



## M01

### **Diagnostic accuracy of a Urine-based DNA Methylation Marker Test to Detect Upper Tract Urothelial Carcinoma: First Results of a European Validation Study**

E Kaufmann; K Röthlin; P Baumeister; A Mattei; C Fankhauser

Klinik für Urologie, Luzerner Kantonsspital, Lucerne, Switzerland

**Introduction:** Following previous results indicating a high diagnostic accuracy in detecting bladder and upper tract urothelial carcinoma (UTUC) [1, 2], the urine-based epigenetic test Bladder CARE™ received FDA Breakthrough Device Designation in December 2023. Our study aimed to validate the diagnostic accuracy of this test for detection of UTUC within a European cohort.

**Methods:** Between February and March 2024, we prospectively collected urine samples from patients with suspected UTUC prior to diagnostic ureterorenoscopy and radical (nephro)ureterectomy. Samples were analyzed with Bladder CARE™, a urine-based test that measures the methylation levels of 3 cancer biomarkers (TRNA-Cys, SIM2, and NKX1-1) and 2 internal control loci. Results were reported as the Bladder CARE Index (BCI) and quantitatively categorized as positive (> 5), high risk (2.5-5), or negative (< 2.5).

**Results:** The study included 7 patients presenting with visible hematuria (n=4), non-visible hematuria (n=4) or incidental findings (n=3) of which ultimately 1 underwent a negative diagnostic ureterorenoscopy (URS), 5 had a diagnostic URS suggesting cancer followed by radical nephroureterectomy and open ureterectomy in 1 patient. The mean age was 73 years (IQR 68–76) with a mean Charlson Comorbidity Index (CCI) of 5 (IQR 4–7), with 71% of the cohort being male and 29% current smokers. The sensitivity, specificity, negative predictive and positive predictive value for urine cytology was 17% (1/6), 100% (1/1), 17% (1/6), 100% (1/1) and for Bladder CARE™ 83% (5/6), 100% (1/1), 50% (1/2), 100% (5/5).

**Discussion:** Our preliminary findings align with previously reported data on the sensitivity and specificity of Bladder CARE™ which appears to be superior compared to urine cytology. For patients with ambiguous imaging results, this test offers a promising tool to distinguish between renal cell and urothelial carcinomas, aiding in the choice between nephrectomy and nephroureterectomy. Moreover, the test's high sensitivity could potentially eliminate the need for diagnostic URS in patients with a Bladder CARE Index > 5, expediting the diagnostic process and reducing treatment delays. This strategy could potentially reduce the risk of bladder cancer recurrence by dissemination of cancer cells during biopsy procedures in URS. However, due to the test's limited sensitivity, it should not be solely relied upon to exclude UTUC, as there may be a correlation between the BCI and tumor volume.



## M02

### Comprehensive analysis of perioperative complications during transformation from open to robot-assisted radical cystectomy with intracorporeal urinary diversion

L Wimmer<sup>1</sup>; A Elyan<sup>1</sup>; J Ebbing<sup>1</sup>; A Hosseini<sup>1</sup>; HHK Seifert<sup>1</sup>; A Mortezaei<sup>2</sup>

1 Unispital Basel; 2 UniSpital Zürich

#### Introduction

Robot-assisted radical cystectomy with intracorporeal urinary diversion (iRARC) is associated with reduced perioperative blood loss, transfusion rate and days in hospital compared to open radical cystectomy (ORC). However, iRARC is technically challenging and in a multicenter analysis of learning curves a minimum of 100 were needed until perioperative parameters, specifically the complication rate, reached a plateau. Here we perform a comprehensive analysis of perioperative complications and their treatment occurring during these first 100 cases at a tertiary center changing its approach from ORC to iRARC.

#### Patients and Methods

From April 2017 to December 2023 a total of 112 patients underwent iRARC at our institution. Before this observation interval, all RCs were performed through open laparotomy (ORC) at our institution. Our primary aim was to perform a detailed analysis of postoperative complications including reoperation and rehospitalisation rate. Complications occurring at 30- and 90-days post-surgery were categorized according to the modified Clavien Dindo (CD) classification and were further categorized according different organ systems. Secondly, we aimed to assess perioperative parameters such as transfusion rate, operation time, and length of stay (LOS).

#### Results

The median age of the cohort was 72y(IQR 64-78), and 83% were male(n=93). A total of 92 received an ileum conduit(82.1%) and 20(17.9%) an orthotopic bladder substitution. In the first 30 days, 129 complications were noted, 69.7% low-grade (CD I-II) and 30.2% high-grade (CD IIIa-V). The most common complications classified as low-grade in the first 30 days were urinary tract infections (n=21) and transient paralytic ileus (n=20). Over the next 60 days these were urinary tract infections (n=7) and metabolic acidosis (n=10). The most common 30-day post-surgery high grade complications were cardiovascular events (n=7) and Urosepsis (n=6). After 30 days until 90 days these were obstructive pyelonephritis (n=4) and ureteral strictures (n=5). Rehospitalization occurred in 24 patients (21.4%) within 30 days. The overall 90-day mortality was 2.7%(n=3). Median operating time was 408 minutes (IQR: 345-421), with a median LOS of 15 days(IQR: 13-21).

#### Conclusion

Most common complications following iRARC are infections, although mostly not graded as high grade. Most common high-grade complications during the learning curve of iRARC are cardiovascular events and infections.



## M03

### **In patients with muscle invasive bladder cancer undergoing radical cystectomy, dynamics of ctDNA post-cystectomy are indicative of patient outcomes**

T Angelos

Inselspital - University Hospital of Bern

Tasios A, Amstutz U, Seiler-Blarer R, Thalmann GN, Roth B, Grob T, Kiss B  
University Clinic for Urology, Inselspital Bern

#### Abstract

**Background:** Despite various novel therapeutic possibilities for patients with muscle-invasive bladder cancer, therapy response varies highly between patients. CtDNA assays offer heightened sensitivity and specificity in detecting minimal residual disease and monitoring treatment response, thereby potentially offering navigation for treatment decisions.

**Objective:** To investigate the predictive and prognostic value of ctDNA in the context of bladder cancer management. Specifically, we aim to investigate the utility of ctDNA as a biomarker for predicting disease recurrence prior and after radical cystectomy.

**Design, Setting, Participants:** We prospectively collected samples from 81 patients undergoing radical cystectomy. Among these, 71 patients were eligible for pre-surgery analysis, while 79 patients were included in the post-surgery analysis. In patients eligible for this study plasma, tumor-tissue and germline samples were collected at the time point of radical cystectomy and at least one plasma sample collected within the first four months post cystectomy. PPV and NPV were calculated for commonly mutated genes in both tissue and plasma for overall and for each analysis groups by pre and post-surgery time-points, separately. In our analysis genes of interest were TERT and TP53 performed.

**Results and Limitations:** In pre-surgery plasma of the overall population PPV and NPV for TERT 46.7% and 51.8% whereas for TP53 46.7% and 51.8% respectively. In post-surgery plasma of the overall population PPV and NPV for TERT 75% and 54.9% whereas for TP53 80% and 56.5% respectively. In the post-surgery plasma PPV and NPV for TERT 75% and 56% as well as for TP53 85.7% and 63.6% were highest in the population of locally advanced T3-4N0 patients. Time to recurrence was significantly longer ( $p=0.0003$ ) in patients with negative ctDNA status in the post-surgery plasma

**Conclusion:** Plasma ctDNA status during disease surveillance after cystectomy is a notable prognostic factor.



## M04

### ROBOTIC INTRACORPOREAL ORTHOTOPIC NEOBLADDER: COMPARISON OF URODYNAMIC AND FUNCTIONAL RESULTS AT YEARS 1 AND 5

P Kraft; C Schregel; F Obrecht; B Foerster; G Froelicher; K Boehler; J Tornic; C Padevit; H John

Kantonsspital Winterthur, Winterthur, Switzerland

#### Introduction:

Robotic-assisted radical cystectomy (RARC) with complete intracorporeal urinary ileal orthotopic neobladder is a promising continence-preserving therapy for muscle-invasive bladder cancer. The aim of this study was to compare urodynamic and functional results at years 1 and 5 after RARC and intracorporeal urinary diversion with ileal orthotopic neobladder.

#### Methods:

In this institutional review board-approved single-center observational cohort study, consecutive patients undergoing RARC for urothelial carcinoma with an orthotopic modified Studer neobladder between November 2015 and February 2022 were included. Urodynamic evaluations served to assess neobladder capacity, pressure at maximum filling, uroflowmetry, and post-void residual volume at years 1 and 5. Continence was evaluated by pad count.

#### Results:

Overall, 32 patients were included (65±9 years). Postoperative urodynamic examination was performed in 23 patients at 1 year and in 18 patients at 5 years. Urodynamic measurements showed a maximum neobladder capacity of 478 ± 134 mL and 520 ± 220 mL (p=0.5), a maximum detrusor pressure of 18 ± 10 cmH<sub>2</sub>O and 23 ± 16 cm/H<sub>2</sub>O (p=0.7), and a maximum flow of 18 ± 9 mL/s and 13 ± 9 mL/s (p=0.1) at 1 year and 5 years, respectively. Post-void residual volume was < 30 mL in 17/23 (74%) patients at 1 year and in 11/18 (61%) patients at 5 years. At 1 year and 5 years, 4/23 (17%) patients and 5/18 (28%) patients needed intermittent self-catheterization, respectively. At 1 year and 5 years, 7/23 (30%) and 2/18 (11%) patients were completely dry, 7/23 (30%) and 7/18 (39%) patients required a median of 1 pad during daytime, and 15/23 (65%) and 17/18 (94%) patients needed a median of 1 pad during nighttime.

#### Conclusion:

This patient series shows stable urodynamic and functional results at years 1 and 5 after robotic-assisted radical cystectomy and intracorporeal urinary reconstruction with a modified Studer neobladder, thus demonstrating satisfactory long-term outcomes of this demanding robotic approach.



## M05

### Neoadjuvant versus adjuvant chemotherapy for muscle-invasive bladder cancer: A decision analysis

L Afferi<sup>1</sup>; B Jahn<sup>2</sup>; CD Fankhauser<sup>1</sup>; R Cathomas<sup>3</sup>; J Bellmunt<sup>4</sup>; M Moschini<sup>5</sup>; A Mattei<sup>1</sup>; SL Chang<sup>6</sup>; U Siebert<sup>2</sup>

<sup>1</sup> Department of Urology, Luzerner Kantonsspital, Lucerne, Switzerland; <sup>2</sup> Center for Health Decision Science, Department of Health Policy and Management, Harvard T. H. Chan School of Public Health, Boston, Massachusetts; <sup>3</sup> Department of Medical Oncology, Kantonsspital Graubünden, Chur, Switzerland; <sup>4</sup> Department of Medical Oncology, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA; <sup>5</sup> Urological Research Institute (URI), Unit of Urology, IRCCS Ospedale San Raffaele, Vita-Salute San Raffaele University, Milan; <sup>6</sup> Harvard Medical School, Boston, MA 02215, USA; Division of Urologic Surgery, Brigham and Women's Hospital, Boston, MA 02115, USA

#### Introduction and objectives

Evidence on the cost-effectiveness of neoadjuvant (NAC) versus adjuvant (ACT) cisplatin-based chemotherapy for muscle invasive bladder cancer (MIBC) is missing. We aimed to evaluate the long-term quality-adjusted life years (QALYs), costs and cost effectiveness of different strategies for treating patients with MIBC through a decision analysis approach.

#### Materials and methods

We developed an individual-level state transition microsimulation model for patients with histologically diagnosed urothelial non-metastatic MIBC eligible for surgery and perioperative chemotherapy at the time of diagnosis. Over a lifelong-time horizon, four strategies simulating 100,000 individuals were evaluated: (i) no treatment, (ii) radical cystectomy (RC) without perioperative chemotherapy, (iii) NAC followed by RC (reference strategy) and (iv) RC followed by ACT (administered according to surgical pathology). The endpoints were QALYs and costs. Utility data were obtained from recent cost-effectiveness analysis. Survival data were obtained from selected randomized controlled trials, and, when not available, from retrospective cohort analysis. Costs were estimated from the United States healthcare perspective; past costs were corrected for inflation. A sensitivity analysis on the probability (at diagnosis) of being fit for ACT after surgery was performed to account for uncertainty of this estimate. The model was face-validated independently by two urologists.

#### Results

Discounted life-expectancy was 4.63 QALYs for ACT, 4.46 QALYs for NAC, 4.37 QALYs for RC without perioperative chemotherapy, and 2.85 QALYs for patients receiving no treatment. Costs were lowest for ACT (US\$45,861) as compared to NAC (US\$48,434), RC without perioperative chemotherapy (US\$49,732) and no treatment (US\$59,994). Therefore, ACT is a dominant strategy. The probabilistic sensitivity analysis showed no overlap in terms of QALYs and costs between the no treatment group and all the other treatment strategies. Sensitivity analysis suggested



that NAC is associated with improved QALYs than ACT if the estimated probability (at diagnosis) of being fit for ACT after surgery would be less than 32%.

#### Conclusions

Perioperative chemotherapy is associated with improved QALYs and is cost saving compared to RC alone. ACT leads to increased QALYs and is cost effective compared to NAC. QALYs between NAC and ACT are similar if the initial estimated risk of being fit for ACT is low.



## M06

### **Optimal time for radical cystectomy after neoadjuvant chemotherapy for patients with muscle invasive bladder cancer, a multicenter retrospective cohort study**

L Antonelli<sup>1</sup>; MS Wettstein<sup>2</sup>; A Mattei<sup>1</sup>; CD Fankhauser<sup>1</sup>

1 LUKS; 2 University of Zurich, Zurich, Switzerland

**Introduction:** In patients with muscle invasive bladder cancer (MIBC) current guidelines recommend not delaying radical cystectomy > 3 months after diagnosis as it decreases overall survival. However, there are no specific recommendations regarding timing of radical cystectomy in patients receiving neoadjuvant chemotherapy (NAC).

**Materials and methods:** This is a retrospective study of 601 patients with MIBC treated with NAC and radical cystectomy between 1990 and 2021. Overall survival (OS) and cancer specific survival (CSS) were estimated via Kaplan-Meier curves according to time to cystectomy after NAC and to responders vs non-responders to NAC.

**Results:** Median age of patients was 67 years (IQR 60-74). Median time from last day of NAC to radical cystectomy was 31 days (IQR 23-48) and median follow-up after cystectomy was 601 days (IQR 256-925). Time from NAC to cystectomy > 4 weeks compared to < 4 weeks was associated with shorter 5-years OS (respectively 65% vs 78%, p-value= 0.006) and 5-years CSS (respectively 65% vs 78%, p-value= 0.04).

**Conclusions:** Our study suggests that delaying radical cystectomy beyond 3-4 weeks after NAC is associated with an impaired survival.



## M07

### Wirksamkeit von Botulinumtoxin Injektionen in den Detrusor zur Therapie von neurogener Detrusorüberaktivität im Langzeitverlauf

J Neuenschwander<sup>1</sup>; J Krebs<sup>2</sup>; J Pannek<sup>1</sup>; J Wöllner<sup>1</sup>

1 Schweizer Paraplegiker-Zentrum Nottwil; 2 Schweizer Paraplegiker Forschung

#### Hintergrund & Ziele

Eine neurogene Detrusorüberaktivität (DO) stellt ein Risiko für den oberen Harntrakt dar. Botulinumtoxin Injektionen in den Detrusor sind eine wirksame Zweitlinien-Therapie. Es fehlen jedoch Daten zur langfristigen Wirksamkeit. In einer retrospektiven Kohortenstudie haben wir daher den Langzeitverlauf von Patienten\*innen mit Botulinumtoxin-A Injektionen in den Detrusor untersucht.

#### Material & Methoden

Patienten\*innen mit einer neurogenen DO nach einer Querschnittlähmung wurden im Register für off-label Botulinumtoxin-A Injektionen (2001 bis 2011) identifiziert. Alle urodynamischen Daten vor und nach einer Behandlung, von Mai 2001 bis Dezember 2023, wurden gesammelt und analysiert. Eine erfolgreiche Behandlung wurde bei Blasenentleerung mittels intermittierendes Katheterisierens (IK) oder ohne Katheter wie folgt definiert: Blasenkapazität  $\geq 400$ ml, Compliance  $\geq 20$ ml/cmH<sub>2</sub>O und Speicher-Detrusordruck  $< 40$ cmH<sub>2</sub>O. Eine erfolgreiche Injektion bei Personen mit einem suprapubischen Katheter bedingte Harnkontinenz. Auch die Gründe für Behandlungsabbrüche wurden evaluiert.

#### Resultate

Daten von 51 Frauen und 91 Männern mit einer neurogenen DO wurden ausgewertet. Die ersten Injektionen erfolgten im Alter von  $35 \pm 13.6$  Jahren, mediane 2.2 Jahre (unteres / oberes Quartil 0.7 / 10.4 Jahre) nach Diagnosestellung der DO. Die Mehrheit (107 / 75.4%) entleerte die Blase mittels IK. Sowohl bei der ersten als auch der letzten (erfolgreichen) Behandlung wurden meist 300 IE injiziert (131 / 92.3% und 59 / 72.8%).

Bei 105 Personen (73.9%) war die erste Behandlung erfolgreich. Während medianen 7.7 Jahren (3.9 / 13.1 Jahre) wurden im Median 7 erfolgreiche Behandlungen (4 / 12 Behandlungen) durchgeführt.

Bei 63 dieser 105 Personen (60%) wurde die Behandlung im Verlauf wegen folgender Gründe abgebrochen: 35 (55.6%) ungenügende Wirkung, 12 (19.0%) unbekannt, 10 (15.9%) keine Indikation und 6 (6.5%) diverse Gründe. Zu 14 (13.3%) Personen fehlen Angaben zur Weiterführung der Behandlung. Somit waren 28 (26.7%) Personen am Ende des Beobachtungszeitraums nach 12.5 Jahren (6.5 / 15.3 Jahre) weiter in Behandlung. Gemäss gewählten Kriterien war die Behandlung bei einer Person nicht mehr erfolgreich (erhöhter Detrusordruck).

#### Schlussfolgerungen

Die Wirkung der Botulinumtoxin-A Injektionen blieb bei etwas mehr als einem Viertel der evaluierten Personen über mehr als 12 Jahre erhalten. Ein Verlust der Wirksamkeit wurde bei über 50% der evaluierten Personen beobachtet.





## M08

### **Prospective, Randomized-Controlled Study of the Effect of Propofol vs. Sevoflurane on Erections during Narcosis in Transurethral Surgery: a Study Protocol**

T Scherer<sup>1</sup>; C von Deschwanden<sup>1</sup>; U Held<sup>1</sup>; C Poyet<sup>2</sup>; J Kwok<sup>1</sup>; L Kandler<sup>1</sup>; M Schläpfer<sup>1</sup>; EX Keller<sup>1</sup>; FA Schmid<sup>1</sup>

1 Universitätsspital Zürich; 2 Stadspital Triemli

#### Background

Penile erection is unwanted during transurethral interventions as it may be associated with adverse events such as impaired access, prolonged operation time, operation abortion, or need for ancillary measures to reach penis flaccidity such as intracorporeal injection of vasoactive drugs. Because there are no high-quality studies investigating the impact of various anesthetic agents on penile tumescence in men during transurethral procedures in literature to date, anesthesiologist and urologist at our institution initiated together a prospective randomized controlled trial comparing the incidence of intraoperative penile tumescence during propofol versus sevoflurane general anesthesia.

#### Endpoints

The primary outcome is the occurrence of an intraoperative penile erection. The secondary outcomes are related to the impact of the primary outcome on the surgery, such as changes in operative strategy or operation duration, operation abortion, as well as adverse events.

#### Patients and Methods

Randomization of 200 patients undergoing transurethral surgery to receive a general anesthesia either with propofol or sevoflurane. Inclusion criteria are men < 75 years old with an international index of erectile function 5 item questionnaire (IIEF-5) of  $\geq 12$  points. All men fulfilling the inclusion criteria will be asked to participate. Exclusion criteria are patient characteristics associated with an increased risk for complications with the use of either propofol or sevoflurane. Randomization and treatment allocation will occur after consent. The results will undergo statistical analysis using a logistic regression model. The research has received ethical clearance from the local competent ethics committee and is publicly registered (KEK code 2023 - 01682 / SNCTP000005681).

#### Conclusion

Given the global shift toward reducing greenhouse gas emissions and the consequent decrease in the use of gaseous anesthetics, this study addresses a potentially critical yet underexplored topic in the context of transurethral surgeries. Should our study confirm the hypothesis that either propofol or sevoflurane is associated with significantly higher rates of intraoperative erections, this finding may impact on anesthesia protocols during transurethral surgeries.



## M09

### Management of bladder outlet obstruction after stress urinary incontinence surgery in women: Results of a North American Survey among surgeons.

A Perrin<sup>1</sup>; L Campeau<sup>2</sup>; J Singh<sup>2</sup>; J Corcos<sup>2</sup>

1 Hôpitaux universitaires de Genève; 2 McGill University

#### Contexte & Objectifs:

To gather expert opinion and describe trends in the management of early and prolonged bladder outlet obstruction following stress urinary incontinence surgery.

#### Matériel & Méthode:

Expert physicians, members of the Society of Urodynamics, Female Pelvic Medicine & Urogenital Reconstruction (SUFU), were queried by means of an online survey regarding the management of bladder outlet obstruction following stress urinary incontinence surgery. The survey has an epidemiological section as well as clinical scenarios.

#### Résultats:

From 652 SUFU members on the distribution list, 60 answered the questionnaire (9 %).

The number of sling procedures performed over a year among the responders was 1-5 by 3% of them, 6-10 by 7 % of them, 11-20 by 20 % of them, 21-50 by 38 % of them and >50 by 38 % of them.

Among these sling procedures, responders estimated that approximately 15% (SD ±26) were autologous fascial pubovaginal slings.

Responders estimated the prevalence of complete postoperative urinary retention to be approximately 3% (SD ±7).

The prevalence of partial postoperative urinary retention, defined as a post-void residual volume ≥200 ml, was estimated around 8 % (SD ±11).

Of those patients presenting with partial urinary retention, approximately 35 % (SD ±29) were symptomatic.

For a patient suffering from complete urinary retention 48 hours after synthetic mid-urethral sling insertion, most responders would observe for a week before planning an incision of the sling.

If the same woman presented with partial urinary retention, the trend of the majority would be observation for several weeks.

In patient developing complete urinary retention 48 hours following autologous fascial pubovaginal sling procedure, most participants would offer observation for a mean of 6.3 weeks (SD ±3.6) before planning a surgical revision.

In the situation where the same population would present with partial urinary retention, again several weeks observation would be recommended by most of the surgeons queried, who would follow the patients for a mean of 7.1 weeks (SD ±3.8) before planning surgery.



One surgeon used the adjustable synthetic mid-urethral sling (Remeex®) and was able to correct the bladder outlet obstruction by adjusting the tension in an outpatient setting.

**Conclusion:**

According to expert opinion, although we could highlight some trends, there was no clear consensus on the management in terms of method or timing of surgical revision.



## M10

### **Surgical Treatment of Lower Urinary Tract Symptoms Secondary to Benign Prostatic Obstruction: A Systematic Review and Meta-Synthesis of Available Guidelines**

LS Matter<sup>1</sup>; O Burkhardt<sup>2</sup>; P Lyatoshinsky<sup>1</sup>; J Blarer<sup>1</sup>; R Seiler<sup>1</sup>; D Abt<sup>1</sup>

1 Spitalzentrum Biel / Centre Hospitalier Bienne, Biel / Bienne, Switzerland; 2 Kantonsspital St. Gallen KSSG

#### Background and Objective

The increase in minimally invasive treatments (MITs) for lower urinary tract symptoms secondary to benign prostatic obstruction (LUTS/BPO) has diversified surgical options, often outpacing solid evidence. The variety of available treatments, while beneficial, can confound physicians. Clinical guidelines provide direction but often differ due to varied evidence interpretation.

#### Methods

We systematically searched for guidelines on the surgical treatment of LUTS/BPO updated within the last three years, focusing on those offering specific procedural recommendations. We compared recommendations, analyzed discrepancies, and developed a consensus algorithm that incorporated all pertinent advice.

#### Key Findings and Limitations

Out of 14 guidelines, four met the inclusion criteria. Major challenges were inconsistent nomenclature and a lack of clear recommendations, especially for newer procedures such as Temporary Implantable Nitinol Device (iTIND™), Prostate Artery Embolization (PAE), Robotic Assisted Simple Prostatectomy (RASP), and Water Vapor Thermal Therapy (Rezūm™). Despite these issues, a consensus algorithm could be synthesized.

#### Conclusions and Clinical Implications

Guidelines for the treatment of LUTS/BPO present a disparate picture, with consensus mostly on older, well-established procedures due to substantial evidence. Newer interventions display significant variation in guideline recommendations and evidence interpretation. The consensus algorithm created from current guidelines offers a synthesized overview of recommendations, underscoring the need for standardized evidence criteria for guideline recommendations. Our work emphasizes the evolving complexity in LUTS/BPO management, aiming to aid urologists in decision-making and patient counseling by providing a clear and comprehensive tool.

#### Advancing Practice

This systematic review uniquely integrates the latest guidelines into a comprehensive consensus algorithm, providing clarity amidst the disparate recommendations for newer LUTS/BPO treatments.



## M11

### **Immersive virtual reality for patient's anxiety management during transperineal prostate biopsies under local anesthesia: A prospective randomized controlled trial**

S Vanoli; M Olivieri; S Buchs; E Grobet-Jeandin; O Windisch; P Sèbe; M Valerio; M Valerio; D Benamran; D Benamran

HUG - Hôpitaux Universitaires de Genève

#### Objectives:

Transperineal prostate biopsies (PB) can be safely performed in an outpatient office setting under local anesthesia. However, managing procedural anxiety remains challenging. Anxiety can lead to increased pain, longer procedure time, and decreased satisfaction. Non-pharmacologic option such as hypnosis, education or music therapy have shown mixed results. Virtual reality (VR) is emerging as a new efficient and safe tool providing encouraging results in anxiety management in various medical procedure.

#### Material and Methods:

We are currently conducting a prospective randomized controlled trial aiming to include a total of 100 patients between November 2023 and January 2025. The study group patients are equipped with VR headset allowing for a visual and auditive immersive experience throughout the PB. The primary outcome is to assess its impact on anxiety. This will be evaluated through validated standardized questionnaires, namely State-Trait Anxiety Inventory and Surgical Fear Questionnaires as well as blood pressure and heart rate recordings during PB. Oncological data, complications and surgeon's appreciation are being recorded as secondary outcomes. We are including every patient undergoing PB and consenting to inclusion. Exclusion criteria are claustrophobia and inability to answer questionnaires due to medical reasons. The study has been validated by local ethics committee.

#### Results:

16 patients have already been included over a two-month period, with promising results on safety and efficacy. Mid-term results will be available at the time of presentation and will include baseline characteristics, anxiety levels, as well as procedural outcomes in both study groups.

#### Conclusion:

This study should provide valuable insights into the potential of VR as a non-pharmacological intervention to manage anxiety during PB that could contribute to improving patient care and procedural outcomes.



## M12

### TARGET vs PI-FAB: an evaluation of novel MRI scores to predict residual disease after focal therapy

M Olivieri<sup>1</sup>; O Windisch<sup>1</sup>; M Martins<sup>2</sup>; S Regusci<sup>2</sup>; M Valerio<sup>1</sup>

1 Hôpitaux Universitaires de Genève; 2 Hirslanden Clinique La Colline

#### Objective

The widely adopted PIRADS score should not be employed to interpret prostate MRI after focal therapy for prostate cancer (PCa). Recently, two dedicated scoring systems, the PI-FAB (Prostate Imaging after Focal Therapy) and the TARGET (Transatlantic Recommendations for Prostate Gland Evaluation with MRI after Focal Therapy), have been proposed. The aim of this study was to compare the performance of these two scores in predicting residual disease after focal therapy.

#### Methods

Consecutive patients undergoing focal therapy for primary unifocal visible PCa between 2015 and 2022. We selected patients with complete follow-up including regular PSA assessment, control MRI and biopsy in the ablated zone within 18 months after focal therapy. Control MRI were retrospectively scored according to the PI-FAB and the TARGET score. Significant PCa was defined as any Gleason pattern  $\geq 4$  in the control biopsy in the treated area. Their performance in predicting residual significant PCa was compared in a head-to-head analysis considering control biopsy as the reference test. In the primary analysis, the PI-FAB was considered negative for score "1-2" and positive for score "3"; the TARGET was considered negative for score "1-3" and positive for score "4-5". Mc-Nemar's test was used to assess the performance using the binary clustered results.

#### Results

103 subjects with median age 69 years (IQR 65-75) and PSA 6.3 ng/ml (4.6-8.3). 71 patients (69%) underwent HIFU using the Focal One device; 32 (31%) underwent focal laser ablation using the SoracteLite device. Latest PSA prior to control biopsy decreased to a median of 4 ng/ml (2.3-5.9). Significant residual disease in the ablated area was identified in 23/103 patients (22%), of which 15/71 (21%) patients in the HIFU and 8/32 patients (25%) in the laser group. The sensitivity in identifying residual significant PCa of the PI-FAB and the TARGET was 48% (95% CI 27-69%) and 70% (47-87%), respectively. The specificity of the PI-FAB and the TARGET was 100% (96-100%) and 93% (84-97%), respectively. Overall, the AUROC of the two scores was not statistically different although in favor of the TARGET score (74% vs 81%;  $p=0.12$ ).

#### Conclusion

In the present study, both the PI-FAB and the TARGET show excellent specificity. The overall accuracy is encouraging for both while the TARGET score shows slightly better sensitivity.



## M13

### Introduction of mp-MRI prior biopsy and its influence on prostate cancer detection in Switzerland

T Scherer<sup>1</sup>; D Menges<sup>2</sup>; U Bieri<sup>1</sup>; L Wildisen<sup>3</sup>; K Staehelin<sup>3</sup>; D Eberli<sup>1</sup>; S Rohrmann<sup>4</sup>; C Poyet<sup>1</sup>

<sup>1</sup> Universitätsspital Zürich; <sup>2</sup> Epidemiology, Biostatistics and Prevention Institute, University of Zurich; <sup>3</sup> National Agency for Cancer Registration; <sup>4</sup> Cancer registry of the Cantons Zurich, Zug, Schaffhausen and Schwyz, University of Zurich

#### Background

The use of multiparametric MRI (mpMRI) prior to prostate biopsies has demonstrated a reduced detection rate of low-risk (LR) prostate cancer (PCa) while increasing the detection of higher grade PCa in randomized-controlled trials. However, real-world data on the introduction and utilization of mpMRI before prostate biopsies and its impact on the incidence of PCa in Switzerland, are missing. Our study aims to analyze the adoption of mpMRI-guided prostate biopsy over time as well as the distribution of detected risk groups at both hospital and population levels in Switzerland.

#### Materials & Methods

All prostate biopsies at our tertiary care academic center and all PCa diagnoses recorded by the National Agency for Cancer Registration (NACR) between 01/2005 and 12/2019 were retrospectively reviewed. To analyze mpMRI uptake in Switzerland, a survey was conducted among Swiss urological care centers. Proportions of PCa risk groups were calculated and compared for the whole period and each year.

#### Results

In our center, a total of 4890 biopsies were recorded, of which 2642 (54%) were done after implementation of mpMRI prior biopsy from 2012 onward. Among all men undergoing biopsy before 2012, 1631 (72.6%) were PCa-negative. Of the detected PCa, 286 (46.4%) were LR, 188 (30.5%) intermediate-risk (IR) and 143 (23.2%) high-risk (HR) PCa. With mpMRI guided biopsies available, 1209 (45.7%) of the biopsies were PCa-negative. The detected PCa comprised 352 (24.6%) LR, 702 (49.0%) IR, and 379 (26.5%) HR PCa cases. According to the survey results, national mpMRI uptake prior biopsy began in 2008 and surpassed 95% by 2019. During the study period, registry coverage increased. In 2005, it recorded in 14 cantons 3448 PCa cases, of which 1644 (47.7%) had no data on grade (N/A). Among the ones with a reported grade, 836 (46.3%) were LR, 597 (33.1%) were IR, and 371 (20.6%) were HR. In 2019, of 6868 registered cases from 23 cantons, 1026 (14.9%) were N/A. Among cases with a registered grade, 1636 (28.0%) were LR, 2853 (48.9%) were IR and 1353 (23.2%) were HR.



## Conclusions

After the implementation of mpMRI guided biopsy, fewer negative prostate biopsy results were detected in the hospital cohort. Furthermore, we observed in both the hospital and national cohort a shift in the distribution of grades over time. After implementation of mpMRI, the proportion of IR PCa cases increased, whereas LR declined. However, proportion of HR cases remained largely constant.





## M14

### Evaluating a Structured Prostate Cancer Early Detection Program in Switzerland: A Multifaceted Approach

C Würnschimmel<sup>1</sup>; D Menges<sup>2</sup>; M Kwiatkowski<sup>3</sup>; S Sigg<sup>1</sup>; L Prause<sup>4</sup>; A Mattei<sup>1</sup>; D Engeler<sup>5</sup>; D Eberli<sup>6</sup>; H Seifert<sup>7</sup>; T Scherer<sup>8</sup>; S Cermak<sup>9</sup>; M Valerio<sup>10</sup>; C Rentsch<sup>7</sup>; A Mortezaavi<sup>6</sup>

<sup>1</sup> Luzerner Kantonsspital, Department of Urology; <sup>2</sup> Universität Zürich; <sup>3</sup> Kantonsspital Aarau ; <sup>4</sup> Kantonsspital Aarau; <sup>5</sup> Kantonsspital St. Gallen KSSG; <sup>6</sup> Universitätsspital Zürich; <sup>7</sup> Universitätsspital Basel; <sup>8</sup> University Hospital Zürich, Switzerland; <sup>9</sup> University Hospital Bern; <sup>10</sup> Hôpital Universitaire de Geneve

#### Introduction:

Prostate cancer early detection in Switzerland lacks structure and consists mainly of “opportunistic testing”, potentially leading to issues of overdiagnosis and overtreatment. Recognizing this, a group was formed with the objective of investigating the potential implementation of a structured prostate cancer early detection program in Switzerland.

#### Methods:

An intercantonal group of Urologists was established, all of whom submitted a proposal at the last Swiss Society of Urology (SGU) congress in Lausanne (2023) advocating for a vote on the pros and cons of early detection with the following wording:

„Considering the evidence and the significant amount of ongoing opportunistic screening, Switzerland should take a stepwise approach, including piloting and further support research to evaluate the feasibility of implementation of organized programs aimed at assuring appropriate management and quality of prostate cancer screening”.

As part of these efforts, a survey has been developed to evaluate the opinions of primary care physicians and urologists regarding prostate cancer early detection programs and identify sensible, beneficial and feasible testing strategies to be evaluated through prospective research projects.

Furthermore, an analysis of the NICER database is ongoing to obtain basic knowledge of prostate cancer epidemiology and trajectories in Switzerland.

#### Results

The voting outcome indicated overwhelming support by the members of the SGU, with 80 votes for yes, 6 abstentions and no negative votes. This underscores a positive inclination within the SGU towards the evaluation of a structured early detection initiative in Switzerland.



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### Conclusion:

As a consequence of the positive vote during the SGU-assembly we intend to embark on various projects spanning epidemiology, health sciences, implementation research, and prospective screening trials, supplemented by ongoing surveys. This multifaceted approach aims to lay the groundwork for the potential introduction of a structured prostate cancer early detection program in Switzerland, ensuring both effectiveness and sustainability.



## M15

### **Structured Reporting Protocol and Surgical Checklist for Rezum Water Vapor Therapy: Application in a Real-world, Multiuser, High-Volume Center Cohort**

V Alargkof Anagnostou<sup>1</sup>; J Ebbing<sup>1</sup>; P Trotsenko<sup>2</sup>; A Elyan<sup>1</sup>; H Seifert<sup>1</sup>; N Keller<sup>3</sup>; C Wetterauer<sup>1</sup>

1 Universitätsspital Basel; 2 Landesklinikum Wiener Neustadt; 3 University of Basel

#### Background and Objectives:

The Rezum system, using water vapor for benign prostatic enlargement, lacks standardized documentation, complicating data comparison. This study introduces a Structured Reporting Protocol (SRP) to evaluate the data quality of non-standardized Rezum operative documentation.

#### Materials and Methods:

An SRP featuring detailed diagrams for various prostatic urethral lengths (PUL) and a comprehensive 10-item checklist was retrospectively applied to 100 patients treated with Rezum from December 2020 to September 2022. The analysis compared operative reports and videos against SRP standards.

#### Results:

The SRP's diagrams document injection sites, while the checklist captures factors potentially affecting outcomes. Median number of injections was 4.0, injection density was 12.7 ml (PVOL) / injection, and injection interval was 0.7 cm (PUL) / injection. Variations in injection techniques were noted, including non-standard locations in 10% of cases and alternating sequences in 22%. Only 30% of reports detailed injection sites accurately. Limitations include an unvalidated SRP and potential interobserver variability.

#### Conclusions:

Variability in Rezum surgical techniques was observed, particularly in the number and locations of injections related to prostate volume (PVOL) and PUL, and in the structured information of non-SRP-compliant operative reports. Enhanced reporting on injection density and intervals is crucial for optimizing injection numbers. The Structured Reporting Protocol (SRP) could significantly improve the uniformity, quality, completeness, and consistency of Rezum documentation, aiding in the standardized assessment of treatment outcomes and identification of risk factors for procedural failure.



## M16

### Is prostate cancer multifocality a predictor of oncological outcomes?

C Dumont; M Valerio; O Windisch; D Benamran; C Iselin

Geneva University Hospital, University of Geneva, Geneva, Switzerland

#### Objective

To explore whether prostate cancer (PCa) multifocality is a predictor of the oncological outcome in men undergoing radical prostatectomy.

#### Methods

Consecutive patients undergoing radical prostatectomy at the Geneva Prostate Cancer from the 1st January 2013 till the 31st December 2023 were included. Patients who underwent any previous PCa treatment and patients with nodal or metastatic disease were excluded. A significant lesion was defined as any PCa foci harboring extracapsular extension and/ or ISUP  $\geq 2$  at final pathology. Multifocal disease was defined as  $\geq 2$  significant lesions in the final specimen. Cox-regression was employed to evaluate the impact of multifocality and known predictors over the risk of surrogate oncological endpoints, namely surgical margins, adverse features at final pathology (node positive, pT3-4), biochemical recurrence as well as secondary local or systemic treatment.

#### Results

589 patients with a median PSA at 7.45 ng/ml (IQR 5.3-11) were included in the final analyses; 23.1% (136/ 589) had multifocal significant disease. Of these, 75% (102/ 136), 16.2% (22/ 136) and 8.8% (12/ 136) had one, two or  $\geq 3$  additional significant lesion plus the index lesion, respectively. 103/589 (17.8%) patients had a positive surgical margin: 95 (92.2%) were at the level of the index lesion, six (5.8%) at a non-index significant lesion and two (2%) at an insignificant lesion. Significant surgical margins ( $\geq 3$ mm) occurred in 33 patients (5.6%), and were all located at the level of the index lesion. Surprisingly, overall and significant margins occurred more in men with unifocal significant disease (28.7% vs 13.4%,  $p < 0.001$ ; 11.5% vs 2.2%,  $p < 0.001$ ). 240 (40.6%), 157 (26.8%) and 157 (26.8%) patients presented adverse pathological features, biochemical recurrence, and secondary treatments, respectively. In the multivariate analysis, significant multifocality was not associated with none of the above endpoints; only ISUP, pT and pN status were significant predictors.

#### Conclusion

In our series, significant surgical margins occurred only at the level of the index lesion. Multifocal significant disease was associated with no oncological endpoint. Altogether, these findings suggest that the index lesion drives the fate of this group of patients. Wide excision at the level of the index lesion location plus maximal preservation of surrounding structures seems legitimate to enhance the therapeutic ratio of radical prostatectomy.



## M17

### **Introduction of Rezum™ for treatment of lower urinary tract symptoms secondary to benign prostatic hyperplasia in a Canadian high-volume center: A retrospective study.**

A Perrin<sup>1</sup>; L Campeau<sup>2</sup>; J Singh<sup>2</sup>; J Corcos<sup>2</sup>

1 Hôpitaux universitaires de Genève; 2 McGill University

#### Contexte & Objectifs:

Water vapor thermal therapy (WVTT) using the Rezum™ system is an increasingly used minimal invasive surgical treatment for lower urinary tract symptoms (LUTS) secondary to benign prostatic hyperplasia (BPH). We evaluate the efficacy and safety of this procedure in a consecutive everyday patient cohort.

#### Matériel & Méthode:

We retrospectively analyzed a prospectively maintained database including consecutive men undergoing WVTT in our institution between July 2022 and June 2023 by three operators. We selected patients presenting LUTS secondary to BPH, refractory to oral medication. Descriptive outcomes such as patient self-reported symptoms scores and objective cure were analyzed.

#### Résultats:

In total, 48 patients have been treated using WVTT without perioperative complications.

At baseline, mean patients age was  $70.5 \pm 10.0$  years (mean  $\pm$  SD), 60.9 % presented a median lobe, 26 % had a history of urinary retention, and 18.8 % required catheterization up to the surgery. Prostate volume was  $61.8 \pm 26.0$  ml, of which 21 % were  $\geq 80$  ml.

Procedure duration was  $5.3 \pm 2.0$  minutes, and  $8.7 \pm 2.6$  injections were performed. All patients were catheter-free after  $20.0 \pm 12.7$  days.

At 6-months post-WVTT, IPSS score improved 61.9 % ( $p < 0.05$ ), IPSS-QoL score improved 54.8 % ( $p < 0.05$ ) and BPHI score improved 79.06 % ( $p < 0.05$ ). Peak flow rate (Q<sub>max</sub>) improved 115.6 % ( $p < 0.05$ ) and post void residual (PVR) decreased 55.5 % ( $p < 0.058$ ).

Sexual and ejaculatory function were preserved.

At 1-month post-WVTT, 17 mild to moderate adverse events (AE) have been reported. 30% of patients presenting AE at 1-month had a history of urinary retention prior the procedure.

#### Conclusion:

WVTT is effective and safe even in a rather heterogeneous everyday population of patients with LUTS secondary to BPH. As the study is ongoing, we expect to be able to perform a more detailed subgroup analysis.



## M18

### Prostatic Artery Embolisation Versus Transurethral Resection of the Prostate for Benign Prostatic Obstruction: 5-year Outcomes of a Randomised, Open-label, Noninferiority Trial

DS Engeler<sup>1</sup>; G Müllhaupt<sup>2</sup>; L Hechelhammer<sup>3</sup>; N Graf<sup>4</sup>; L Mordasini<sup>5</sup>; D Abt<sup>6</sup>

<sup>1</sup> St. Gallen Cantonal Hospital and School of Medicine, University of St. Gallen, St. Gallen, Switzerland; <sup>2</sup> Spital Thun, Thun, Switzerland;; <sup>3</sup> St. Gallen Cantonal Hospital, St. Gallen, Switzerland; <sup>4</sup> Clinical Trials Unit, St. Gallen Cantonal Hospital, St. Gallen, Switzerland; <sup>5</sup> Uroviva Group, Sursee, Switzerland; <sup>6</sup> Spitalzentrum Biel, Biel, Switzerland

**Background and aims:** Prostatic artery embolisation (PAE) and transurethral resection of the prostate (TURP) are two of the surgical options for treatment of lower urinary tract symptoms/benign prostatic obstruction (LUTS/BPO). Our aim was to compare the efficacy and safety of PAE and TURP for LUTS/BPO treatment at long-term follow-up.

**Material and Methods:** We conducted a randomised, open-label, single-centre trial at a Swiss tertiary care centre. The main outcome was the change in International Prostate Symptom Score (IPSS) after PAE versus TURP. Secondary outcomes included patient-reported outcomes, functional measures, and adverse events assessed at baseline and at 3, 6, 12, 24, and 60 mo. Between-group differences in the change from baseline to 5 yr were tested using two-sided Mann-Whitney and t tests.

**Results:** Of the 103 patients with refractory LUTS/BPO who were randomised between 2014 and 2017, 18/48 who underwent PAE and 38/51 who underwent TURP reached the 60-mo follow-up visit. The mean reduction in IPSS from baseline to 5 yr was -7.78 points after PAE and -11.57 points after TURP (difference 3.79 points, 95% confidence interval [CI] -0.66 to 8.24;  $p = 0.092$ ). TURP was superior for most patient-reported secondary outcomes except for erectile function. At 5 yr, PAE was less effective than TURP regarding objective parameters, such as the improvement in maximum urinary flow rate (3.59 vs 9.30 ml/s, difference -5.71, 95% CI -10.72 to -0.70;  $p = 0.027$ ) and reduction in postvoid residual volume (27.81 vs 219.97 ml; difference 192.15, 95% CI 83.79–300.51;  $p = 0.001$ ).

**Conclusions:** The improvement in LUTS/BPO at 5 yr after PAE was inferior to that achieved with TURP. The limitations of PAE should be considered during patient selection and counselling.



## V01

### Case report Uretero-iliac artery fistula: endoscopic and endovascular approach

C Olivieri<sup>1</sup>; K Rohrmann<sup>1</sup>; J Klein<sup>2</sup>; TR Herrmann<sup>1</sup>

1 Spital Thurgau AG, Kantonsspital Frauenfeld; 2 Spital Thurgau AG, Kantonsspital Münsterlingen

#### Introduction

Uretero-iliac artery fistula is a recognised but uncommon life threatening condition with increasing incidence in the last years.

The presentation is usually massive gross hematuria with acute anemia unto to hemorrhagic shock.

A diagnostic delay is associated with high mortality, thus a high index of suspicion is warranted in patients with predisposing factors.

Angiography and computed tomography scan are gold standard for diagnosis.

Endovascular stenting procedure represents a successful treatment option.

#### Materials and Methods

We present the case of a 61 years old male with history of oncological surgery, pelvic radiotherapy and chronic ureteral stenting for rectum carcinoma. Emergency referral with massive gross hematuria and acute anemia. Significant drop in haemoglobin required four units of transfusions, reaching a hemodynamic control. Whilst transurethral evacuation of the bladder tamponade and change of ureteral stent, we noticed blood ejection from the right ostium, suggesting a bleeding in the upper urinary tract.

Contrast-enhanced computed tomography scan showed intraluminal clots in the right kidney and an uncommon close pathway of the common iliac artery to the right ureter.

During diagnostic ureterorenoscopy a pulse-synchronised protrusion into the ureteral lumen at the level of the iliac vascular junction was highly suspicious for a fistula.

Angiography confirmed the diagnosis, endovascular stenting and coiling of the internal iliac artery were performed.

Oral anticoagulation therapy was reestablished without recurrence of hematuria.

#### Results

We reported a case of a rare and potentially fatal clinical entity, in which early diagnosis and intervention prevented the development of hemorrhagic shock.

After the intervention the indwelling ureteral stent was not substituted by a nephrostomy, but we continued performing the periodic change every three months using a softer stent.

#### Conclusions

The site of fistular communication typically involves the iliac artery and the ureter. Chronic inflammatory changes, extensive fibrosis and eventual necrosis of the ureteric and artery lead to the development of a fistula.

Disease management was endoscopic and endovascular, avoiding overtreatment and delayed diagnosis with open surgery, as often reported in the literature.



## V02

### **Robot-assisted bladder neck artificial urinary sphincter implantation and supratrigonal cystectomy with augmentation cystoplasty in a spinal cord injured male patient**

N Grilo<sup>1</sup>; B Peyronnet<sup>2</sup>; I Lucca<sup>1</sup>

<sup>1</sup> Lausanne University Hospital (CHUV) and University of Lausanne (UNIL); <sup>2</sup>

Rennes University Hospital, France

#### Context & objectives:

Neurogenic lower urinary tract dysfunction (nLUTD) significantly impacts the quality of life of spinal cord injury (SCI) patients. Despite the availability of various conservative and minimally invasive treatments for nLUTD management, surgical intervention becomes necessary for many patients.

In this video, we present the surgical technique of a robot-assisted bladder neck artificial urinary sphincter implantation and supratrigonal cystectomy with augmentation cystoplasty in a 41 year-old male patient with spinal cord injury.

#### Material & Methods:

The patient was positioned in 23° Trendelenburg position. Trocars were placed as in a robot-assisted prostatectomy.

An inverted U incision of the peritoneum overlying the seminal vesicles was performed. Dissection was developed between seminal vesicles and the bladder until the bladder neck was reached. The anterior peritoneum was incised to access the Retzius space and periprostatic fat was removed. The bladder neck was isolated in a retrograde fashion until meeting the previously dissected posterior space. The bladder neck circumference was measured using a measuring tape from the AMS® accessory kit, which was left in place.

Supratrigonal cystectomy was then performed with monopolar scissors.

A 40cm ileal segment was harvested 20cm proximal to the ileocecal valve. A Sureform® 60mm stapler was used for harvesting and ileo-ileal side-to-side anastomosis. The ileal segment was configured in a "W" shape, and after resection of the staple lines in both extremities, ileobladder anastomosis was performed with a double-armed suture beginning with the posterior aspect of the bladder. The measuring tape was removed and a 9-cm cuff was positioned around the bladder neck. A 61-70cmH<sub>2</sub>O pressure-regulating balloon was implanted in the prevesical space and filled with 24ml. Peritoneum was closed with barbed sutures. The pump was implanted in the right hemiscrotum, and at the end of the procedure, the device was deactivated.

**Results:** The total surgery time was 370 minutes with minimal blood loss. The patient presented with ileus 6 days after surgery, which was managed conservatively. He was discharged home 12 days after surgery.

**Conclusion:**





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This innovative surgical technique offers a precise and less invasive intervention than the open approach. Further research and clinical experience are warranted to validate the long-term efficacy and safety of this approach in SCI patient populations.



## V03

### **First report of heminephrectomy for a rare case of horseshoe kidney tumor employing the new transabdominal lumbar approach for robotic-assisted renal surgery (TALA)**

F Heining<sup>1</sup>; U Bieri<sup>2</sup>; L Hefermehl<sup>2</sup>; P Maletzki<sup>2</sup>; J Adank<sup>2</sup>; C Tschung<sup>2</sup>; T Niemann<sup>2</sup>; A Nocito<sup>2</sup>

1 USZ UniversitätsSpital Zürich; 2 Kantonspital Baden

#### Introduction & Objectives

Surgical resection of tumours arising in horseshoe kidneys poses unique challenges not encountered during surgery in anatomically normal kidneys. The highly variable vascular anatomy, aberrant isthmus anatomy, and fixed, poorly mobile nature of horseshoe kidneys complicate minimally invasive procedures in these patients. Collectively, these anatomic abnormalities increase the risks of vascular injury, incomplete tumour resection, and positive surgical margins during robotic-assisted renal surgery. To overcome these challenges, the novel surgical approach, the transabdominal lumbar approach (TALA) - which integrates the advantages of the transabdominal (TA) and retroperitoneal (RP) techniques, was applied.

#### Materials & Methods

Here, we present an instructional video of TALA as a safe and feasible option for robotic-assisted renal surgery in a patient with a horseshoe kidney tumour.

#### Results

A 53-year-old female with a 8 cm incidentally discovered tumour in the lower pole of a horseshoe kidney underwent robotic heminephrectomy using the TALA technique. Preoperative imaging revealed a midline isthmus with aberrant vasculature, including accessory renal arteries. The patient was placed in a 70° lateral decubitus position. Access was obtained via a 5-port approach with ports placed in the lumbar line. The retroperitoneum was opened by incising the line of toldt. The kidney was mobilized, and the isthmus was approached dorsally. After controlling the aberrant vasculature, the artery and veins were clipped and transected, followed by hilus control. Parenchymal resection was performed under ultrasound guidance. ICG fluorescence imaging helped delineate perfusion during tumour resection. Operative time was 341 minutes with 200 mL estimated blood loss. Total warm ischemia time was 16 minutes. Final pathology showed a chromophobe renal cell carcinoma with negative surgical margins (pT2a pN0 L0 V0 Pn0 R0). The patient was discharged on postoperative day 4 with no complications. At 6-month follow-up, there has been no recurrence.

#### Conclusions



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TALA facilitated robotic-assisted heminephrectomy in a patient with a horseshoe kidney tumour. By combining the advantages of the TA and RP approach, TALA provided optimal instrument manoeuvrability and control of the complex vasculature. An ongoing RCT at our Institution investigates and evaluates the outcome of the TALA versus the RP approach for robotic-assisted renal surgery.



## V04

### Robotic assisted nephroureterectomy in a patient after radical cystectomy

F Wieland<sup>1</sup>; M Walter<sup>1</sup>; H Seifert<sup>1</sup>; J Ebbing<sup>1</sup>; A Hosseini<sup>1</sup>; A Mortezaei<sup>2</sup>

1 Universitätsspital Basel; 2 Universitätsspital Zürich

**Background:** Urothelial carcinoma is a highly aggressive entity of solid tumors. For localized muscle invasive urothelial carcinoma of the bladder, radical cystectomy remains the treatment of choice. Recurrence rate is high, especially in patients having concomitant pTis. For high risk urothelial carcinoma in the upper urinary tract nephroureterectomy is considered standard of care. Here we describe a complete intracorporeal approach of a robotic assisted nephroureterectomy in a patient who underwent robot-assisted radical cystectomy with intracorporeal ileal conduit previously.

**Patient:** A 78-year-old male underwent robotic assisted radical cystectomy with urinary diversion by an ileal conduit due to muscle invasive bladder cancer. Final histology urothelial carcinoma pT2b, pTis, pN0 (0/11), locally R0 with pTis in the dissection margins of both distal ureters after multiple frozen sections. First follow up 3 months postoperative showed no radiologic sign of metastatic disease or local recurrence, however cytology showed high-grade urothelial carcinoma cells. A BCG therapy of the upper urinary tract was conducted. Recurrence of urothelial cancer of the upper urinary tract on the left side was diagnosed by ureteroscopy 18 months after initial surgery. The patient was scheduled for robotic-assisted nephroureterectomy.

**Results:** Surgery was performed with the Da Vinci® Xi system. The left ureter was identified. The kidney vessels were consecutively dissected. The ureter was further exposed until the Wallace anastomosis was reached. The anastomosis was dissolved and both distal ureters resected. Tension free re-insertion of the right ureter to the ileal conduit and placement of a Mono-J-stent were performed. Total operation time was 241 minutes. Total blood loss was 100 ml. There was no need for blood transfusion. Hospitalisation time was 7 days. The histology was pT2, R0. At the follow up 2 months after surgery the patient presented in a good clinical state with no postoperative complications. Unfortunately a CT scan at that time showed disseminated pulmonary metastasis.

**Conclusion:** Nephroureterectomy with a fully robotic-assisted laparoscopic approach is feasible after radical cystectomy with ileal conduit with a reasonable operation time and minimal blood loss. Benefits of the minimal invasive technique can be transferred to this patient population. Due to its aggressive character and high recurrence rate, treatment of urothelial carcinoma remains challenging



## V05

### Single-Port Robotic-Assisted Extraperitoneal Pyeloplasty via Lower Anterior Retroperitoneal Access (LARA): First European Experiences

FJ Haselhoff; CD Fankhauser; C Würnschimmel; P Baumeister; A Mattei

Luzerner Kantonsspital (LUKS)

Introduction: Approved for use in Europe since January 2024, the DaVinci Single-Port robotic system marks a novel development in minimally invasive surgery. It offers several advantages over multiport robotic systems, including access through smaller surgical cavities and reduced incisions, potentially diminishing perioperative pain and enhancing cosmetic outcomes. Additionally, it facilitates novel surgical approaches. This video presentation provides an overview of our initial experiences using this system, focusing on the surgical techniques and perioperative outcomes of our early single-port pyeloplasty cases.

Methods: Procedures were conducted in a supine position using a 2.7 cm incision for lower anterior retroperitoneal access (LARA). Following the setup of the DaVinci SP access kit and system docking, we performed careful dissection to expose the psoas muscle while avoiding lateral extension towards the M. quadratus lumborum. The renal pelvis was accessed with minimal dissection, and the strictured segment of the pyeloureteral junction was excised. The ureter was then spatulated and anastomosed to the pyelon using the Anderson & Hynes technique with two running sutures. We collected baseline and perioperative data, analyzed using descriptive statistics.

Results: Our initial series involved three cases, each completed without intraoperative complications or the need for additional ports. The median operative time was 131 minutes, and the median estimated blood loss was < 50 ml. Patients had their urinary catheters removed on the first postoperative day and were discharged on the second day. Postoperative recovery was notable for the absence of opioid analgesia need, and ureteral J-stents were removed after ten days.

Conclusion: The early results confirm the feasibility of SP-Pyeloplasty, highlighting potential superior outcomes in cosmetic appearance, pain management, and rapid patient discharge.



## V06

### **Prophylactic Lymphovenous Bypass during inguinal lymphadenectomy for penile cancer: A promising strategy to prevent lymphedema of the lower extremities**

N Di Nardo<sup>1</sup>; M Scaglioni<sup>2</sup>; L Zahiti<sup>1</sup>; A Mattei<sup>1</sup>; CD Fankhauser<sup>1</sup>

1 Department of Urology, Cantonal Hospital of Lucerne, Lucerne, Switzerland; 2 Department of Hand and Plastic Surgery, Cantonal Hospital of Lucerne, Lucerne, Switzerland

#### Introduction & Objectives

Penile cancer patients undergoing inguinal lymphadenectomy face a high risk, over 70%, of developing lower limb lymphedema, which impacts their quality of life and increases complications such as leg cellulitis. This study assesses the effectiveness of the Lymphatic Microsurgical Preventative Healing Approach (LYMPHA), concurrent with inguinal lymphadenectomy, in reducing this risk.

#### Materials & Methods

Patients were positioned supine and given a prophylactic 2g dose of Cefazoline intravenously. Indocyanine green was then injected intradermally at the toe web, with lymphatic uptake visualized using a handheld infrared camera. The lymphatic flow and optimal anterior ankle incision site were marked on the skin. Concurrently with the uro-oncological surgeon performing inguinal lymphadenectomy, the plastic surgeon executed the LYMPHA under 20–50x magnification microscopy. Anastomotic LYMPHA security was ensured using either 12.0 Ethilon sutures or paired anastomotic rings, with verification via ICG camera. The radical lymphadenectomy involved a 9cm transverse incision above the crease, flap creation with scissors and bipolar energy, lymphatic ligation or clipping (no ultrasonic or advanced bipolar use), and monobloc lymph node package removal within predefined anatomical borders. Post-hemostasis and ICG camera inspection followed, with drainage insertion, subcutaneous Vicryl 3.0 sutures, and staple-assisted skin closure. Ankle circumference measurements were recorded preoperatively and at each follow-up visit.

#### Results

Three patients underwent LYMPHA; two bilaterally and one unilaterally. Total operative times were 131 and 201 minutes for bilateral cases, and 144 minutes for the unilateral case. This latter procedure included a glansectomy, the removal of a bulky 6 cm node with extranodal extension, and a dynamic sentinel lymph node biopsy of the contralateral side. All patients were discharged within 2 days, with no lower leg cellulitis or complications reported within the initial 90 postoperative days. The patient with a unilateral case was confirmed as pN3 and subsequently underwent a robotic pelvic lymph node dissection 2 weeks later. No lymphedema was observed at the 30-day postoperative check, indicated by identical ankle circumference measurements across all patients (difference in all patients 0.0cm).



## Conclusions

Preliminary results suggest that preventive LYMPHA during inguinal lymphadenectomy may help avoid lymphedema.



## V07

### **Video comparative analysis of modern dynamic sentinel node biopsy techniques in european referral centres: Practices, variations, and opportunities for research**

N Di Nardo<sup>1</sup>; S Yan<sup>2</sup>; B Ayres<sup>2</sup>; N Watkin<sup>2</sup>; M Longoni<sup>3</sup>; M Bandini<sup>4</sup>; CD Fankhauser<sup>1</sup>

<sup>1</sup> Department of Urology, Cantonal Hospital of Lucerne, Lucerne, Switzerland; <sup>2</sup> Department of Urology, St George's Hospital, London, UK; <sup>3</sup> Department of Urology, Urological Research Institute, San Raffaele Scientific Institute, Milan, Italy; <sup>4</sup> Division of Urology, IRCCS European Institute of Oncology, Milan, Italy

#### Introduction & Objectives

Dynamic sentinel node biopsy (DSNB) is a less invasive yet accurate surgical method for staging intermediate to high-risk penile cancer. Developed in the 1970s, advancements in surgical approach and technique have occurred. This study by the EAU YAU Penile and Testis Cancer working group compares current DSNB practice and techniques among European referral center surgeons.

#### Materials & Methods

An online survey, based on 29 questions, was sent to members of the EAU YAU Penile and Testis Cancer working group. These questions delved into various facets of DSNB, encompassing lymphoscintigraphy techniques, tracer, antibiotic prophylaxis, and post-operative patient care. Each participating centre also video recorded a DSNB procedure in a standardised manner for a comparative analysis of technical nuances.

#### Results

Responses were received from 12 surgeons, across referral centres from nine European countries. Among the recruited surgeons, 83% of surgeons performed >10 DSNB procedures per year, and 42% performed >50 per year. There is a broad consensus on the technique and site of radiopharmaceutical agent injections across the majority of centres. With respect to imaging, 58% of centres use lymphoscintigraphy, 17% use SPECT-CT, while 25% utilise both imaging modalities. The predominant choice of dye is Patent Blue, but 25% of centres opt for Indocyanine Green (ICG). Notable variability exists in the choice of surgical incision sites and lymphatic ligation techniques. However, the consensus is leaning towards not leaving a wound drain post-procedure. 83% of centres adopts antibiotic surgical prophylaxis, with many not continuing it peri-operatively or recommending post-operative antibiotics. A quarter of centres would advocate for patients to be discharged with thromboprophylaxis, either using low molecular weight heparin or thromboembolic deterrent stockings. On average, the post-procedure length of stay in hospital is 1 day.

#### Conclusions

There is evident variation in certain procedural aspects and post-operative management, in particular concerning antibiotics, wound drainage, and thromboprophylaxis. This study has also demonstrated that newer techniques such as ICG tracer and SPECT-CT are being adopted by some referral centres in Europe.





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The current landscape highlights the lack of high-quality evidence in this area, underlining the need for extensive multi-centre research and further exploration into the surgical and oncological results.



## V08

### ROBOTIC VESICourethRAL ANASTOMOSIS RECONSTRUCTION WITH Y-V PLASTY FOR VESICourethRAL STRICTURE AFTER ROBOTIC ASSISTED RADICAL PROSTATECTOMY

J Santos<sup>1</sup>; M Valerio<sup>2</sup>; B Peyronnet<sup>3</sup>; O Windisch<sup>2</sup>

1 HUG Hôpitaux Universitaires de Genève; 2 HUG - Hôpitaux Universitaires de Genève; 3 Rennes University Hospital, France

#### Objective:

To demonstrate the technique of Robotic Y-V plasty for vesicourethral stricture after robotic-assisted radical prostatectomy.

#### Methods:

A 58-year-old patient underwent Robotic Radical Prostatectomy in March 2023 for pT2 pNx R0 adenocarcinoma. Subsequently, he developed a vesicourethral stricture, for which one DVIU was performed in September 2023, followed by an early obliterative recurrence that required a suprapubic catheter. He required a "cut to the light DVIU" in January 2024 for an obliterative stricture relapse. After this intervention, a urethrogram was performed, revealing a new relapse of an almost obliterative 1.5 cm stricture. After discussion of a re-do anastomosis or Y-V plasty, a Robotic Y-V plasty was planned since the recurrence was not obliterative. Robotic trocars were placed as in a standard radical robotic prostatectomy. Robotic-assisted dissection was performed to open the space of Retzius, release adhesences and mobilize the bladder. A cystoscope was inserted through the urethra by the assistant and helped localize the stricture with the help of the Firefly. The stricture was then incised anteriorly, and a V-shaped bladder flap was advanced into the stricture in a Y-V plasty fashion. An 18Fr catheter and a 12 ch suprapubic catheter were placed. Total operative time was 217 minutes, blood loss < 100 ml.

#### Results:

There were no immediate post-operative major complications. The patient was followed up with a voiding urethrogram at three weeks and then at 3 months after surgery.

#### Conclusion:

Robotic vesicourethral anastomosis reconstruction with Y-V plasty is a feasible and effective technique for managing a difficult reconstructive problem. This technique is indicated in case of non-obliterative stricture at time of surgery. We recommend avoiding repeated endoscopic treatment that can complexify the intervention, and referring these patients to reference centers quickly



## V09

### A Standardized Preoperative Workflow and Surgical Protocol for Testicular Lesions: Personalized Medicine in Six Steps

N Di Nardo; S Sigg; P Baumeister; A Mattei; CD Fankhauser  
Department of Urology, Cantonal Hospital of Lucerne, Lucerne, Switzerland

#### Introduction

Testicular lesions present symptomatically or as incidental findings during imaging procedures. Given the young patients' age and the malignancy risk, there is a need for rapid but thoughtful preoperative evaluation. Many men rush to surgery without addressing critical functional aspects such as fertility preservation and the feasibility of testis-sparing procedures or prosthesis. These challenges become more pronounced when cases occur outside of regular hours and are handled by urologists in training. This educational video aims to standardize the preoperative workflow and outlines the surgical steps reliably.

#### Methods

We first measure serum markers (AFP,  $\beta$ -hCG, LDH, and M371). Patients interested in fertility preservation undergo testing for HIV, Hepatitis B, and C. Following these tests, patients are re-referred for semen cryopreservation. Should the semen analysis reveal abnormalities, onco-testicular sperm extraction (ONCO-TESE) is recommended. Tumor enucleation is considered only if serum tumor markers are negative and ultrasound findings support its feasibility. In these cases, we proceed with scheduling the patient for frozen section analysis. Additionally, discussions regarding testicular prostheses form an essential part of the consultation.

#### Surgical Steps:

1. Use clippers for shaving, disinfect, and drape the patient and penis, leaving the scrotum fully exposed.
2. < 3cm skin incision above the external inguinal ring, palpated through the scrotum.
3. Deliver the inguinal cord and avoid clamping if testis-sparing surgery is attempted.
4. Gently deliver the testis, sparing the gubernaculum if testis-sparing surgery is indicated; otherwise, dissect it carefully to avoid scrotal skin damage.
5. If testis-sparing is not performed, incise the external oblique muscle fascia, exposing the deep inguinal ring, then clamp and ligate the ductus deferens and vascular structures separately.
6. Close the external oblique muscle fascia and the skin incision, ensuring effective hemostasis.

#### Conclusion

Our algorithm provides a rapid diagnostic work-up for testicular lesions, specifying which diagnostics are necessary, when they should be conducted, and in which patients. This results in a clear, step-by-step guide for urologists in training.



## V10

### **AdVance™ XP male sling procedure to treat mild to moderate post-prostatectomy stress urinary incontinence.**

A Perrin<sup>1</sup>; L Campeau<sup>2</sup>

1 Hôpitaux universitaires de Genève; 2 McGill University

#### Contexte & Objectifs:

Synthetic slings to treat post-prostatectomy stress urinary incontinence are gaining acceptance among functional and reconstructive urologists since the early 2000s. The AdVance™ XP male sling is indicated in men suffering from mild to moderate stress urinary incontinence, without prior pelvic radiotherapy or transurethral surgery. This video presentation aims to demonstrate the AdVance™ male sling procedure, providing a detailed step-by-step guide for specialised surgeons in the field of urinary incontinence.

#### Matériel & Méthode:

In this video, we present a case of a man with clinically confirmed bothersome mild pure stress urinary incontinence following prostatectomy. Conservative management didn't show any improvement, and the patient was willing for a more efficient treatment. After careful counselling, he accepted to undergo an AdVance™ male sling procedure. The video emphasizes key equipment, patient positioning, and surgical steps.

#### Résultats:

The video shows a successful AdVance™ male sling procedure. Key surgical steps include a midline perineal incision followed by dissection of the subcutaneous tissue to the bulbospongiosum muscle, which is open in the midline exposing the corpus spongiosum. The central tendon is incised to increase mobility of the corpus spongiosum. An incision is made 1-2 cm below the adductus longus tendon and lateral to the ischiopubic ramus, and a spinal needle may be used to identify the area of insertion at the obturator foramen. The AdVance™ helical needle is inserted through the incision and the obturator foramen until it reaches the perineal incision. The sling is secured to the needle and then pull back through the incision. The procedure is repeated on the opposite site. Tensioning of the sling is performed by pulling on both arms, and a cystoscopy is done to assess the coaptation of the external sphincter.

The procedure resulted in resolution of the patient's incontinence, highlighting the effectiveness of this surgical approach.

#### Conclusion:

The AdVance™ male sling procedure is a safe and effective surgical option for man suffering from postprostatectomy stress urinary incontinence without prior pelvic radiotherapy or transurethral surgery.



## V11

### Laparoscopic inguinal lymph node dissection in penile cancer as the modern mainstay approach: a video presentation.

S Narimani; P Bohner; F Crettenand; I Lucca

CHUV Lausanne University Hospital and University of Lausanne

#### Context

Surgical staging of inguinal lymph node metastasis is the standard of care in cases of penile cancer with palpable lymph nodes or cN0 patients with high risk of lymph node recurrence. Presence and number of lymph node metastases are considered the single most important prognostic factors for survival in penile cancer. The open dissection is currently the standard of care, but it is associated with high morbidity such as wound infection, skin necrosis and increased lymphocele. More recently, the minimally invasive approach has emerged because of its lower postoperative morbidity, especially for cN0 patients.

#### Materials and methods

We will present a video of a bilateral laparoscopic modified lymph node dissection in a 75-year-old man who was diagnosed with a pT3cN0cM0 R0 epidermoid penile carcinoma after initial partial penectomy six weeks earlier. Given the high risk of lymph node metastases, a modified bilateral inguinal lymph node dissection was advised and performed. The patient is otherwise known for an adenocarcinoma of the lower rectum treated with radio chemotherapy and abdomino-perineal amputation in 2011 as well as a metabolic syndrome. He has a Charlson comorbidity score of 6.

#### Results

(video)

#### Conclusion

The laparoscopic minimally invasive lymph node dissection is a surgically and oncologically safe option for high risk cN0 penile cancer patients. Because of its reduced morbidity, it should be suggested for these patients in clinical practice, to avoid unnecessary costs of the robotic approach.



## V12

### Primary RPLND as a New Standard of Care in Stage 2 Germ Cell Tumors? A Video Case of a Robotic Bilateral Template

C Malkmus; F Haselhoff; P Baumeister; A Mattei; C Fankhauser

Luzerner Kantonspital

#### Introduction

The standard treatment for Clinical Stage (CS) 2 non-seminomatous germ cell tumor (NSGCT) typically includes chemotherapy followed by retroperitoneal lymph node dissection (RPLND) for residuals. An emerging alternative involves primary RPLND followed by adjuvant chemotherapy in selected cases. This "surgery first" approach provides histological clarity, potentially reduces the need for chemotherapy and may eliminate complexity of post-chemotherapy RPLND. While robotic RPLND can reduce morbidity, shorten hospital stays and improve cosmetic outcomes, a major criticism is the use of only unilateral templates in most cases, often due to more familiar patient positioning and access. In this video case, we present a bilateral robotic RPLND without nerve-sparing.

#### Methods

A 19-year-old individual with intellectual disability and obesity, diagnosed with a mixed germ cell tumor (GCT) of the right testis, presented seven months post-orchidectomy with a marker-negative 41mm recurrence in the preaortic region. A robotic RPLND using the DaVinci Xi™ system (Intuitive Surgical Inc, USA) with four robotic (8mm) and two assistant ports (12mm and 5mm) was performed.

#### Key Procedure Steps:

The patient was positioned with a 40° head-down tilt, and after docking an incision of the peritoneum up to the ligament of Treitz was performed

The peritoneal compartment was suspended to the abdominal wall using prolene 4-0/hemoloc.

The patient was repositioned to a 10° Trendelenburg tilt only

Preparation and visualization of the renal hilum and lateral dissection up to the ureter were performed.

Para- and intraaortocaval lymphatic tissue was dissected using the "split'n'roll" technique.

Complete dissection of the template from the renal vascular axis (cranial) to bilateral ureters (lateral). Redocking and reposition of robotic system to resect the gonadal vein.

#### Results

Final pathology revealed pure teratoma pN2 (2/49). The operation lasted 275 minutes, with < 50ml of blood loss. The patient was discharged from the hospital on the second postoperative day without any complications during follow-up.



## Conclusion

The described access with suspension of the peritoneal compartment allows a clean and safe robotic bilateral template dissection. This technique has the potential to become a new standard of care in selected men with stage 2 germ cell tumours.



## P001

### **Short-term low-dose dutasteride treatment and its effect on standardized uptake values (SUVmax) in prostate-specific membrane antigen (PSMA)-PET imaging: A pilot study with comparison to histology after template biopsy**

L Praetzel

Universitätsspital Zürich

Background: Prostate-specific membrane antigen (PSMA) based imaging and therapy are increasingly used in the management of prostate cancer. However, limitations are a low PSMA surface expression in certain patients. We have previously shown that different concentrations of Dutasteride, a 5-alpha-reductase inhibitor generally used for the treatment of benign prostatic enlargement, induce PSMA expression in vitro and in vivo.

The aim of this pilot study was to analyze the effect of short-term Dutasteride treatment on standardized uptake values (SUVmax) in PSMA-PET imaging and the immunohistochemical expression of PSMA.

Methods: A total of four patients diagnosed with intermediate and high-risk prostate cancer were included. Following a first PSMA-PET/MRI of the prostate, all patients received 0.5mg of Dutasteride orally once daily for 7 days. Afterwards, a second PSMA-PET/MRI of the prostate and a template biopsy was performed.

We compared the maximal standardized uptake value (SUVmax) of PSMA-positive lesions before and after treatment with Dutasteride. In addition, histopathological specimens from PSA-positive lesions and negative controls were analyzed (Gleason Score, PSMA expression)

Results: An increase in SUVmax was observed in all patients following short-term treatment with Dutasteride with a mean increase of 14%. Histological analysis confirmed prostate cancer with a Gleason Score  $\geq 3+4=7a$  in PSMA-positive lesions with increased SUVmax following stimulation. One PSMA-positive lesions with a decrease in SUVmax following stimulation was negative for prostate cancer in the biopsy specimen.

Conclusion: This pilot study showed an increase in SUVmax in PSMA-positive prostate cancer lesions following short-term treatment with Dutasteride treatment for 7 days. Short-term Dutasteride treatment prior to PSMA-PET imaging may have the potential to increase the detection rate in patients with prostate cancer. Further studies need to explore the observed effect in larger patient cohorts.





## P002

### **29MHz Micro-Ultrasound for Perineal Prostate Biopsies in Local Anesthesia without Peri-operative Antibiotic Prophylaxis: Initial Swiss Experiences on Feasibility, Safety, and Biopsy Results**

K Barwari; N Grossmann; P Baumeister; A Mattei; C Fankhauser

LUKS Luzern

#### Introduction

Traditionally, transrectal ultrasound (TRUS) with a < 14MHz ultrasound probe is the standard method for guiding perineal prostate biopsies. This study assesses the feasibility, safety, and diagnostic accuracy of using a < 14MHz TRUS compared to a higher-resolution micro-ultrasound (microTRUS) probe.

#### Methods

We followed men undergoing TRUS-guided perineal prostate biopsies prospectively. The procedures required no preoperative urine cultures, enemas, catheter, or perioperative antibiotics. Biopsies were conducted using TRUS (BK Medical) or, starting April 2024, with microTRUS (ExactVu). We collected clinical and pathological variables and recorded complications. Clinically significant prostate cancer (csPCa) was classified as ISUP  $\geq 2$ .

#### Results

From 11/2023 to 04/2024, we performed 119 perineal prostate biopsies, 84 with TRUS and 35 with microTRUS. Except for four cases, all biopsies were done under local anesthesia. The median age was 66 years, and median PSA was 9. Median prostate volume was 47cc. Pre-biopsy MRI was conducted in all but four men. The median number of cores differed significantly between TRUS (13) and microTRUS (11) ( $p < 0.001$ ).

Using microTRUS, we completed 11 biopsies per day with each procedure scheduled for 20 minutes. One patient with a history of repeated urinary retention, experienced another urinary retention after biopsy requiring catheterization; otherwise, no complications were noted. Clinically significant prostate cancer was detected in 60% of biopsies guided by both TRUS and microTRUS. For PI-RADS lesions 3, 4, and 5, csPCA was found in 0%, 27%, and 67%, respectively. Of the 103 men who underwent both targeted and systematic biopsies, systematic biopsies were negative in 60% (62/103).

#### Conclusion

Our initial data indicates that our microUS biopsy program maintains our standards for safety and feasibility. Future analyses will focus on the implementation of PRIMUS score-guided biopsies and re-reading of external MRI scans. We plan to report updated results from over 150 microUS cases in September 2024.



## P003

### Prostatic artery embolization at the Cantonal Hospital St. Gallen: minimally invasive, comparable and safe?

P Lyatoshinsky<sup>1</sup>; V Geisser<sup>2</sup>; M Pratsinis<sup>2</sup>; O Burkhardt<sup>2</sup>; G Müllhaupt<sup>3</sup>; D Abt<sup>4</sup>; L Hechelhammer<sup>2</sup>; D Engeler<sup>2</sup>

<sup>1</sup> Kantonsspital St. Gallen/Spitalzentrum Biel; <sup>2</sup> Kantonsspital St. Gallen; <sup>3</sup> Spital Thun

<sup>4</sup> Spitalzentrum Biel

#### Introduction

Prostatic artery embolization (PAE) remains under investigation in the recent 2024 EAU guidelines. Since July 2017 all patients with written consent, surgically treated for lower urinary tract symptoms (LUTS)/benign prostatic obstruction (BPO) at Cantonal Hospital St. Gallen are enrolled in a prospective multi-arm BPH-registry. Patients that are enrolled in other prospective trials were not included to the registry. In this retrospective analysis we summarize the technical aspects of PAE in an everyday situation.

#### Materials and Methods

We systematically collected interventional data of patients undergoing a prostatic artery embolization, previously enrolled in our BPH-registry. The executing interventional radiologist, time of procedure, type of anesthesia and analgesia, embolization approach, amount of contrast medium, size of catheters and spheres, fluoroscopic dose and time, as well as complications were reported. The results were finally compared and discussed with published data and official regulations.

#### Results

112 cases were analyzed. The majority of PAE (77%) was performed by the same radiologist (L.H). 84% of cases were embolized bilaterally. The time of procedure averaged 100 minutes (55 – 200min). 97% were conducted under local anesthesia. In 3 patients the embolization was performed under general anesthesia. 85% of patients reported VAS "0", 3% needed additional intravenous analgesia. A mean of 146 ml of contrast medium was injected. Microspheres varied between 150 and 400 µm. The mean dose-area product was 15,9 µGy m<sup>2</sup> (8 - 62 µGy m<sup>2</sup>), with an average fluoroscopic time of 46 min (19 – 91min).

#### Discussion and Conclusion

Bilateral prostatic artery embolization was reported to be one of several predictors for better clinical outcome, by Bilhim et al. In comparable cohorts, the average rate of bilateral PAE was 82%. In our cohort we can report 84% of successful bilateral embolization. With 97% of procedures performed under local anesthesia, PAE seems to be a true minimal invasive approach. In regards of safety, we did not report any intraprocedural complications. The average dose-area product and fluoroscopy time meets the diagnostic reference values of the Swiss Federal Office of Public Health (FOPH – BAG). With our data we state that PAE seems to be a safe procedure in an everyday setting and a true minimal invasive approach in the landscape of BPO treatments.



## P004

### Prostatic Artery Embolization in Patients with Advanced Prostate Cancer: A Prospective Single Center Pilot Study

O Burkhardt<sup>1</sup>; B Hörner<sup>1</sup>; D Abt<sup>2</sup>; L Hechelhammer<sup>3</sup>; O Kim<sup>3</sup>; A Omlin<sup>4</sup>; H Schmid<sup>5</sup>; D Engeler<sup>1</sup>; V Zumstein<sup>6</sup>; G Müllhaupt<sup>7</sup>

<sup>1</sup> Klinik für Urologie Kantonsspital St. Gallen; <sup>2</sup> Klinik für Urologie, Spital Biel; <sup>3</sup> Klinik für Radiologie, Kantonsspital St. Gallen; <sup>4</sup> Onkozentrum Zürich und Uroonkologisches Zentrum, Hirslanden Zürich; <sup>5</sup> UroPoint; <sup>6</sup> Urologiezug, Zug, Switzerland; <sup>7</sup> Klinik für Urologie, Spital Thun

**Purpose** To assess efficacy and safety of prostatic artery embolization (PAE) in patients with advanced prostate cancer (PCa).

**Materials and Methods** In this prospective single-center, single-arm, pilot study, 9 men with advanced PCa underwent PAE. PAE was performed with the use of 250–400  $\mu$ m Embosphere microspheres (Boston Scientific, Natick, Massachusetts, USA). International Prostate Symptoms Score (IPSS), urinary peak flow (Q<sub>max</sub>) and post-void residual urine volume (PVR) was assessed at 12 weeks and up to 12 months. Changes in total prostate volume (TPV) and tumor responses by PSA, changes in tumor volume and evaluation of tumor regression by multiparametric magnetic resonance imaging were assessed at 12 weeks after PAE.

**Results** IPSS reduction in median 6 points (0–19) and a significant decrease in PVR from median 70 (20–600) mL to 10 (0–280) mL could be achieved within 12 weeks after PAE. Median TPV and tumor volumes (TV) increased slightly from 19.7 (6.4–110.8) mL to 23.4 (2.4–66.3) mL and 6.4 (4.6–18.3) mL to 8.1 (2.4–25.6) mL at a median of 12 weeks after the procedure. Significant tumor necrosis (C 50%) was found in one patient. Eight patients showed 50% of viable tumor on post-PAE MRI according to MRI. Only one Clavien-Dindo Grade 1 adverse event related to PAE occurred.

**Conclusions** PAE with the use of 250–400  $\mu$ m microspheres is feasible, safe and effective in some patients with advanced PCa regarding functional outcomes. A cytoreductive effect might be achieved in individual patients but must be further assessed.



## P005

### Reducing the Risk of Pathology Upgrading from Biopsy to Prostatectomy: Results of Robotic-assisted Transperineal Fusion Prostate Biopsy with Trizonal Sampling

V Alargkof Anagnostou<sup>1</sup>; M Walter<sup>1</sup>; P Trotsenko<sup>2</sup>; C Engesser<sup>1</sup>; L Nueesch<sup>3</sup>; H Seifert<sup>1</sup>; C Wetterauer<sup>1</sup>

1 Universitätsspital Basel; 2 Landeskrankenhaus Wiener Neustadt; 3 University of Basel

#### Background and Objectives:

Concordance between biopsy and prostatectomy pathology could help optimize staging, treatment selection, and patient outcomes in prostate cancer. This study aims to evaluate the rates of ISUP grade migration in a contemporary cohort biopsied using a robotic-assisted transperineal MRI/ultrasound fusion approach (RA-TP-FBx) utilizing a trizonal sampling scheme and treated with robotic-assisted radical prostatectomy (RARP).

#### Materials and methods:

All RA-TP-FBx cases in the prospectively collected databank of a tertiary center were investigated. All biopsies were performed with the iSR'obot Mona Lisa (Biobot) under general anesthesia. Cases with PI-RADS lesions  $\geq 3$  on MRI, received trizonal sampling (targeted, halo, and systematic biopsies). Halo biopsies were perilesional or near-target biopsies in the penumbra of the region of interest. The total ISUP grade at prostate biopsy was compared with the final pathology in cases that were treated with RARP. Demographic, MRI, pathological, and immunohistochemical data were included. A clinically relevant upgrading (CRU) was defined as any increase from ISUP  $\leq 2$  to any higher ISUP. Concordance rates were analyzed with kappa statistics.

#### Results:

A total of 438 RA-TP-FBx were performed from January 2020 to October 2023. Out of those, 97 patients with a positive biopsy went on to receive an RARP at the same institution (22.2 % of all patients receiving a biopsy). Concordance between ISUP grade at prostate biopsy and final prostatectomy specimen was observed in 74/97 cases (76.3 %). ISUP downgrading and upgrading from biopsy at prostatectomy was seen in 12/97 cases (12.4 %) and 11/97 cases (11.3 %) respectively. CRU was observed in 6/97 cases (6.2 %). The kappa coefficient for concordance was 0.57. The median prostate volume was 42.8 ml (IQR, 31-58), while the median number of cores was 27 (IQR, 20-31).

#### Conclusions:

R-TP-FBx in this cohort displayed a minimal CRU and one of the highest concordance rates (76.3%) reported for targeted prostate biopsies, particularly considering the reported 40 % - 50 % range of previous studies.



## P006

### Implementation of a robotic urologic surgery program within a specialized pathway in Fribourg: results at one year.

N Fleury<sup>1</sup>; M Martins-Favre<sup>2</sup>; G Lesec<sup>3</sup>; C Hugonnet<sup>4</sup>; G Wirth<sup>5</sup>

<sup>1</sup> Cabinet d'Urologie, Fribourg; <sup>2</sup> Imagerive / SIPC; <sup>3</sup> Institut de Pathologie, Unilabs; <sup>4</sup> Cabinet d'Urologie, Bulle; <sup>5</sup> Centre Urologie Générale Beaulieu / SIPC

Introduction: Urologic care in the canton of Fribourg differs from Swiss urban centers by the absence of a dedicated urologic division (academic or private). Efforts to provide its population with state-of-the-art quality of care culminated in the purchase of a da Vinci X system by the non-profit Daler Hospital in April 2023. From the onset, we aimed to apply standards from higher volume academic centers to our patients (who represent a share of all locally treated men): expert prostate imaging, targeted fusion biopsies, clinician-oriented uropathology, and specialized robotic surgery. In this study, we critically analyze the outcomes of this effort at one year.

Patients and methods: Data on prostate MRIs, biopsy positivity, surgical outcomes and 30d-complications were prospectively collected in a quality control setting. MRIs were performed and read by a dedicated urologic radiologist according to Pirads v2. Biopsies were performed by NF and ChH using the Uronav system. Prostate biopsy pathology was interpreted according to ISUP 2019 and graphically represented with MRI targets for ease of study prior to surgery. Whole-mount sections of prostatectomy specimens provided visual feedback on capsular penetration and margin status. Gleason scoring was assisted with artificial intelligence software (IBEX Galen). Surgical outcome measures included complications and the trifecta of radical prostatectomy.

Results: Between 04/2023 and 04/2024, 149 MRI-guided fusion biopsies were performed. Positivity rate was 73%. Concordance with Pirads 4 and 5 lesions was 83%. 43 patients were operated with the da Vinci X system by the authors (GW, NF), of which 34 were radical prostatectomies with lymph node dissection. There were no conversions to laparotomy and no blood transfusions. Length of surgery significantly decreased over time. 30d complication rate was 1/43 (2%) (prolonged catheterization due to anastomotic leakage). R1 rate was 10% (pT2: 9% pT3: 10%). One patient remains incontinent (2 pads or more) at 2 months, none at 3 months. Length of follow up is insufficient for potency outcomes.

In conclusion, these results demonstrate that high quality of care can be delivered locally in a less deserved region of Switzerland. Key elements of diagnosis and treatment are addressed by a network of experts, independently of their affiliation and institution. We believe that the success of this initial robotic program is rooted in the high standards of past academic training.



## P007

### The interaction of structured data using openEHR and Large Language Models for Clinical Decision Support in Prostate Cancer

C Wetterauer<sup>1</sup>; P Kaiser<sup>2</sup>; S Yang<sup>2</sup>; M Bach<sup>2</sup>; C Breit<sup>2</sup>; K Mertz<sup>2</sup>; B Stieltjes<sup>2</sup>; J Ebbing<sup>2</sup>; M Henkel<sup>2</sup>

1 Universitätsspital Basel; DPU, Krems ; 2 Basel University Hospital

**Background:** Multidisciplinary teams (MDTs) are essential for cancer care but are resource-intensive. Decision-making processes within MDTs, while critical, contribute to increased healthcare costs due to the need for specialist time and coordination. The recent emergence of large language models (LLMs) offers the potential to improve the efficiency and accuracy of clinical decision-making processes, potentially reducing costs associated with traditional MDT models.

**Methods:** We conducted a retrospective study of 171 consecutively treated patients with newly diagnosed prostate cancer. Relevant structured clinical data and the European Association of Urology (EAU) pocket guidelines were provided to two LLMs (ChatGPT-4, Claude-3-Opus). LLM treatment recommendations were compared to actual treatment recommendations of the MDT meeting (MDM).

**Results:** Both LLMs demonstrated an overall adherence of 93% with the MDT treatment recommendations. Discrepancies between LLM and MDT recommendations were observed in 15 cases (9%), primarily due to lack of clinical information that could be provided to the LLMs. In 5 cases (3%), the LLM recommendations were not in line with EAU guidelines despite having access to all relevant information.

**Conclusions:** Our findings provide evidence that LLMs, in conjunction with structured data, can provide accurate treatment recommendations for newly diagnosed prostate cancer patients, with significant potential to reduce healthcare costs. LLMs have the potential to streamline workflows, promote cost-effective decision-making and improve resource allocation, particularly in settings where access to specialized expertise may be limited.



## P008

### **Exploring Strategies to Enhance Patient Adherence to an E-Health Application Post-Prostatectomy and the Implications of Non-Adherence on Reported Clinical Outcomes: Preliminary Findings from a Mixed-Methods Implementation Study**

N Bauer<sup>1</sup>; B Hofstetter<sup>2</sup>; A Ort<sup>2</sup>; S Müller<sup>3</sup>; H Coscrato Bachmayr<sup>3</sup>; J Joseph Thomas<sup>3</sup>; G Gariglio<sup>3</sup>; A Treis<sup>3</sup>; P Baumeister<sup>1</sup>; A Mattei<sup>1</sup>; CD Fankhauser<sup>1</sup>; C Würnschimmel<sup>3</sup>

1 Luzerner Kantonsspital, Department of Urology; 2 Universität Luzern; 3 Luzerner Kantonsspital (LUKS)

#### Introduction

Documenting functional and oncological outcomes is essential during follow-ups to ensure the quality of treatment and prompt early intervention in case of complications or recurrence. Traditional follow-up, led by healthcare professionals are increasingly challenging due to workforce shortages. As a result, there is a growing reliance on software-supported automated patient-reported outcome measurements (PROMs). Despite the implementation of such a tool at our institution, patient adherence has been notably low, a trend consistent with literature indicating decreasing patient engagement with e-health applications over time. Furthermore, we hypothesize that non-adherence may correlate with worse outcomes, potentially skewing the results of clinical trials that use routinely collected clinical data. This study aims to explore the underlying reasons for non-adherence and to compare the clinical outcomes of patients who are adherent versus those who are non-adherent to the automated PROMs.

#### Methods

We extracted uro-oncological data for men treated with radical prostatectomy at our department from 01/2022-10/2023, sourced from the Swiss Urology Prostate Cancer Registry. Follow-up data were collected via MeinLUKS, a web- and smartphone-based application designed to automatically request patient-reported outcome measures (PROMs) and clinical data. Quantitative and qualitative telephone interviews were performed.

#### Results

Of 262 men, we report the pilot results of the first 30 patients. Of these 17 men agreed to be interviewed, 59% were users (median age 67) and 41% were non-users (median age 70). In quantitative analyses, the digital affinity of users compared to non-users had a mean of 3.7 versus 2.5 and believed that MeinLUKS simplifies health data organization (mean, 4.2 versus 2.8). Both exhibited little concerns about data security (mean, 2 versus 1.8), and both were satisfied with the medical treatment (mean, 4.8 versus 4.7). We could not find a difference in postoperative EPIC-26 subdomains.



## Conclusion

Automated follow-up may enhance clinical care by identifying unfavorable outcomes more quickly. The survey discovered potential further improvements to increase patient adherence to MeinLUKS, such as optimization of patient registration, information, and the possibility to include complication reporting.





## P009

### Anxiety and health-related quality of life in men with prostate cancer undergoing focal therapy: a prospective single-arm phase II trial

J Sonderer<sup>1</sup>; D Eberli<sup>2</sup>; A Mortezaei<sup>2</sup>

1 Kantonsspital Sankt Gallen; 2 Universitätsspital Zürich

**Purpose:** Standard therapeutic approaches for the treatment of significant prostate cancer are up to date whole gland therapies. They offer good oncological safety yet come with treatment side effects that have an impact on patients' quality of life. Current experimental treatment options such as HIFU aim at lowering treatment side effects and therefore presumably have less negative impact on patients' quality of life. In this study we examined the impact of HIFU treatment in men with significant Prostate Cancer using standardized questionnaires such as HADS, MAX PC and FACT P.

**Materials and Methods:** In this single center, prospective study, 103 men were treated between May 2014 and June 2019. To localize prostate cancer multiparametric magnetic resonance imaging and transperineal saturation prostate biopsy was performed then focal ablation was performed using high intensity focused ultrasound. Patients were asked to fill out HADS, MAX PC and FACT P questionnaires before and 12 months after treatment. The study endpoint was to determine a clinical relevant shift in QoL questionnaires.

**Results:** Mean patient age was 66.9 years, ranging from 52 -78 years. Mean serum PSA was 6.71 ng/ml, (range: 1.03 - 14.9ng/ml). Gleason Scores after TTSPB were distributed as follows: Gleason 6: 8 patients (8%), Gleason 7a: 67 patients (65%), Gleason 7b: 28 patients (27%). Median Memorial Anxiety Scale for Prostate Cancer Anxiety subscale Score at baseline and 12 months were 5.5 (Interquartile Range IQR =2.0 to 10.0). and 3.5 (IQR= 1.0 to 6.0,p=0.03), respectively. Median Memorial Anxiety Scale for Prostate cancer PSA Anxiety subscale Score at baseline was 0 and remained 0 after 12 months (p=0.198). Median Memorial Anxiety Scale for Prostate cancer Fear of Recurrence subscale score at baseline was 4.0 (IQR= 1.25 to 5.0) and 2.5 (IQR 0 to 4.0) at 12 months after treatment (p=0.04). Median HADS anxiety score at baseline was 4.0 (IQR= 1.0 to 7.0) and at 12 months 7.0 (IQR 2.0 to 7.0) respectively (p=0.02), median HADS depression score at baseline was 2.0 (IQR= 0 to 7.0) and at 12 months 7.0 respectively (IQR= 1.0 to 7.0) (p=0.003). Median FACT P Score at baseline was 137 (IQR= 125 to 145) and remained 137 (IQR= 128 to 143) at twelve- month control (p=0.79).

**Conclusion:** Focal HIFU therapy of the prostate leads to a low psychological distress leaving patients in good quality of life.



## P010

### How many patients undergoing radical prostatectomy are eligible for prostate hemi-ablation?

M Laurent; D Benamran<sup>1</sup>; C Iselin<sup>1</sup>; M Valerio<sup>1</sup>; O Windisch<sup>1</sup>

<sup>1</sup> Hôpitaux Universitaires de Genève

#### Introduction

Focal therapy (FT) is a less invasive treatment than whole-gland therapy, targeting the index lesion with a treatment margin. Hemiablation (HA) is the most pragmatic type of FT in which anatomical landmarks define margins, and has shown fewer complications. This study aimed to retrospectively identify patients that would have been eligible for HA among consecutive patients that underwent radical prostatectomy (RP) between 2017 and 2020 in our institution.

#### Methods

Patient data were obtained from the Geneva Prostate Cancer Centre registry. Patients with mpMRI, systematic (SB) and targeted biopsies (TB) were included. Patients with previous TURP, hormono- or radiotherapy, incomplete biopsy dataset, or lack of SB or TB were excluded. Eligibility for HA was defined as follows ( $\leq$  cT2c, PSA  $\leq$  15, unilateral, organ-confined visible index lesion, absence of contralateral PI-RADS  $\geq$  4 lesion, positive TB, absence of contralateral csPCA). RP specimen were used to collect histological data; csPCA was considered as ISUP  $\geq$  2 or 1 with lesion volume  $>$  1.3ml.

#### Results

After exclusion, 97 patients were included. Mean PSA was 9.02. A median of 9 SB (2 positive) and 4 TB (3 positive) were obtained per patient. Based on the preoperative criteria, 76 patients had at least one exclusion criterion; 6 (8%) for clinical stage  $\geq$  T3a patients, 12 (16%) for PSA  $>$  15 ug/L, 34 (45%) for significant contralateral mpMRI lesion, crossing midline lesion in 13 (17%), signs of extracapsular extension in 23 (30%), and ISUP  $\geq$  4 in 16(21%). On the RP specimen, 53 (55%) presented organ-confined disease (pT2), with the following ISUP distribution; 1 (16%), 2 (52%), 3 (24%), 4 (4%), 5 (4%). Of the 21 eligible patients based on preoperative characteristics, 14 remained eligible after RP (66%). Reasons for ineligibility in the RP specimen were lesions crossing the midline, contralateral csPCA and extracapsular extension. When comparing both groups, the eligible group had fewer positive SB (0.9 vs 2.5,  $p < 0.01$ ), with similar positive TB (2.7 vs 3.0,  $p = 0.56$ ) total and SB count. Logistic regression found positive SB as the only factor associated with reduced HA eligibility (OR:0.58,  $p = 0.02$ ).

#### Conclusion

Approximately 1/6 RP patients would have been eligible for HA. Among them, 2/3 would have been correctly classified and could have benefitted from a less invasive treatment than standard RP. As expected, SB was crucial in finding ineligible patients and should therefore not be omitted.



## P011

### Incidence and Risk Factors of Postoperative Inguinal Hernias after Robot Assisted Radical Prostatectomy

L Sabbatini; C Padevit; H John

Kantonsspital Winterthur KSW

#### Background

Robot assisted radical prostatectomy (RARP) has become the surgical standard for patients with prostate cancer in Switzerland. Postoperative inguinal hernia (IH) development seems to be associated to radical prostatectomy. In this study we assessed the incidence and risk factors of IH after RARP in our department.

#### Methods

We included all patients at our institution who received RARP between January 2013 to December 2019 in this retrospective single-center study. Relevant data was extracted using electronic medical records. All patients were controlled in the outpatient clinic in a 4-year follow-up, as well were studied retrospectively. Intraoperative incidental hernia orifices were closed with a 3-0 barbed running suture. Univariate and multivariate cox hazard regressions analysis were used to identify risk factors predisposing to postoperative IH.

#### Results

Among 672 included patients, 46 (7%) developed an IH during a median follow up of 48 months after RARP. We subsequently repaired all hernias by open inguinal mesh repair analogue Lichtenstein. Mean age was  $65.6 \pm 6.7$  years and operative time was  $211 \pm 58$  minutes. In 395 (58%) patients a transperitoneal approach was selected, whereas in 277 patients (42%) an extraperitoneal approach was used. Among the 46 patients, who developed a IH after RARP, just one patient had the incidental hernia orifice closed during RARP. Regression analysis showed age and extended pelvic lymphadenectomy to be risk factors to develop IH after RARP.

#### Conclusion

The incidence of postoperative IH after RARP is among the worldwide published range of 5% to 20%. Since just one patient developed an IH after having the intraoperative orifice closed, we suggest performing concomitant orifice closure to prevent postoperative clinically relevant IH formation after RARP. The mechanism of inguinal hernia formation after RARP is not fully understood. The open surgical mesh repair is a safe and efficient technique to manage postoperative inguinal hernias.



## P012

### How well do urologists know and adhere to the EAU Guidelines on the treatment of acute prostatitis? A survey conducted at the EAU 2023 annual meeting

V Besser; N Keller; J Seiler-Blarer; R Seiler-Blarer; D Abt

Spitalzentrum Biel / Centre Hospitalier Bienne, Biel / Bienne, Switzerland

#### Introduction & Objectives

Acute bacterial prostatitis, primarily treated with antimicrobials, faces controversy over urinary catheter placement—transurethral or suprapubic—due to poor evidence. EAU guidelines reference a single retrospective publication which demonstrated unfavorable progression towards chronic prostatitis (CBP) for transurethral catheters. The goal of this survey was to examine the knowledge and clinical practice of urologists with regards to catheter placement in acute prostatitis.

#### Materials & Methods

An online survey at the 38th EAU congress gathered anonymous responses from 112 physicians, showcasing diverse experiences and locations.

#### Results

112 responses were recorded. Interviewees had 1 - 3 (23 %), 4 - 6 (27 %), 7 - 10 (16 %) or > 10 (34 %) years of experience in urology. The majority (85 %) worked at an academic hospital. Participants were from 33 countries, 20 of these were European. Acute prostatitis was diagnosed > 1x/week (50 %), 1 x / week – 1 x / month (23 %), < 1 x / month (27 %). In scenarios with concomitant symptoms (PVRU > 100 ml, > 300 ml, sepsis, prostatic abscess) clinicians would usually place a urinary catheter (80 % of cases). If a catheter was placed, a transurethral catheter was preferred over suprapubic (63% transurethral) unless in the case of prostatic abscess (68 % suprapubic). With regards to the EAU guidelines on acute prostatitis, 1 / 3 interviewees responded that urinary catheters played a role in the management, 1 / 3 that they did not, and 1 / 3 were unsure. Concerning the impact of catheter placement on clinical outcome, responses were divergent. 51 % agreed that a small caliber catheter was favorable. Less than half found that transurethral or suprapubic catheters improved clinical outcome (37 % and 42 %, respectively). Regarding the prevention of progression to CPB, 10 % agreed, 45 % disagreed and 44 % were unsure for transurethral catheters; similar for suprapubic catheters (24 % vs. 33 % vs. 43 %).

#### Conclusions

Catheter use in acute prostatitis is common, despite limited evidence. Preference for transurethral catheters contrasts with suprapubic recommendations to avert CPB. The survey shows a gap between practice and guidelines, highlighting the need for research to inform catheter use, aiming to align practices with evidence and resolve existing "myths" and knowledge discrepancies.



## P013

### **Retrospective Cohort Study on Urooncological Patients Referred for Genetic Counselling: Analysis of Demographics, Mutation Findings and Implications for the Future**

S Sigg; JN Fronzaroli; S Schmid; A Mattei; CD Fankhauser  
Luzerner Kantonsspital LUKS

#### Background

The identification of germline mutations in urooncological patients, especially those with renal and prostate cancers, can play a pivotal role in understanding the genetic predisposition and personalizing patient care. According to the literature, 12-15% of all GU cancers harbour pathogenic gene variants (PGV) (somatic or germ line mutations) and further 40-60% variants of uncertain significance (VUS). The aim of this study was to determine the prevalence and type of mutations in urooncological patients, patient characteristics, tumour stage, family history and concomitant tumours.

#### Material and Methods

We conducted a retrospective analysis of patients who underwent genetic testing at the department of medical oncology at the cantonal hospital of Lucerne between January 2018 and February 2024 and had any genitourinary malignancy. We categorized the results of genetic testing as pathogenic gene variants, variants of uncertain significance and negative results.

#### Results

Of 108 patients with urooncological malignancies undergoing genetic testing, 48 (44%) patients had prostate cancer, 12 (12%) urothelial cancer, 32 (30%) renal cell carcinoma and 8 (7%) testicular cancer. More than one GU tumour was found in 4 patients (4%) and 19 (18%) had at least one other tumour. PGV were found in 7 patients (8%), VUS in 4 patients (4%) and no alteration was found in 97 patients (91%). The median age of the patients was 62 years, a positive family history was found in 47 (43%). A metastasis at the time of presentation at the oncology department was detectable in 2 (2%). The number of referrals to the department of genetical oncology rose from initially 1 per year in 2019 to 53 patients in 2023.

#### Conclusion

We found a relatively low number of pathogenic mutations in our patients compared to the literature. However, given the rising number of patients referred as well as improved testing strategies, we expect a rising future demand of genetic testing.



## P014

### Clinical test design affects tumor tissue and ctDNA FGFR gene status in metastatic urothelial cancer: a prospective study

D Muller-Sartori<sup>1</sup>; G Vandekerkhove<sup>2</sup>; AJ Murtha<sup>2</sup>; JV Bacon<sup>2</sup>; G Wang<sup>3</sup>; A Papadakis<sup>4</sup>; M Annala<sup>5</sup>; A Spatz<sup>4</sup>; K Chi<sup>6</sup>; AW Wyatt<sup>2</sup>; BJ Eigl<sup>6</sup>

<sup>1</sup> Vancouver Prostate Centre, University of British Columbia & Dept. of Urology, University Hospital Basel, University of Basel; <sup>2</sup> Vancouver Prostate Centre, University of British Columbia; <sup>3</sup> Department of Pathology and Laboratory Medicine, BC Cancer Vancouver British Columbia, Canada; <sup>4</sup> Lady Davis Institute, Jewish General Hospital, Montreal, Quebec, Canada; <sup>5</sup> Life Sciences and BioMediTech Institute, University of Tampere, Tampere, Finland; <sup>6</sup> Department of Medical Oncology, BC Cancer, Vancouver, British Columbia, Canada

#### Background & Aims

FGFR gene alterations are common in urothelial cancer (UC) and targetable with erdafitinib. The co-approved companion diagnostic is an amplicon-based tumor tissue test that detects a limited number of recurrent FGFR alterations. However, FGFR status may change during disease progression, and rare FGFR alterations not typically covered by existing tests may be of clinical importance. Therefore, in a prospective pan-Canadian study (NCT06129084), we compared standard archival tissue testing to targeted sequencing of cell-free circulating tumor DNA (ctDNA).

#### Material & Methods

Eligible patients had progressing metastatic UC and were undergoing tissue FGFR testing. Blood was drawn at study enrollment, and plasma cell-free DNA and matched white blood cell DNA underwent deep-targeted sequencing with a hybridization capture panel. Archival tissue selection and testing was initiated by the treating physician and typically used the OncoPrint Focus assay.

#### Results

210 patients were enrolled across 12 sites, and 140 patients have tissue and ctDNA results available. 43/140 of cell-free DNA samples had low tumor fraction and were considered inconclusive. For the remaining 97 same-patient tissue and ctDNA pairs, FGFR status was identical in 88 (91%). In 7 of 9 discordant cases, the tissue was negative, but ctDNA was positive for FGFR alterations: these were enriched for FGFR3-TACC3 fusions (4/7). Two discordant fusions had canonical breakpoints that can be identified by current amplicon-based companion diagnostics, indicating potential spatiotemporal heterogeneity in somatic FGFR status. The other two discordant (ctDNA-only) fusions had non-canonical breakpoints that are not amenable to detection by current amplicon-based companion diagnostics. In two mutation discordant cases, lack of signal in tumor tissue could be explained by the presence of additional FGFR3 variants within 25bp of S249 and in cis disrupting primer binding sites. There were only two cases of tissue-only FGFR alterations among the 97 evaluable pairs.

#### Conclusions



ctDNA testing with a broad capture-based approach can identify additional alterations not detected with current amplicon-based companion diagnostics applied to archival tissue. Our results support ctDNA testing as a valuable adjunct to tissue testing but not a replacement. Assay design, including target enrichment technique, is a significant source of variability in FGFR status.



## P015

### Mechanisms of Action and Resistance in Intravesical Chemotherapy for Non-Muscle-Invasive Bladder Cancer: A thorough analysis of literature

M Reynard<sup>1</sup>; M Egger<sup>1</sup>; M Kruithof-De Julio<sup>2</sup>; R Seiler-Blarer<sup>1</sup>

1 Centre hospitalier Bienne/Spitalzentrum Biel, Klinik für Urologie; 2 Inselspital, Bern University Hospital, Department for BioMedical Research (DBMR), University of Bern, Switzerland

**Context:** In the ongoing phase II Trial GAIN-INST (NCT05024734), we explore the antitumor effects of four drugs in patient-derived organoids (PDOs) from non-muscle-invasive bladder cancer (NMIBC). The response observed exhibits substantial variation. Before delving into the molecular analysis of tumors and PDOs, we conduct a literature review to investigate the mode of action and mechanisms of resistance of these four drugs.

**Materials and Methods:** A thorough analysis of literature was performed to explore the mechanisms of action and resistance associated with four pivotal intravesical chemotherapeutic agents: epirubicin, mitomycin C, gemcitabine, and docetaxel.

**Results:** Epirubicin, an anthracycline, exerts cytotoxic effects by intercalating DNA and inhibiting topoisomerase II, leading to irreversible DNA damage and cell death. Resistance mechanisms may include a loss of MSH2 or MLH1 function, alterations in DNA repair pathways, or microenvironmental factors like pH variations and metabolic abnormalities. Mitomycin C, derived from *Streptomyces caespitosus*, demonstrates DNA crosslinking at CpG sites, resulting in DNA synthesis inhibition and cell cycle arrest. Overexpression of CXC motif chemokine ligand 5 (CXCL5) is among the resistance mechanisms. The epithelial-mesenchymal transition (EMT) appears to be closely associated with chemoresistance. Gemcitabine, an antimetabolite, inhibits DNA synthesis by integrating gemcitabine diphosphate (dFdCTP) into DNA, causing chain termination. Resistance mechanisms may involve long noncoding RNA (lncRNA) genes, alterations in metabolism-related enzymes, downregulation or inactivation of deoxycytidine kinase (dCK), and upregulation of TGFβ1. In pancreatic cancer, the deletion of SLC38A5, a glutamine transporter, has been found to reduce gemcitabine resistance. Docetaxel, a taxane, binds to microtubules, halting cell division and promoting cell death. Resistance mechanisms include the upregulation of tubulin isotypes and drug efflux pumps like P-glycoprotein.

**Conclusion:** The variations in response among the analyzed PDOs in GAIN-INST could be explained by the differing mechanisms of action and resistance of the study drugs. The molecular examination of samples from this trial will be conducted to decipher differences in response to the study drugs. Understanding intravesical chemotherapeutic agents' diverse mechanisms of action and resistance is crucial for refining treatment strategies tailored to NMIBC patients.





## P016

### **Guidance of adjuvant instillation in intermediate risk non-muscle invasive bladder cancer by drug screens in patient derived organoids – preliminary data**

M Egger<sup>1</sup>; P Lyatoshinsky<sup>1</sup>; M De Menna<sup>2</sup>; J Blarer<sup>1</sup>; R Hoesli<sup>1</sup>; D Abt<sup>1</sup>; M Kruithof-De Julio<sup>3</sup>; R Seiler<sup>1</sup>

1 Spitalzentrum Biel; 2 Departement for BioMedical Research, University of Bern; 3 Department for BioMedical Research, University of Bern

**Introduction:** Clinical guidelines recommend adjuvant instillations for intermediate risk NMIBC, but the regimen and chemotherapeutic agent are not clearly defined. We have established a standardized pipeline to create patient-derived organoids (PDO) from NMIBC biopsies. These organoids mirror the tumor's characteristics and molecular profile. In this trial, we aim to investigate drug selection for adjuvant instillation by drug response on PDO models.

**Methods:** PDOs are created from NMIBC biopsies, and their response to four chemotherapeutic agents is tested. The most effective agent is then used for 6 adjuvant instillations. Primary endpoint: determining the proportion of patients for whom a specific agent for intravesical instillation can be chosen using PDO drug screens. Secondary endpoints include survival, quality of life, and translational studies.

**Results:** Since November 2022, 21 patients have been screened for the study. Our study population had a median age of 74 years and was 88% male. Histology report showed 33.33% high grade carcinoma despite 100% negative cytology. PDO generation was attempted in 21 patients and successful in 85.7% of the cases. Drug screens and selection of the most effective drug was successful in 81%. 93.3% of patients with a successful drug screen were treated with the study drug. During the median follow-up of 6.53 months to date, one intravesical recurrence occurred (6.67%).

**Conclusion:** We are successfully conducting a trial to implement drug screens in PDO into daily routine and to guide patient treatment. This is a novel concept to precise treatment of patients with intermediate-risk NMIBC. When the primary endpoint is met, an extension of the trial with larger sample size and novel compounds is aimed that will focus on oncological outcomes.



## P017

### **Circulating tumor DNA and tissue staining analyses reveal heterogeneous ERBB2/HER2 status in urothelial cancer.**

G Vandekerckhove<sup>1</sup>; AJ Murtha<sup>1</sup>; D Muller-Sartori<sup>2</sup>; K Parekh<sup>1</sup>; G Wang<sup>3</sup>; T Todenhöfer<sup>4</sup>; PC Black<sup>5</sup>; K Chi<sup>6</sup>; BJ Eigl<sup>6</sup>; AW Wyatt<sup>1</sup>

<sup>1</sup> Vancouver Prostate Centre, University of British Columbia; <sup>2</sup> Vancouver Prostate Centre, University of British Columbia & Dept. of Urology, University Hospital Basel, University of Basel; <sup>3</sup> Department of Pathology and Laboratory Medicine, BC Cancer Vancouver British Columbia, Canada; <sup>4</sup> Studienpraxis Urologie, Nürtingen, Germany; <sup>5</sup> Department of Urologic Sciences, University of British Columbia, Vancouver, BC, Canada; <sup>6</sup> Department of Medical Oncology, BC Cancer, Vancouver, British Columbia, Canada

#### Background & Aims

Human epidermal growth factor receptor 2 (HER2) is encoded by the ERBB2 gene, and frequently mutated, amplified, and/or overexpressed in urothelial cancer (UC). Promising antibody-drug conjugates have led to new interest in HER2 as a UC clinical target. Patient selection for HER2-targeted therapy typically relies on immunohistochemistry (IHC) and fluorescence in-situ hybridization (FISH) of tumor tissue, however DNA sequencing can identify ERBB2 genomic alterations. Accurate biomarker-driven patient selection will be critical to optimize the clinical benefit of HER2-targeted therapy. Therefore, we evaluated plasma circulating tumor DNA (ctDNA) for ERBB2/HER2 status determination in UC, as compared to IHC and FISH of metachronous tissue.

#### Material & Methods

411 plasma samples from 236 metastatic UC patients were profiled with targeted sequencing. 81 formalin-fixed paraffin-embedded tissue specimens were retrieved from 43 patients. HER2 IHC was performed with a polyclonal rabbit anti-human Her2 antibody (Dako), and scored according to gastric cancer guidelines. HER2 FISH was performed with the PathVysion HER-2 DNA Probe Kit.

#### Results

Protein-altering ERBB2 mutations were identified in 14% of evaluable patients. ERBB2 copy gain was detected in 8% of patients overall, 9% when excluding low tumor fraction samples. IHC results were assessable for 82 tissue samples from 43 patients, and 33 patients had at least one sample with positive HER2 staining (2+/3+). IHC scores varied in 16/23 patients with  $\geq 2$  tissue samples, with the variation leading to a change in classification (HER2-negative [0/1+] versus positive [2+/3+]) in half (8/16). Frequent focal staining patterns were observed with both IHC and FISH. ERBB2 alterations in ctDNA were correlated with IHC positivity – when considering the most recent tissue sample per patient, 79% of ctDNA ERBB2-altered patient's tumors were also positive by IHC. Conversely, 55% of ctDNA ERBB2-wildtype cases were positive by IHC. FISH results were available from 24 samples (20 positive, 4 negative), all from patient's with ctDNA ERBB2 amplification. 18/20 samples with FISH positivity were HER2 IHC 2+/3+; the remaining two samples were IHC 1+.



## Conclusions

Our results demonstrate significant spatial and/or temporal heterogeneity in ERBB2/HER2 status, with implications for the rational implementation of biomarker-directed (HER2-targeted) therapy in UC.



## P018

### A patient-derived bladder cancer organoid biobank for translational research and precision oncology

M Garioni; VJ Tschan; A Elyan; J Wang; L Roma; H Pueschel; T Vlajnic; L Bubendorf; H Seifert; C Rentsch; C Le Magnen

University Hospital Basel

Bladder cancer (BC) heterogeneity poses an ongoing challenge for an appropriate management of this disease. Patient-derived organoid (PDO) models have unlocked the possibility to evaluate personalized treatment options in a more clinically relevant manner. Here, we aim at establishing an expandable living biobank of BC PDO models to provide a resource for translational research and precision oncology.

110 samples were collected from 63 patients with muscle-invasive bladder cancer (23 pT1, 32 pT2, 8 pT3), 42 patients with non-muscle invasive bladder cancer and 1 patient with carcinoma in situ undergoing TUR-B, radical cystectomy, cytology or biopsies from metastatic sites. All samples were processed to generate PDOs and tumor/PDO pairs were characterized through H&E, IHC, immunofluorescence for stromal and epithelial-associated markers, RNA sequencing, and Whole Exome Sequencing (WES). Drug testing was performed with a selected library of compounds on organoids and matched single cells.

Out of 110 collected samples, 46 did not grow in organoid culture conditions (42%) and 49 grew short-term (i.e. maintained in culture for less than five passages, 45%). 15 samples were maintained for more than five passages and were established as long-term PDO lines (14%). Long-term PDO lines recapitulated the phenotype of their original patient' tumor and were representative of relevant molecular and histological subtypes of BC. In particular, PDOs displayed either a pure luminal (CK8+), a pure basal (CK5+), a mixed basal-luminal (CK5+ and CK8+ cells), or a sarcomatoid (Vimentin+) phenotype. PDO lines exhibited mutations in genes commonly altered in BC such as TP53, KMT2C, ARID1A which were shared with the corresponding patient tumor. Preliminary in vitro drug screens revealed significant differences in the response of each PDO line towards various therapeutics. The treatment on PDOs vs. single cells of the same lines showed similar response profiles, suggesting that fast-track screening for line-specific drug responses may represent a valid method.

We have successfully generated a series of PDO models, which highly resemble their original tumors and are representative of relevant histological and molecular subtypes of BC. Upon further molecular and functional characterization, our BC PDO biobank will provide a unique resource for translational research and precision oncology applications.



## P019

### Novel patient-derived organoid xenograft models emulate molecular, functional, and clinical features of advanced prostate cancer

R Dolgos<sup>1</sup>; R Servant<sup>1</sup>; R Parmentier<sup>1</sup>; J Wang<sup>1</sup>; Z Diamantopoulou<sup>2</sup>; D Bossi<sup>3</sup>; L Roma<sup>1</sup>; F Stenner<sup>1</sup>; AJ Templeton<sup>4</sup>; N Aceto<sup>2</sup>; J Theurillat<sup>3</sup>; L Bubendorf<sup>1</sup>; H Seifert<sup>1</sup>; CA Rentsch<sup>1</sup>; C Le Magnen<sup>1</sup>

<sup>1</sup> University Hospital Basel; <sup>2</sup> Swiss Federal Institute of Technology (ETH) Zurich; <sup>3</sup> Institute of Oncology Research; <sup>4</sup> St. Claraspital Hospital Basel

The generation of clinically relevant models is critical for understanding mechanisms underlying prostate cancer (PCa) progression. Here, we generated and characterized key features of novel patient-derived organoids xenograft (PDOX) models of advanced PCa.

Two patient-derived organoid lines (PDOs) were used to establish a series of in vitro and in vivo models. P20-11 PDOs were derived from a lung metastasis obtained from a patient with hormone-naïve PCa. P20-23 PDOs were derived from a TURP sample obtained from a patient with metastatic castration-resistant PCa, priorly treated with goserelin, docetaxel, and enzalutamide. PDOXs were generated by subcutaneous injection of PDO cells in NSG male mice. Samples were characterized by IHC, immunofluorescence, whole exome sequencing, and scRNA-seq. Organoids were cultured in androgen-proficient or deficient conditions and/or treated with single compounds or in combination. Cell viability was measured using CellTiter-Glo 3D, PSA secretion was measured by ELISA, and gene expression was assessed by qRT-PCR.

PDOX were serially transplanted for multiple generations and could be re-cultured as organoids (PDOXO). P20-11 and P20-23 derived models maintained phenotypical features of the original patient' tumor and emulated relevant molecular subtypes of advanced PCa, as exemplified by alterations in CTNNB1, PTEN, TP53, and AR, as well as strong expression of PSMA. Following scRNA-seq and mapping amongst PCa samples using the PCa profiler tool, all PDOX and PDOXO models clustered within the "AR PCa" category close to the androgen-sensitive LNCaP and LuCap models. P20-11 and P20-23 PDOXO responded to androgen deprivation in vivo and in vitro, although P20-11 displayed significant higher sensitivity as evident by strong decreases of viability and PSA secretion upon castration. P20-11 PDOXO exhibited sensitivity to enzalutamide, darolutamide, and apalutamide while P20-23 did not respond. Both models displayed degrees of sensitivity to the PI3K/AKT inhibitors capivasertib and ipatasertib. Notably, long-term androgen deprivation in P20-11 PDOXO induced molecular changes, which were also enriched in the clinical sample of the original patient upon recurrence.

We have generated a unique panel of serially-transplantable PDOX and PDOXO models, which are representative of relevant clinical and molecular subtypes of advanced PCa and allow uncovering hallmarks of disease progression associated with the original patients.



## P020

### Development of a 3D Organoid Culture System for Renal Cell Carcinoma: Advancements and Challenges

A Elyan<sup>1</sup>; R Dolgos<sup>2</sup>; H Hopfer<sup>1</sup>; T Menter<sup>1</sup>; HH Seifert<sup>1</sup>; CA Rentsch<sup>1</sup>; C Le Magnen<sup>2</sup>

<sup>1</sup> Universitätsspital Basel; <sup>2</sup> Universität Basel & Universitätsspital Basel

#### Introduction

Renal cell Carcinoma (RCC) is a frequent solid malignancy for which existing therapeutic options often prove insufficient, particularly in advanced stages and non-clear cell pathology. The lack of robust experimental models hinders progresses in personalized therapies and translational research. In this pilot study, we report the preliminary stages of establishing a platform for the development of clinically relevant three-dimensional (3D) RCC patient-derived models.

#### Materials

During the early stages of the study, we assessed a variety of growth media, drawing from current literature to pinpoint the best medium for RCC organoid cultivation. We refined the seeding densities of single cells in Matrigel and determined the most effective Matrigel concentration. Various approaches, such as liquid culture and a preliminary spheroid-forming technique, were utilized to promote the development of 3D tumoroids. Phenotypic analysis of both tumor and organoid samples was conducted using H&E staining and immunohistochemistry, targeting specific markers. Over ten months, we collected samples from 25 patients undergoing surgery for suspected RCC. Full nephrectomy was performed on 8 patients (32%) and partial nephrectomy on 17 (68%). Clinical data showed 23 localized and 2 metastasized. Clear cell RCC was most common (52%), followed by chromophobe (17%), papillary (11%), and other types (20%). For organoid cultures, samples were digested and seeded in Matrigel with growth-factor enriched medium. Tumor and organoid samples were phenotypically characterized using H&E staining and immunohistochemistry for specific markers.

#### Results

Out of the 25 samples, 18 failed to grow in organoid culture conditions (72%), while 7 exhibited short-term growth, being maintained for fewer than five passages (28%). Successful organoid cultures faithfully recapitulated the histological and immunohistochemical features of the original patient tumors as shown by positivity for CK7 and carbonic anhydrase IX, and negativity for AMACR. Spheroid and liquid culture methods demonstrated greater success in selected cases, facilitating expansion of cells that fail to grow in Matrigel-based conditions.

#### Conclusion

While patient-derived RCC organoids offer valuable preclinical models, their clinical valid establishment remains challenging. Alternative methods such as spheroid and liquid culture are promising, suggesting that they may be more amenable to rapid drug testing applications.



## P021

### Synergistic effects of DNA PK and PARP inhibitors in BRCA mutated Prostate Cancer

T Scherer; A Mazumdar; V Baumgartner; D Enderlin; S Salemi; D Eberli

Universitätsspital Zürich

#### Background

Mutations in the genes of BRCA2 and BRCA1 are known to increase the risk for aggressive prostate cancer (PCa). Both genes are essential for the homologous repair of DNA double strand breaks (DSB). PARP inhibitors have been found to enhance survival in BRCA mutated patients but offer overall limited benefit in end stage PCa and have serious adverse effects. Our research aims to develop an BRCA mutated PCa in vitro model and assess the therapeutic effects of DNA activated protein kinase (PK) inhibitors, targeting non-homologous recombination of DSB in BRCA mutated PCa.

#### Methods

The genes BRCA1 and BRCA2 were targeted for knockout (KO) in the prostate cell line LNCaP using CRISPR-Cas9 technology. The knockouts were assessed via Western blot analysis. Control LNCaP, BRCA1 KO, and BRCA2 KO cells were then treated with the PARP inhibitor talazoparib, the DNA-PK inhibitor nedisertib and their combination. The impact on cell proliferation was evaluated using the CellTiter-Glo assay and synergy of the treatments was analyzed with SynergyFinder. Cytotoxic effects were measured by flow cytometry using an Annexin V-FITC apoptosis detection kit. Additionally, the presence of DSB was examined using immunofluorescence techniques.

#### Results

BRCA2 and BRCA1 expression were successfully downregulated in the knockout (KO) cell lines. After two days of treatment with talazoparib and/or nedisertib, a significant decrease in cell proliferation was observed. Additive effects of the combination treatment were detected exclusively in the BRCA KO cells. These cells also exhibited significantly higher rates of necrosis after treatment compared to control cells. Additionally, DNA DSB were significantly more prevalent in the BRCA KO cells.

#### Conclusion

Using CRISPR-Cas9 technology, prostate cell models in LNCaP were established. Therapeutically targeting non-homologous DNA repair presents a promising approach in treating BRCA-mutated prostate cancer. Further in vivo investigations are required to assess the tolerability of this drug combination.



## P022

### Implementing Entrusted Professional Activities (EPA) with the preparedEPA App in Swiss Urology Residencies: Initial Results

F Aschwanden<sup>1</sup>; L Afferi<sup>1</sup>; M Kozomara<sup>1</sup>; L Kandler<sup>2</sup>; A Marty<sup>3</sup>; P Baumeister<sup>1</sup>; A Mattei<sup>1</sup>; C Fankhauser<sup>1</sup>

1 Luzerner Kantonsspital (LUKS); 2 Universitätsspital Zürich; 3 Universitätsklinik Balgrist

**Background:** In Switzerland, urology certification has traditionally been based on a quantitative evaluation of procedural volume. To advance towards a qualitative educational framework, the Swiss Institute for Medical Education (Schweizerisches Institut für ärztliche Weiter- und Fortbildung SIWF/ISFM) is planning the integration of Entrustable Professional Activities (EPAs). The "preparedEPA" mobile app has been developed to support this initiative, facilitating both self-assessment and external evaluation of residents' competencies. This study reports on the initial phase of implementing EPAs, evaluating the feasibility and reliability of the "preparedEPA" app.

**Methods:** Between August 2023 and March 2024, we tracked user data and EPA assessments, analyzing user engagement and calculating the agreement between trainees and supervisors with Cohen's weighted kappa and Fleiss kappa.

**Results:** Out of 246 initiated EPA-based assessments, 214 were completed, yielding an 86% completion rate. A minority of the assessments (n=24) were unsupervised. Residents and supervisors completed a median of 18 (IQR 19) and 16 (IQR 30) assessments, respectively. The EPAs primarily included ureterorenoscopy (23%), TUR-B (13%), and TUR-P (10%). Both groups predominantly rated the complexity of the performed EPAs as simple (64% by trainees, 68% by supervisors). The median time to complete an EPA-based assessment was 20 seconds for trainees and 6 seconds for supervisors. The agreement on task complexity showed moderate reliability (Cohen's  $\kappa = 0.56$ ), as did the correlation between trainee confidence and supervisor evaluations (Cohen's  $\kappa = 0.55$ ). When trainees felt competent to supervise others, agreement improved significantly (Fleiss'  $\kappa = 0.71$ ). Notably, trainees were more likely to underestimate (23%) than overestimate (12.8%) their skills.

**Conclusions:** The "preparedEPA" app is a robust and efficient tool that facilitates the implementation of EPAs in urology residency programs, supporting a transition from a quantitatively focused to a qualitatively oriented training system. While adherence and time for completion require improvement, future studies should explore effective methods for integrating the use of this app into daily clinical routines. The difference in ratings between supervisors and trainees is not a problem but the perfect prerequisite for a meaningful subsequent feedback discussion.





## P023

### Simultaneous Autophagy and Androgen Receptor Inhibition in a Prostate Cancer Xenograft Model

S Salemi; B Kranzbuhler; V Baumgartner; D Eberli

UniversitätsSpital Zürich (USZ), Zürich, Schweiz

Abiraterone (Abi), an androgen receptor antagonist employed in advanced prostate cancer treatment, triggers autophagy, a survival mechanism in prostate cancer (PCa) cells during Abi treatment in vitro. Our goal was to evaluate autophagy levels in response to Abi alone and in combination with the autophagy inhibitor Chloroquine (Chl), and explore their relationship with PSMA and the androgen receptor (AR) axis in a castrated mouse xenograft model. LNCaP cells were injected into castrated nude mice. Mice received daily intraperitoneal injections of vehicle-control, Abi (10mg/kg), Abi (10mg/kg)+Chl (10mg/kg), or Chl (10mg/kg). Each group consisted of four mice, maintained for 2/3 weeks. Samples underwent analysis for tumor weight, size, immunoblotting, and immunofluorescence. The combination treatment of Abi+Chl resulted in a significantly greater decrease in tumor weight in mice compared to either Abi or Chl administered alone, highlighting its pronounced efficacy. Mice receiving Abi+Chl exhibited reduced expression of ATG5, Beclin1, and LC3 punctuations, along with increased P62 levels, as determined by immunofluorescence and WES analysis. Ki67 nuclear staining was present in all samples but decreased in Abi+Chl-treated specimens, correlating with elevated caspase 3 expression. AR expression was only observed in the control and notably reduced in all treatment groups. PSMA was expressed in all groups, with the highest levels in control and combination groups. These findings demonstrate that Abi plus Chl treatment lowers autophagy levels and suppresses tumors more effectively than Abi alone. Therefore, combining Abi with autophagy inhibitors could offer a promising new therapeutic strategy with potential benefits for patients.



## P024

### Prostate cancer-derived extracellular vesicles drive macrophage immunosuppression in the murine tumor microenvironment

A Mazumdar; V Baumgartner; TP Scherer; S Salemi; D Eberli

UniversitätsSpital Zürich (USZ)

#### Background

Prostate cancer (PCa) is diagnosed in about 1 out of 8 men globally during their lifetime, making it the most common tumor type among male cancer patients. However, despite the significant strides made in treating various cancer types, modern therapeutic options such as immunotherapies and immune checkpoint inhibitors have shown restricted efficacy in managing PCa. This is because PCa is immunologically "cold" and tends to have fewer immune cells infiltrating the tumor than other cancers. A contributing factor to the immunologically cold nature of PCa could be the tumor's capability to manipulate its surrounding microenvironment. Specifically, PCa cells may release immunosuppressive cytokines and extracellular vesicles (EVs), which attract regulatory immune cells and suppress immune activity.

#### Methods

Our team has devised a specific mouse model for investigating the immunomodulation of the tumor microenvironment in mice. This entails employing lentiviral modification to induce PCa cells to produce CD9-mEmerald, generating fluorescent EVs continually from tumor cells. Upon implantation of these cells into mice, we can observe their interactions with infiltrating immune cells in the tumor microenvironment in real-time and assess the consequent immunosuppressive effects on the environment. Subsequently, after sacrifice, we employ a 10-antibody flow cytometry panel to comprehensively characterize all the cells tumor microenvironment affected by tumor cell-secreted EVs/ soluble factors and further map out the immunomodulation cascade.

#### Results

Following the enzymatic breakdown of tumor tissue and subsequent isolation of single cells, our findings indicate that both C4-2 and PC3 tumor cells transfer their fluorescent EVs to resident and infiltrating CD45+ immune cells and CD31+ endothelial cells. Furthermore, we observe a differentiation of the activated macrophage population (CD45+ CD11b+ CD64+) within the tumor microenvironment toward an M2-immunosuppressive phenotype due to tumor-secreted EVs.

#### Outlook

For the first time, our discoveries reveal the suppression of immune cells through EV-mediated communication originating from tumor cells. Our focus is on identifying the specific cargo within EVs responsible for driving immune suppression. This may lead to identifying novel drug targets crucial for overcoming immune suppression, thereby fostering the transformation of the tumor microenvironment into a more conducive setting for immune therapies in PCa.



## P025

### Global Trends in the Epidemiology of Urological Cancers in Geneva: A Twenty-Six Years Registry-Based Study

V Benard<sup>1</sup>; E Grobet-Jeandin<sup>1</sup>; P Sebe<sup>1</sup>; D Benamran<sup>1</sup>; E Fournier<sup>2</sup>; E Rapiti Aylward<sup>2</sup>; M Valerio<sup>1</sup>

1 HUG - Hôpitaux Universitaires de Genève; 2 Cancer Registry, University of Geneva.

#### Objective

Urological cancers (UCa) are substantial burden for public health worldwide, due to their considerable incidence, morbidity and mortality. We aimed to report epidemiological trends in UCa in Geneva from the last 26 years.

#### Methods

Data were obtained from the population-based Geneva cancer registry. All patients diagnosed with prostate cancer (PCa), kidney cancer (KCa), and bladder cancer (BCa) between 1995-2021 were included. Quinquennial age-standardized incidence rates per 100,000 inhabitants were computed for 3-year-periods (3y) using the European Reference population. Cancer-specific (CSS) and overall survival (OS) rates were calculated for each localization using the Kaplan-Meier (KM) method and compared with log-rank tests. Patients with no follow-up (death certificate only) were excluded from survival analysis. Date of last follow-up was December 31, 2023.

#### Results

A total of 12,017 new cases of UCa and 2,880 deaths were recorded during the study period. PCa was the most common UCa ( $n = 8,373$ ), with a rising incidence from 104 to 131 cases per 100,000 between 1995-2021. PCa-mortality rates significantly dropped since 2007 (annual percent change (APC) -4.7%,  $p < 0.001$ ). Interestingly, 3y-OS and CSS significantly improved during the follow-up period (OS:  $p < 0.001$ ; CSS:  $p < 0.001$ ).

Regarding KCa ( $n = 1,599$ ), the incidence rate did not consistently show a steady rise but rather some fluctuations overtime (female:  $p = 0.27$ ; male:  $p = 0.51$ ), with a sex ratio (M:F) exceeding 2. Mortality was stable in women ( $p = 0.44$ ), but significantly increased in men until 2001 (APC +9.2%,  $p < 0.001$ ), before dropping until 2021 (APC -4.6%,  $p < 0.001$ ). In both genders, 3y-OS and CSS significantly improved during the study period (female OS:  $p = 0.017$ , male OS:  $p < 0.001$ , female CSS:  $p = 0.001$ , male CSS:  $p < 0.001$ ).

Focusing on BCa ( $n = 2,045$ ), the incidence was stable in women ( $p = 0.16$ ) but significantly decreased in men (APC -1.1%,  $p = 0.02$ ), with a sex ratio (M:F) exceeding 3. Mortality did not vary, and 3y-OS was stable overtime in both genders (female OS:  $p = 0.59$ , male OS:  $p = 0.63$ ). 3y-CSS did not significantly change among women ( $p = 0.17$ ) but improved in male ( $p = 0.03$ ).

#### Conclusion

Epidemiological data from the last 26 years suggest a global improving picture for UCa patients. PCa incidence continues to rise, while that of other UCa stabilizes or decreases. Overall, CSS seems to improve highlighting an improvement in patient care and available treatment



## P026

### Appreciation of male lower urinary tract symptoms in Parkinson's disease using IPSS and QoL scores

M Pal1; I Lucca2; N Grilo2; A Dos Santos Reis2

1 CHUV Centre Hospitalier Universitaire Vaudois (CHUV); 2 Department of Urology, University Hospital CHUV, Lausanne, Switzerland

#### Introduction

Among various neurological disorders, Parkinson's disease (PD) stands out as a condition strongly associated with lower urinary tract symptoms (LUTS), affecting anywhere between 27-71% of the patients. Patients frequently experience bladder overactivity, with storage symptoms like urgency with or without incontinence, pollakiuria, nocturia but they also can relate to voiding difficulties. Accurate assessment of symptoms in PD presents a significant challenge due to the complexity and heterogeneity of the disorder, and also because these symptoms often overlap with those related to prostate enlargement. The aim of our study is to assess the prevalence of bothersome urinary symptoms in Parkinson male patients followed in our hospital.

#### Method

In collaboration with the Unit of abnormal movements from the department of Neurology, we reached out to all male patients followed in the department from 2021 until nowadays. They all received the IPSS and quality of life (QoL) questionnaire. We reported the participation rate and analysed the IPSS and QoL scores to characterize the LUTS of our male PD population. Troublesome symptoms were identified in case of moderate IPSS score (>7) and a QoL score superior to 2.

#### Results

Of the 177 potential candidates, 32% participated, and only 29% completed the questionnaire completely. The median IPSS score and the QoL were respectively at 8 and 1. 52% (n=27) of the patients experienced bothersome LUTS symptoms meanwhile only 33% (n=17) reported a significant impact in term of QoL. Percentage contribution analysis revealed that the three most bothersome symptoms were by decreasing order, pollakiuria, urgency and nocturia. A coefficient correlation at 0.82 confirmed the positive correlation between IPSS and QoL.

#### Conclusion

IPSS and QoL might not be the right tools for the assessment of LUTS in PD patients. Challenges such as variability in symptom presentation and patient-reported outcomes underline the need for further assessment tools specific to the PD population. Addressing these challenges is essential to enhance early detection, improve treatment efficacy, and ultimately optimize the management of symptoms in individuals living with PD.



## P027

### Microbiological characteristics of Fournier's Gangrene: A systematic review and meta-analysis.

F Aschwanden<sup>1</sup>; L Wimmer<sup>2</sup>; S Sigg<sup>1</sup>; M Rossi<sup>1</sup>; R Schweizer<sup>1</sup>; N Grossmann<sup>1</sup>; H Seifert<sup>2</sup>; B Roth<sup>3</sup>; A Mattei<sup>1</sup>; C Fankhauser<sup>1</sup>; L Schneidewind<sup>3</sup>

1 Luzerner Kantonsspital (LUKS); 2 Universitätsspital Basel; 3 Inselspital - Universitätsspital Bern

Background: Fournier's gangrene (FG) represents a rare, yet potentially fatal necrotizing infection affecting the perineum, perineal region, and genitalia. Antibiotic therapy, alongside surgical debridement, constitutes a critical component of the treatment algorithm. Despite its significance, there is a notable lack of data concerning the microbiological characteristics of FG. Thus, the aim of this systematic review was to assess the microbiological aspects and its prevalence in FG.

Methods: This systematic review (SR) was conducted in accordance with the guidelines reported in the Cochrane Handbook for SR of Interventions and in adhered to the PRISMA guidelines. Due to paucity of data this review includes all article types reporting microbiological data and a minimum sample size of 20 patients.

Results: The literature review identified 2977 studies, of which 50 met the inclusion criteria, including a total of 6907 patients. The median sample size per study was 42 (IQR 35) and the respective median age was 53.8 (IQR 7). Most patients were male (82%). Approximately half of the studies (48%, n=24) differentiated between mono- and polymicrobial infections. The total number of patients with monomicrobial infection was 2343 (44%), whereas polymicrobial infection was observed in 3008 patients (56%). *Escheria coli* was the most frequently identified microorganism (60%), followed by *Staphylococcus.spp.* (7%), *Streptococcus.spp.* (7%) and *Pseudomonas aeruginosa* (4%). Fungal infections comprised 1% of the microbiological findings. Microbiologically sterile cases were noted in 2%. Regarding antibiotic therapy, only 22% of the studies provided details on the treatment regimen. The most administered regimen was a triple combination of ceftriaxone, metronidazole and an aminoglycoside (46%). Less frequently reported were metronidazole alone (20%), carbapenem with vancomycin (7%), ceftriaxone monotherapy (7%) and a combination of co-amoxiclav, metronidazole and gentamicin (7%). The duration of antibiotic therapy was reported in two studies with a median duration of 17 days (IQR 1). The median mortality, as reported in 42 studies, was 19% (IQR 9).

Conclusion: The majority of FG cases is caused by polymicrobial infections, with the most frequently identified microorganism being *Escheria coli*. The high mortality of FG, its predominantly polymicrobial genesis and rising resistance patterns of *Escheria coli* justifies an aggressive, empirical broad-spectrum antibiotic therapy.



## P028

### Role of computed tomography cavernosography in the diagnosis and treatment planning of venous leak

M Martins<sup>1</sup>; Y Vlamopoulos<sup>2</sup>; L Micol<sup>2</sup>; T Favre<sup>3</sup>; S Regusci<sup>4</sup>; B Leffe<sup>5</sup>; F Saucy<sup>6</sup>

<sup>1</sup> Imagerive/SIPC; <sup>2</sup> independent; <sup>3</sup> UNIGE; <sup>4</sup> SIPC - Swiss International Prostate Center; <sup>5</sup> Imagerive; <sup>6</sup> EHC, Hopital de Morges

Venous leak appears to be the most common cause of vasculogenic erectile dysfunction (ED), which can be treated with venous coil embolization. Our purpose is to demonstrate that computed tomography (CT) cavernosography is a cross-sectional imaging method advantageous compared to conventional cavernosography. In our series there is no significant complication

#### Material and method

CT cavernosography was performed on 50 patients diagnosed with venous insufficiency in Doppler US and we compared the results of conventional cavernosography.

CT cavernosography is performed after an intracavernosal injection of 10–20 µg prostaglandin (Caverject). After 10–20 min, a 23-G needle is inserted into a dorso-lateral side of the corpora cavernosum. Subsequently, 10–20 cc of iodinated contrast agent is injected with 3ml/sec in bolus. CT images are acquired using a state-of-the-art CT scanner with 80 × 0.5 mm collimation and 0.35 s gantry rotation time. It is a continuous scan with real-time monitoring of venous contrast distribution, starting from the upper brim of the true pelvis to the most distant level of the penis. For postprocessing, multiplanar reconstructions (MPRs) in the axial, coronal, and sagittal planes, maximum intensity projection (MIP) in two and three dimensions and three-dimensional volume rendering were applied to obtain diagnostic images of venous contrast distribution.

#### Results

CT cavernosography is a new technique performed with few side effects and is superior for the identification of site-specific venous leaks (19.4% vs 100% respectively). CT cavernosography is a more detailed imaging method that is faster to perform, exposes the patient to less radiation, and requires less contrast material. Benign complications are observed as a hematoma.

#### Conclusion

Ct cavernosography is superior to conventional cavernosography for diagnosis and treatment planning in patients with erection dysfunction caused by venous leaks. Consequently, CT cavernosography should be included in management algorithms for erection dysfunction in a multidisciplinary team.



## P029

### Oncological treatments have limited effects on the fertility prognosis in men with testicular cancer: A systematic meta-analysis

J Pape<sup>1</sup>; J Fernando<sup>1</sup>; D Megaritis<sup>1</sup>; S Weidlinger<sup>1</sup>; A Vidal<sup>1</sup>; F Birkhäuser<sup>2</sup>; T Karrer<sup>3</sup>; M von Wolff<sup>1</sup>

1 Division of Gynecological Endocrinology and Reproductive Medicine, University Women's Hospital, Inselspital Bern, University of Bern; 2 Urologie St. Anna Luzern; 3 Medical Library, University Library Bern, University of Bern

**HINTERGRUND & ZIELE:** Testicular cancer is the most common solid tumor among men aged 15-45. More than 95 % of the patients become long-term survivors and up to 77 % of cancer survivors report an interest in paternity after completing cancer treatment. Research on post-therapy fertility parameters is limited. This very first meta-analysis in a large pooled study population of patients aims to assess infertility prevalence, defined by azoospermia, failure to achieve paternity, or cryosperm use after oncological treatments for testicular cancer.

**MATERIAL UND METHODEN:** A systematic literature review was conducted in Medline, Embase, and Cochrane databases in December 2022. Studies on unilateral testicular cancer were included for systematic review and meta-analysis, excluding those with unspecified treatments, < 10 patients for outcomes, or rare tumors. Infertility was defined as azoospermia, failure to achieve paternity or the usage of cryosperm. Study quality was assessed using the Newcastle-Ottawa Scale. This analysis is part of the FertiTOX project ([www.fertitox.com](http://www.fertitox.com)), aiming to improve fertility preservation counseling by addressing gonadotoxicity data gaps from studies since 2000 reporting relevant outcomes.

**RESULTATE:** Out of 126 studies screened, 30 involving 13718 men with unilateral testicular cancer were eligible for qualitative synthesis. Sample sizes ranged from 17 to 4846 patients, with a follow-up of 1-30 years (mean 6.5 years). Histology included seminomas (43.9 %), non-seminomas (49.6 %), and sex cord or stromal tumors (0.01 %). Treatment comprised active surveillance after unilateral orchidectomy (32.7 %), radiotherapy (23.1 %), standard or low-dose chemotherapy (33.7 %), and high-dose chemotherapy (1.4 %). Spermograms were analyzed in 17 studies, with quantitative synthesis in 23. A random-effects model estimated infertility prevalence and its 95 % confidence interval. Overall pooled infertility prevalence (95% CI) after standard oncological treatment was 14 % (9-21 %), with azoospermia appearing in 8 % (6-12 %). Good-prognosis patients had a lower infertility prevalence of 4 % (2-10 %) post-standard therapy.

**SCHLUSSFOLGERUNGEN:** This meta-analysis comprehensively assesses fertility outcomes post-testicular cancer therapy. Despite relatively low infertility prevalence, sperm cryopreservation remains advisable due to uncertainty about subsequent therapies and limited longitudinal data on individual treatment effects.



## P030

### Impact of a Dedicated Penile Cancer Clinic on Workflow and Early Oncological Outcomes

N Di Nardo; P Baumeister; A Mattei; CD Fankhauser

Department of Urology, Cantonal Hospital of Lucerne, Lucerne, Switzerland

#### Introduction

Penile cancer is a rare and aggressive malignancy that demands rapid diagnostic assessment and decisive management to optimize functional and oncological results. Strategies include maximizing penile preservation and conducting lymph node interventions for patients at high risk of lymph node metastases to improve outcomes. This study describes our initial experiences following the establishment of a dedicated penile cancer clinic.

#### Materials and Methods

We conducted a retrospective, descriptive analysis of patients diagnosed with penile carcinoma at our institution since May 2021.

#### Results

Eighteen men were diagnosed with penile cancer, presenting a median age of 70 and a median BMI of 28. The mean time from referral to clinic visit was 9 days, and from referral to completion of the last surgical step was 30 days. Tumor grades included 41% G2, 23% G3, and 18% G1. Primary treatments involved partial penectomy (39%), total glansectomy (33%), and both partial glansectomy and subtotal penectomy at 11% each. Among 16 men with intermediate to high-risk disease, 14 underwent dynamic sentinel node biopsy (DSNB). Of these, five had positive sentinel nodes leading to inguinal lymphadenectomy, with one requiring additional pelvic lymphadenectomy and adjuvant radiotherapy. Fourteen men remain disease-free under ongoing monitoring.

#### Conclusion

The establishment of a dedicated penile cancer clinic has reduced the time from referral to the first visit and surgery, enhancing patient care through streamlined workflows and early intervention.





## P031

### Incidence, Risk Factors, and Impact of Perioperative Antibiotic Prophylaxis on Surgical Site Infections After Scrotal Surgery: A Retrospective Single-Center Cohort Study

NC Grossmann; L Bünter; A Mattei; CD Fankhauser

Luzerner Kantonsspital, Department of Urology

#### Introduction

Surgical site infections (SSIs) following surgery present significant complications that affect recovery and escalate healthcare costs. Our objective was to describe the incidence and risk factors for SSIs after scrotal surgery and evaluate potential preventive measures, including perioperative antibiotic prophylaxis.

#### Methods

We performed a retrospective analysis on patients who underwent clean wound scrotal or inguinal testicular surgeries at Kantonsspital Luzern from September 2018 to September 2022. Patients were categorized based on whether they received single-dose PAP or not and time of the procedure was noted. We evaluated complication types, timing, severity (using the Clavien-Dindo classification and the Comprehensive Complication Index [CCI]), duration of hospital stay, and readmission rates. Univariable regression was used to analyze risk factors for SSIs in patients not receiving PAP.

#### Results

The study encompassed 178 patients, with 105 not receiving perioperative antibiotic prophylaxis (PAP) and 73 receiving it. The surgical procedures conducted included 53 hydrocelectomies, 43 epididymectomies, 47 orchiectomies, 29 orchidopexies, one varicocelectomy, and five spermatocelectomies. Complication rates were similar between the non-PAP and PAP groups (22% vs. 28%;  $p=0.4$ ), as were the rates of surgical site infections (SSIs) (4% vs. 12%;  $p=0.058$ ), unplanned hospital visits (16% vs. 26%;  $p=0.13$ ) and median CCI (26.2 vs. 26.2,  $p=0.7$ ), scrotal hematoma (4% vs. 10%;  $p=0.12$ ), swelling (4% vs. 2%;  $p=0.4$ ), prolonged pain (4% vs. 2%;  $p=0.4$ ), and wound dehiscence (1.5% vs. 3%;  $p=0.6$ ), hospital stay (3 versus 3 days). SSIs presented earlier in the PAP group (3 vs. 10 days;  $p=0.021$ ). Prolonged surgery duration (OR 1.04, 95% CI 1.01-1.07,  $p=0.013$ ) and the occurrence of scrotal hematomas (OR 5.4, 95% CI 1.23-21.86,  $p=0.019$ ) were significant risk factors for SSIs in the non-PAP group.

#### Conclusions

Patients should be counseled that complications occur in approximately 20% of cases. Enhanced surgical training could not only reduce operation times but also minimize complications, as can meticulous hemostasis. We were unable to demonstrate a benefit of PAP but because of the limited sample size we were not able to adjust for known confounders. Consequently, we are planning a retrospective multinational, multicenter study to gather adequate data, which will inform the design of a randomized trial.



## P032

### „Urethral rest“ vor Harnröhrenplastik: Fake News oder evidenzbasiert?

M Borisenkov; A Pandey

Sana Klinikum Hof

Einleitung: EAU-Leitlinie empfiehlt „urethral rest“ für mind. 3 Monate nach Manipulation an Harnröhre vor Harnröhrenplastik (HP), obwohl das „Level of evidence“ sowie „Strength rating“ niedrig ist. Ziel: Ergebnisse der HP mit Mundschleimhaut bei obliterativen Strikturen bulbärer Harnröhre ohne „urethral rest“.

Material und Methoden: 04/94 - 09/23 wurden 2008 Pat. operiert und Follow-up (FU) Daten prospektiv erhoben. Einschlusskriterien: einzeitige ventral-onlay HP mit max. Ausdehnung 10 cm nach distal vom Sphinkter. Nach hausinternem Protokoll erhielten alle Pat. 3-4 Wochen vor der HP eine Sicht-UTI, somit alle ohne „urethral rest“. Als FU wurde Flow & Restharmessung prospektiv standardisiert empfohlen. Statistik mit SPSS 26, Chi Square.

Ergebnisse: 341 Pat. eingeschlossen. Pat. wurden in 3 Gruppen eingeteilt: „frisches Harnröhrentrauma“ (Bougierung < 6 Wochen oder DK vor HP, DK-Gruppe, N=42/341, 12,3%); „obliterative Striktur“ (CF-Anlage bei Harnverhalt oder Qmax. < 5 ml/s vor HP, CF-Gruppe, N=112/341, 32,8%); „nicht-obliterative Striktur“ (Qmax. > 5 ml/s ohne Bougierung < 6 Wochen vor HP, Flow-Gruppe, N=187/341, 54,8%). DK-Gruppe mit 7/42 (16,7%) Strikturrezidive, CF-Gruppe 10/112 (8,9%) und Flow-Gruppe 9/187 (4,8%). Unterschied war statistisch signifikant lediglich zwischen DK- und Flow-Gruppe (p=0,019).

Schlussfolgerung: In unserer Patientenkohorte hatte kein einziger Patient „urethral rest“ bekommen, sodass wir dieses bei hoher Erfolgsrate der HP nicht als Risikofaktor für Strikturrezidiv anerkennen können. Auf Grund von sehr dürtigen Datenlage kann aber auch im Allgemeinen das sog. „Urethral Rest“ nicht als Empfehlung praktiziert werden.

Tab. 1. Patientencharakteristika.

Gruppe	N=341	Mittl. Alter (min-max), Jahre	Anzahl Vortherapien,	
med. und IQR	Strikturlänge in cm, med. und IQR	Monate, med. und IQR	Follow up-Dauer in	
DK-Gruppe	42	58,3 (29-79) 5 (3-6)	6 (4-6)	23 (7,5-49,75)
CF-Gruppe	112	51 (16-87) 3 (2-5)	6 (4,5-7)	27,5 (13-52)
Flow-Gruppe	187	50,5 (15-85) 4 (3-5)	5 (4-6)	21 (11-44)



## P033

### **Feasibility, safety and early functional results of intraplaque platelet-rich plasma injections in men with induratio penis plastica, first results of a prospective Swiss cohort study**

L Zahiti<sup>1</sup>; H Wipfli<sup>1</sup>; A Mattei<sup>1</sup>; A Salonia<sup>2</sup>; C Fankhauser<sup>1</sup>

1 Luzerner Kantonsspital (LUKS); 2 San Raffaele Hospital

#### Introduction

Induratio penis plastica (IPP) often leads to painful erections, erectile dysfunction, palpable nodules, and penile curvature. Following the acute phase, a chronic phase ensues with fewer than 10% of patients seeing improvements. Standard treatments, including traction devices and surgical procedures such as Nesbit's procedure or plaque excision and grafting, are fraught with risks like reduced erectile function or sensory loss, deterring many from surgery. With the withdrawal of collagenase Clostridium histolyticum (Xiapex®) in Europe, platelet-rich plasma (PRP) has emerged as an intriguing alternative, potentially enhancing erectile function due to its regenerative properties. This study assesses the safety and early functional outcomes of PRP treatments for IPP.

#### Methods

In September 2022, we initiated a prospective study on PRP injections. PRP was prepared by centrifuging each patient's blood, followed by intraplaque administration with each man receiving two injections six weeks apart. Alongside clinical data, participants completed the Peyronie's Disease Questionnaire (PDQ), the International Index of Erectile Function (IIEF-15), and the Erectile Hardness Score (EHS). We evaluated these questionnaires, penile curvature, and flaccid geometric ratios at baseline and then again at 1 and 3 months after the second injection.

#### Results

We enrolled 13 men with a mean age of 63. Nine patients (69%) reported mild ecchymosis, with no other complications observed. The following results are reported as means at baseline, and 1 and 3 months after the second injection, respectively: Subdomain A of the PDQ scores were 13.8, 8.7, and 7.7; Subdomain B scores were 3.7, 2.0, and 2.3; Subdomain C scores were 9.1, 7.2, and 7.2. The mean IIEF-EF scores were 22, 20, and 21. Flaccid penile dorsal lengths were 14.55 cm, 15.01 cm, and 15.06 cm, while ventral lengths were 17.45 cm, 18.05 cm, and 18.26 cm. The angle of dorsal curvature decreased from an average of 59° to 52° and then to 50°. Notably, 4 patients (30%) reported significant clinical benefits, achieving satisfactory sexual intercourse through improved curvature.

#### Conclusion

The preliminary results from this pilot study highlight the safety and feasibility of intraplaque PRP injections for treating IPP. The data indicate median symptom score improvements and meaningful curvature reduction in a third of the patients.



## P034

### DOES PREVIOUS URETHRAL SURGERY IMPACT LONG TERME EFFICACY AFTER DORSAL ONLAY URETROPLASTY FOR BULBAR URETHRAL STRICTURES?

J Santos<sup>1</sup>; A Gregoris<sup>2</sup>; M Valerio<sup>2</sup>; V Fenner<sup>3</sup>; C Iselin<sup>2</sup>

1 HUG Hôpitaux Universitaires de Genève; 2 HUG - Hôpitaux Universitaires de Genève; 3 La Tour Hospital

#### Purpose

Repeat endoscopic procedure for urethral stricture is believed to lengthen the stricture and potentially complexify the reconstruction afterwards. Our goal was to evaluate the impact of previous urethral surgery on the long-term efficacy of dorsal onlay graft (DOG) urethroplasty in patients with at least 10 years follow-up in a specialized center.

#### Methods

Monocentric retrospective study of patients who underwent bulbar DOG urethroplasty between 1998 to 2013, either with oral mucosa graft (OMG) or penile skin graft (PS). Exclusion criteria were lichen sclerosis, prior hypospadias repair, penile and posterior strictures. The current study aimed to investigate whether previous surgery (DVIU, balloon dilation or urethroplasty), and their amount, had an impact on the long-term success rate. Survival analyses were conducted using Kaplan-Meier's method and Cox regression.

#### Results

76 patients meeting the inclusion criteria were identified. Median age was 59,5 years (+/- 14,4). Mean stricture length was 4.4 (+/-1,9) cm.

38 patients (50%) had prior urethral surgery. 30 had DVIU, 6 had open reconstruction and 2 had both. 11 patients had more than one DVIU

Mean operative time was 186 (+/- 38) min. Penile skin graft was used in 48 (63,1 %) patients and buccal mucosa graft in 28 (36,8 %).

Median follow-up was 116 months (range 4-293). 74 out of 76 patients had complete follow up data. In total, 21 patients (28,3 %) presented a recurrence. The 5-year success rate was 80.6%, while the 10-year success rate was 67.8% when considering patients lost to follow-up.

Patients with previous treatment had a 10-year success rate of 73% vs 63% for naïve patients (p=0.326) (81% vs 80 at 5 years). Patients that had only one DVIU had a success rate at 10 years of 67% against 53% for those who had more than one endoscopic treatment. (p = 0,772). On the Kaplan-Meier analysis, a trend was observed for earlier recurrence for patients with previous treatment, despite not reaching statistical significance on the logrank test.

#### Conclusion



Previous endoscopic surgery, especially when repeated, may complexify urethral reconstruction.

While the current study could not prove that repeated endoscopic treatments prior to DOG was associated with earlier or increased recurrence, a trend was observed for worse results in previously operated patients. We recommend referring patients to specialized centers instead of pursuing repeated endoscopic treatment.



## P035

### **Optilume® drug coated balloon dilation of recurrent anterior urethral stricture: a single center preliminary experience**

T Jaugey; K Stritt; N Grilo; I Lucca

CHUV (Centre hospitalier universitaire vaudois)

#### Background and goals

The use of Optilume drug coated balloon for short (< 3 cm) recurrent anterior urethral stricture dilation has been proven to be superior to standard dilation in terms of stricture recurrence, maximal urinary flow (Q<sub>max</sub>) and decrease International Prostate Symptom Score (IPSS). The aim of this study was to describe the early postoperative functional results, recurrence and complications of this technique introduced in April 2023 in our academic institution.

#### Material and method

We reviewed all consecutive patients with recurrent anterior urethral stricture who underwent Optilume balloon urethral dilation in the Lausanne University Hospital from April 2023 to March 2024. The intervention was carried out in the outpatient clinic without post-operative bladder catheterization. Patient characteristics, pre- and 30-day postoperative Q<sub>max</sub> and post-void residual volume and 30-day postoperative complications were reviewed.

#### Results

A total of 8 male patients were included. Median patient age was 65 years (IQR: 59 – 74). All patients previously underwent urethral interventions: five had multiple standard dilation, two had internal urethrotomy and one had segmental resection with urethral end-to-end anastomosis. Urethral strictures were 0.5 to 5 cm long. The mean Q<sub>max</sub> was increased after intervention (12.8 ml/s (± 6.3 ml/s) vs. 8.4 ml/s (± 3.1 ml/s), p = 0.068). The mean post-void residual volume was reduced after intervention (18.3 ml (± 28.6 ml) vs. 45.7 ml (± 37.4 ml), p = 0.086). Two patients presented mild postoperative complications. The first patient had transient dysuria and mild macrohematuria, which resolved spontaneously within one week. The second patient experienced persistent nycturia and urgency for 30 days post-intervention, necessitating anticholinergic medication. Recurrence of urethral stricture was observed in two patients 8 months after surgery.

#### Conclusion

Our preliminary results demonstrated that Optilume balloon dilation is a safe and feasible technique for anterior urethral stricture treatment. Further studies with larger population and longer follow-up are needed to corroborate our results.



## P036

### Oncologic and functional outcomes of penile shaft sparing surgery for localized penile cancer: a systematic review

N Di Nardo<sup>1</sup>; G Fallara<sup>2</sup>; G Basile<sup>3</sup>; A Poterek<sup>4</sup>; M Tozzi<sup>5</sup>; KH Pang<sup>6</sup>; OO Cakir<sup>7</sup>; M Bandini<sup>3</sup>; M Ferro<sup>5</sup>; G Musi<sup>8</sup>; F Castiglione<sup>7</sup>; CD Fankhauser<sup>1</sup>

<sup>1</sup> Department of Urology, Cantonal Hospital of Lucerne, Lucerne, Switzerland; <sup>2</sup> Division of Urology, European Institute of Oncology, IRCCS, Milan, Italy; <sup>3</sup> Department of Urology, Urological Research Institute, San Raffaele Scientific Institute, Milan, Italy; <sup>4</sup> Department of Urology, Wroclaw Medical University, Wroclaw, Poland; <sup>5</sup> Division of Urology, IRCCS European Institute of Oncology, Milan, Italy; <sup>6</sup> Department of Urology, University College London Hospitals NHS Foundation Trust, London, UK; <sup>7</sup> Department of Urology, King's College Hospital NHS Foundation Trust, London, UK; <sup>8</sup> Division of Urology, IRCCS European Institute of Oncology, Milan, Italy

#### Introduction & Objectives

Penile shaft sparing surgery (PSS) for localized penile cancer (PeCa) aims to balance oncologic and functional outcomes. This study summarizes the published evidence on different PSS approaches.

#### Materials & Methods

We performed a systematic review adhering to PRISMA guidelines. The systematic search was performed on PubMed, EMBASE, and Scopus databases up to February 14, 2023. Inclusion criteria encompassed retrospective or prospective studies including patients  $\geq 18$  years of age with localized PeCa treated with different PSS approaches, classified as laser ablation, circumcision, wide local excision, glanssectomy with or without split skin graft, glans resurfacing, and mixed techniques excision. The risk of bias was assessed using the Newcastle-Ottawa scale. A quantitative synthesis was not performed due to anticipated data heterogeneity and lack of comparative studies.

#### Results

Out of 4 343 identified articles, 47 met our inclusion criteria, including 10 847 patients. The year of publication ranged between 1983 and 2021. Nine studies were prospective case series, while the remaining studies were retrospective. No comparative studies were identified. Most of the included cases in these studies were Ta and T1. The oncologic outcomes were good for all the approaches, with cancer specific survival ranging between 0 and 18%. Sexual and cosmetic outcomes, despite underreported, were good for all the approaches, being almost all patients satisfied with their quality of life after surgery. The quality assessment revealed a high or severely high risk of bias in all the included studies.

#### Conclusions

PSS approaches were reasonably safe and with good functional outcomes. The review underscores the need for standardized methodologies and comprehensive reporting in future studies.



## P037

### Outcomes after primary retroperitoneal lymph node dissection in men with clinical stage 2a/b non-seminomatous germ cell tumour, a multicenter retrospective cohort study

L Antonelli<sup>1</sup>; A Heidenreich<sup>2</sup>; A Bagrodia<sup>3</sup>; A Amini<sup>3</sup>; F Baky<sup>3</sup>; N Branger<sup>4</sup>; W Cazzaniga<sup>5</sup>; T Clinton<sup>6</sup>; S Daneshmand<sup>7</sup>; H Djaladat<sup>7</sup>; A Ghoreifi<sup>7</sup>; S Eggener<sup>8</sup>; M Ho<sup>8</sup>; R Hamilton<sup>9</sup>; W Sexton<sup>10</sup>; S Nazzani<sup>11</sup>; D Nicol<sup>5</sup>; N Nicolai<sup>11</sup>; K Olson<sup>12</sup>; P Paffenholz<sup>13</sup>; J Porter<sup>14</sup>; Z Qian<sup>6</sup>; N Rocco<sup>15</sup>; A Yerrapragada<sup>16</sup>; S Stroup<sup>15</sup>; I Tachibana<sup>17</sup>; A Terbuch<sup>18</sup>; N Singla<sup>16</sup>; C Cary<sup>17</sup>; CD Fankhauser<sup>1</sup>

<sup>1</sup> LUKS; <sup>2</sup> Faculty of Medicine and University Hospital Cologne; <sup>3</sup> San Diego & The University of Texas Southwestern; <sup>4</sup> Institut Paoli-Calmettes; <sup>5</sup> The Royal Marsden NHS Foundation Trust; <sup>6</sup> Brigham and Women's Hospital; <sup>7</sup> Kenneth Norris Jr. Comprehensive Cancer Center; <sup>8</sup> University of Chicago Medical Center; <sup>9</sup> University of Toronto; <sup>10</sup> H. Lee Moffitt Cancer Center; <sup>11</sup> Fondazione IRCCS Istituto Nazionale dei Tumori; <sup>12</sup> Mayo Clinic; <sup>13</sup> Robot Assisted and Reconstructive Urologic Surgery; <sup>14</sup> University of Washington School of Medicine; <sup>15</sup> Naval Medical Center San Diego; <sup>16</sup> The Johns Hopkins University School of Medicine; <sup>17</sup> Indiana University School of Medicine; <sup>18</sup> Medical University of Graz

**Introduction:** Based on only smaller retrospective cohort studies, current guidelines recommend primary retroperitoneal lymph node dissection (RPLND) for men with marker-negative clinical stage (CS) 2a non-seminomatous germ cell tumor (NSGCT).

**Materials and methods:** We aimed to reassess the role of primary RPLND in marker negative CS2a, explore results in CS2b and evaluate surgical methods, recurrence, and adjuvant chemotherapy indications. Data from 17 institutions were collected, comprising 305 men who underwent primary RPLND for CS2 NSGCT. Regression analyses were conducted to predict histology in the RPLND specimen and progression-free survival (PFS).

**Results:** A larger retroperitoneal lymph node diameter was associated with pure teratoma in the RPLND specimen (odds ratio [OR] 1.03, 95% confidence interval [CI] 1.01-1.09, p-value = 0.02), but it did not correlate with PFS. The 5-year PFS rates in CS 2a and 2b were 79% and 76% in the overall cohort (p= 0.7). In men with viable cancer in the RPLND specimen the 5-year PFS for CS 2a and 2b were 95% and 87% (p=0.7) with adjuvant chemotherapy, and 67% and 68% (p=0.74) without adjuvant chemotherapy. The number of adjuvant chemotherapy cycles did not significantly affect PFS.

**Conclusions:** Our study suggests considering primary RPLND not only in marker negative CS 2a but also 2b. Further research should identify the efficacy in men with CS 2c and marker positive CS 2 and which patients may benefit from adjuvant chemotherapy and the optimal cycle number.





## P038

### Ureterorenoscopy with flexible vacuum-assisted ureteric access sheath : the Geneva experience

J Ruggiero; F Schoofs; M Valerio; T Liernur

HUG - Hôpitaux Universitaires de Genève

#### Introduction

Reducing intrarenal pressure while increasing visibility is key to enable optimal endoscopic procedures in the upper urinary tract. Both might be achieved using flexible vacuum-assisted ureteric access sheath (FV-UAS) that differs from traditional UAS by offering adjustable pressure suction through the sheath, which has a soft tip that can be passively bent with the flexible ureteroscope and positioned into the renal pelvis and calices. The aim of this study is to present the outcome of our initial experience in ureterorenoscopy (URS) with FV-UAS.

#### Material and Methods

Retrospective review of all consecutive URS for kidney stones using FV-UAS performed at our institution between February 2024 and April 2024. Patient and stone characteristics, operative parameters, stone-free status and complication rate were recorded. Stone-free status was defined as absence of significant fragments at on-table endoscopic and fluoroscopic assessment or as no residual fragments  $\geq 4$  mm on postop CT-scan. A 10/12Fr or 12/14Fr disposable ClearPetra® ureteral access sheath (Well Lead Medical Co., Ltd, China) and a 7.5Fr single use flexible ureteroscope were used. Stones were fragmented using Thulium laser. Stone dust was suctioned from the sheath gap and larger fragments were removed by withdrawing the ureteroscope intermittently. A ureteric stent was always positioned for post-operative drainage. Procedures were performed on an outpatient basis.

#### Results

20 patients had URS with FV-UAS, with a median age of 51 years (IQR 44-60) and a median ASA score of 2 (IQR 2-3). Median cumulative stone burden was 15 mm (IQR 13-33) with a median density of 1115 HU (IQR 678-1300). 8 patients presented with pelvic stones (40%), 10 with calyceal stones (50%) and 2 with both (10%). 11 patients were pre-stented (55%). Median operative time was 64 minutes (IQR 55-89). A basket was not used in 17 patients (85%). 10/12Fr and 12/14Fr ureteral access sheath were used in 17 (85%) and 3 (15%) patients, respectively. 19 patients were stone-free (95%). 1 patient presented a Clavien grade 2 complication (5%; post-op fever treated by antibiotics). No Clavien complications grade 3 or higher.

#### Conclusions

URS with FV-UAS seems to be a safe and effective technique addressing kidney stones, associated with a high stone-free rate, low basket usage and low likelihood of significant complications.



## P039

### Outcome Analysis of Rigid and Flexible Ureteroscopy: Evaluation of Risk Factors for Post-Surgical Urinary Tract Infection in a Retrospective Monocentric Study

F Peranzoni; F Peranzoni

CHUV Centre Hospitalier Vaudois

#### Objective

Infectious complications following ureteroscopy pose significant morbidity and mortality risks. Strategies such as prophylactic antibiotic use, minimizing stent duration, and reducing procedural time have shown promise in mitigating these risks. Urosepsis rates post-URS for stone disease are reported at 0.51%, with fever occurring in up to 66% of patients. However, there is limited literature on predictors of post-ureteroscopy infectious complications, with most studies focusing solely on stone disease and excluding ureteral strictures and cancers.

The aim of this study is to identify predictive factors that may be associated with postoperative infectious complications to optimize patient outcomes.

#### Methods

In this retrospective monocentric study, we assessed the outcomes of rigid or flexible ureteroscopy procedures performed on 100 patients in 2023 at the Urology Department of Lausanne University Hospital. Preoperative factors such as age, sex, presence or absence of double J stent, indication for ureteroscopy (stones, cancers, strictures), congenital urinary tract malformations, and neurogenic bladder were considered for each patient. The study evaluated postoperative infectious complications such as fever, rehospitalization, and positive inflammatory syndrome.

#### Results

The mean age of the patients was 57.74 years. Among them, 11% (11) had congenital urinary malformations and 38% (38) had recurrent kidney stone disease. Prior to ureteroscopy, 87% (87) of patients underwent urine culture, with 15% (15) showing positive cultures. Of those with positive cultures, 33% (5) were positive for *E. coli*, all of whom received antibiotic treatment. A total of 4% (4) of patients experienced postoperative infectious complications necessitating hospitalization within 30 days of ureteroscopy. Using chi-square tests, we found a significant association ( $p = 0.009$ ) between preoperative positive urine culture and post-ureteroscopy complications, including fever and rehospitalization, along with inflammatory syndrome based on laboratory findings. A significant association ( $p = 0.0005$ ) was identified between patients with neurogenic bladder and the risk of infectious complications.

#### Conclusion

Patients with a positive urine culture prior to surgery and those with a neurogenic bladder are at higher risk of developing postoperative infectious complications. Therefore, these patient may benefit from prolonged antibiotic treatment before and after surgery.



## P040

### Which parameters affect radiation protection during ureterorenoscopy for urolithiasis ?

M Feldman; A Grégoris; T Genetay; T Liernur; M Sans Merce; M Valerio; D Benamran

Hôpitaux Universitaires de Genève

#### Introduction

Radiation protection is a critical consideration in both diagnostic and therapeutic urological procedures to ensure safety of patients and surgeons. The Federal Office of Public Health (FOPH) has established diagnostic reference levels (DRLs) for some of them.

Ureterorenoscopy (URS) lacks specifically defined DRLs and radiation dose values can vary widely. Our aim was to assess the factors that may contribute to dose variation in patients undergoing URS for urolithiasis.

#### Material and methods

Baseline data were collected from 238 patients in our institution over a year using a prospectively maintained database. Demographics, patients and stone-related variables as well as surgical and radiation exposure data were recorded. Univariate and multivariate linear regressions were conducted to examine the associations between the radiation level (dose-area-product, DAP) and various variables (demographic and clinical data) with a significance level set at 0.05.

#### Results

The analysis included 238 patients with a mean age of 55.5 (15.7) years and a median DAP of 2.0 (2.1) Gy x cm<sup>2</sup>.

Univariate analysis showed a significant association ( $p < 0.05$ ) with BMI, with an  $r^2 = 0.1$ . Additionally, significant associations were found with the type of URS (semi-rigid (reference (ref)), flexible), ( $r^2 = 0.02$ ), localization (kidney (ref), ureter) ( $r^2 = 0.03$ ), total stone volume according to quartiles (1st quartile ( $< 67$  mm<sup>3</sup>) (ref), 3rd quartile ( $\geq 199$  and  $< 463$  mm<sup>3</sup>) and 4th quartile ( $\geq 463$  mm<sup>3</sup>)), ( $r^2 = 0.07$ ). Preoperative ureteral stenting (no (ref)), ( $r^2 = 0.02$ ) and patient's width (1st quartile ( $< 22$  cm) (ref) vs 3rd quartile ( $\geq 24$  and  $< 27$  cm) and 4th quartile ( $\geq 27$  cm)), ( $r^2 = 0.15$ ) also showed significant associations.

Multivariate analysis showed significant associations ( $p < 0.001$ ,  $r^2 = 0.27$ ) of DAP with patient's width (1st quartile ( $< 22$  cm) (ref)),  $C = 2.5$  for 4th quartile ( $\geq 27$  cm) and preoperative ureteral stenting (no (ref)),  $C = - 0.9$ .

#### Conclusion

The patient's body habitus and preoperative ureteral stenting influence the total DAP during URS. Care should be taken when treating those patients to ensure minimal radiation exposure. No official recommendations can be made regarding the DAP threshold for URS due to considerable variability in patient-specific preoperative characteristics. This highlights the need for standardization. Real-time dosimeters could help accurately assessing radiation exposure and avoiding overexposure.



## P041

### Endoscopic treatment of symptomatic vesicoureteral reflux after renal transplantation: the Geneva experience

O Minder; E Grobet-Jeandin; C Iselin; M Valerio; D Benamran; T Liernur  
Department of Urology, University Hospital HUG, Geneva, Switzerland

#### Introduction

Endoscopic treatment of vesicoureteral reflux (VUR) in kidney transplant patients has emerged as a minimally invasive alternative approach to ureteral reimplantation. The aim of our study was to report treatment results and to identify factors associated with failure.

#### Materials and Methods

Retrospective review of patients undergoing endoscopic treatment for symptomatic VUR from 2015 to 2023. Treatment consisted of endoscopic Deflux® injection. Treatment success was defined as no recurrence of symptomatic VUR. Persistent or recurrent symptomatic VUR lead to a second or third injection or open ureteral reimplantation. Patient characteristics, operative data, success and complication rate were recorded. Univariate and multivariate linear regressions were conducted to assess the associations between endoscopic treatment failure and potentially relevant predictors. Significance level was set at 0.05.

#### Results

37 patients (21 women, 16 men) were included in the study, with a median age of 56 years (IQR 44-68). 11 patients had grade 2 VUR (30%), 15 grade 3 (41%), 9 grade 4 (24%) and 2 grade 5 (5%). Median time from renal transplantation to endoscopic treatment was 36 months (IQR 18-80). 15 patients had a second injection and 3 had a third injection. Median follow-up was 46 months (IQR 27-57). Median pretreatment creatinine was 137  $\mu\text{mol/l}$  (IQR 97-174) and last posttreatment creatinine was 127  $\mu\text{mol/l}$  (IQR 102-180). Success rate after 1 injection was 51% (n=19), 76% (n=28) after a second injection and 81% (n=30) after a third injection. 7 patients (19%) required open ureteral reimplantation. Univariate analysis showed a significant association between shorter time from renal transplantation to endoscopic treatment and treatment failure ( $p < 0.05$ ). Higher volume of Deflux® injected during the first injection also showed significant association ( $p < 0.05$ ). Other patients or perioperative predictors showed no significant association. Multivariate analysis did show no significant association. 4 patients presented Clavien grade 2 complications (11%; post-op fever treated by antibiotics) and 4 patients had Clavien grade 3 complications (11%; obstruction requiring ureteric stent).

#### Conclusion

Endoscopic treatment of symptomatic VUR following renal transplantation seems to be safe and effective, with a success rate of 81% in our series. Treatment failure was associated with early onset of VUR and with higher volume injected at initial treatment.



## P042

### Comparing perioperative and postoperative outcomes in minimally invasive total nephrectomy: Are living donor nephrectomies truly safer ?

Q Novello; D Benamran; A Gregoris; N Peixoto; M Valerio

HUG - Hôpitaux Universitaires de Genève

#### Background and objective

Minimally invasive nephrectomy is performed for various urological indications. Management and outcomes may vary widely. This study aims to compare perioperative and postoperative outcomes of total nephrectomies according to surgical indication.

#### Methods

A retrospective analysis of a prospectively maintained database was conducted. All patients undergoing total nephrectomy (TN) for oncological or functional reasons as well as living kidney donation (LKD) over 8 years were identified. Demographics and perioperative data were recorded, along with postoperative data on kidney function. Primary outcome was safety defined as no post-operative complication greater than grade 2 according to the Clavien-Dindo classification. Secondary outcomes included length of hospital stay (LOS), loss of hemoglobin and long-term change in glomerular filtration rate (GFR).

Statistical analyses including univariate and multivariate linear regression model were performed using STATA for two distinct groups: TN for LKD and TN for other indications

#### Results

A total of 170 patients were identified, including 107 (63 %) LKD and 63 (37 %) TN for other indications. In the LKD group, patients were significantly younger (mean age 52 (12) vs 60 (16) ( $p = 0.003$ )) and had a lower ASA score (ASA score > 2 in 1% of the LKD group vs 56%,  $p < 0.001$ ). BMI was similar between the two groups. Despite a longer operative time (291.6 (54.5) min vs. 231.3 (99.7) min,  $p < 0.001$ ), Clavien-Dindo complications greater than grade 2 were significantly lower in the LKD group (1 (1%) vs. 7 (11%),  $p = 0.004$ ). Post-operative LOS was shorter for LKD (3.9 (1.8) days vs. 5.9 (4.5) days,  $p < 0.001$ ). No difference was noted in loss of hemoglobin. In the subgroup analysis between LKD and TN for oncological indication, the difference in GFR levels at one year was significantly lower in the LKD group (-11.7 (3.4) ml/min/1,73m<sup>2</sup> vs. -31.1 (5.3) ml/min/1,73m<sup>2</sup>,  $p = 0.004$ ).

#### Conclusion

LKD is performed in a highly selected group of patients with very few comorbidities. In such conditions, TN for LKD is a very safe procedure with extremely low complication rate and midterm decline in renal function. Care should be taken when counseling candidates for TN for oncological or functional indications who are usually more frail and require long term close monitoring.



## P043

### Robotic Management of Vascular Injuries: A Systematic Review

N Di Nardo; FJ Aschwanden; S Sigg; P Baumeister; A Mattei; CD Fankhauser

Department of Urology, Cantonal Hospital of Lucerne, Lucerne, Switzerland

#### Abstract

The adoption of robotic surgical procedures is expected to grow by 8% over the next six years. With this increase comes a shift in performing more complex procedures robotically rather than via traditional open methods, which will inevitably lead to a rise in major vascular injuries. Currently, the management of such injuries through robotic systems lacks standardization and relies significantly on the surgeon's individual expertise. This systematic review aims to evaluate documented robotic repair techniques that prevent the need for conversion to open surgery.

#### Material and Methods

Following PRISMA Guidelines, we systematically reviewed the literature available on PubMed Database up to February 15, 2024. We included a variety of study designs, including non-randomized controlled trials, prospective and retrospective cohort studies, case-control studies, case series, and case reports. Our criteria encompassed articles in English, German, Italian, and French, and included patients of any age and gender. We utilized Covidence software for abstract stratification based on inclusion and exclusion criteria.

#### Results

From an initial pool of 1,359 publications, we selected 22 reports for inclusion. These papers spanned various specialties: five in urology, seven in gynecology, eight in thoracic surgery, and two in general surgery. The types of studies included nine case reports, five case series, six retrospective studies, and two literature reviews.

Collectively, these reports described 44 patients who encountered major vascular complications during robotic surgery, all of which were managed successfully without converting to open surgery. The complications involved several key vascular structures, including the pulmonary artery (14 cases), external iliac vein (6 cases), superior mesenteric artery (6 cases), pulmonary vein (3 cases), inferior vena cava (2 cases), right hepatic artery (2 cases), inferior mesenteric artery (2 cases), aorta (2 cases), and single cases involving the posterior segmental artery, branch of the right internal iliac vein, obturator vein, internal iliac vein, anterior branch of the upper lobe artery, superior vena cava, and azygos vein.

#### Conclusion

The literature on robotic repair strategies for intraoperative vascular lesions remains scarce. Given the rapid advancement and adoption of robotic surgery, it is imperative to develop and refine intraoperative protocols and explore various repair strategies to enhance patient outcomes.



## P044

### Retroperitoneal vs Transperitoneal Approach for Robot-Assisted Nephrectomy: early results of a new technique

V Benard; E Grobet-Jeandin<sup>1</sup>; N Peixoto<sup>1</sup>; M Valerio<sup>1</sup>; J Klein<sup>1</sup>; D Benamran<sup>1</sup>

<sup>1</sup> HUG - Hôpitaux Universitaires de Genève

#### Introduction

Robotic partial nephrectomy (RPN) can be performed by a transperitoneal (TP) or a retroperitoneal (RP) approach. TP is more common and provides ample working space with familiar landmarks. RP may offer advantages, particularly for complex surgical histories or posterior lesions, but its spread is still limited, probably due to technical challenges. Our goal was to review the early outcomes of RP-RPN after implementation in our institution and to compare it with a contemporary TP-RPN series.

#### Materials & Methods

A retrospective analysis of a prospectively maintained database of patients undergoing RPN for renal tumors at our institution over the last 2 years was conducted. Tumor characteristics, demographics, surgical and peri-operative data were collected. We divided patients into two groups based on the surgical approach: TP or RP. We conducted a matched-pair analysis using propensity scores to mitigate the selection bias in terms of demographic and tumor characteristics. Negative surgical margins, warm-ischemia time (WIT) and no significant postoperative complications defined as Clavien  $\geq 3$  were the primary outcome. Operative time (OT), blood loss (BL), bowel activity (BA), postoperative pain (PP), significant changes in postoperative kidney function (KF), and hospital length of stay (LOS) were the secondary outcomes.

#### Results

A total of 50 patients were included (TP = 36, RP = 14). They were mostly men (74%), with a mean age of 58 years (SD 14), mean BMI of 27 (SD 4) and mean SPARE nephrometry score of 2.6 (SD 2). Age, sex, BMI and SPARE nephrometry score were similar between two groups. Mean OT was significantly shorter in the RP-RAN group than the TP-RAN group (144min (SD 66) and 220min (SD 63), respectively;  $p = 0.001$ ).

In the TP-RAN group, 2 patients (5%) had positive surgical margins and only 1 showed a Clavien 3a post-operative complication. In the RP-RAN group, no patients had positive surgical margins and only 1 showed a Clavien 3a post-operative complication. BA was detected earlier in the RP-RAN group (1.6 days, SD 0.6) than in the TP-RAN group (2.1 days, SD 0.9) ( $p = 0.004$ ).

Mean BL, LOS, PP, KF and WIT were comparable between the two groups.

#### Conclusions



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Implementation of RP-RPN seems safe and effective, with similar complication rates and hospital LOS compared to TP-RPN. RP-RAN appears to be a shorter procedure, allowing earlier BA. RP-RAN should be offered as an adequate alternative in selected patients.





## P045

### The Evolution of Kidney Surgery for Renal Masses in Switzerland (CH) – an Analysis from Datasets provided by the National Agency for Cancer Registration (NACR) and the Swiss Federal Statistical Office (BfS)

F Schmid<sup>1</sup>; L Schütz<sup>2</sup>; M Mousavi<sup>3</sup>; M Blum<sup>3</sup>; R Strebel<sup>4</sup>

<sup>1</sup> University Hospital Zurich; <sup>2</sup> University of Zurich (UZH); <sup>3</sup> Cancer Registry Eastern Switzerland; <sup>4</sup> Kantonsspital Graubünden

**Background/aims:** Following international guidelines, partial nephrectomy (PN) is recommended as standard of care in patients with cT1 kidney tumors and in cT2 whenever technically feasible. Due to advantages of minimal-invasive techniques, the laparoscopic approach has increasingly been used worldwide. It was our aim to investigate the evolution of kidney surgery in CH and evaluate, whether urologists adhere to these guidelines. We hypothesize an increase in laparoscopic compared to open surgical procedures over the past decade. Further, increasing numbers of PN compared to radical nephrectomy (RN) should correlate with minimal-invasive procedures.

**Material and Methods:** Datasets were provided by the NACR and the BfS. With the data from NACR, we were able to analyze age categories, sex, demographics, year of intervention, T-stage, and whether PN or RN was performed. The data from BfS revealed numbers regarding age categories, sex, type of surgical procedure (PN vs. RN), surgical approach (laparoscopic vs. open), and mortality. Statistical analysis was performed in R.

**Results:** The NACR dataset included 10'810 patients with renal cell carcinoma (RCC) during 2008-2020. The highest incidence of surgical RCC treatment occurred among patients aged 65-69 (n=1'081). The relative amount of PN vs. RN increased from n=48 (23.19 %) in 2008 to n=393 (48.03 %) in 2020. Especially in pT1 tumor patients, a total of 2'457 PN (59.6%) were performed compared to 1'667 RN (40.4%) during the observation. Due to missing data or incomplete reporting, only 6'565 (60.7%) observations could be used. The BfS data harbored 10'700 patients with RCC between 2008 and 2018. Laparoscopic procedures increased from n=194 (21.1%) in 2011 to n=485 (45.2%) in 2018. The Ticino region had a lower amount of PN procedures performed with n=149 (25.0%) compared to the average of other regions with n=445 (45.4%). Gender had no effect on T-stage. However, 43.0% of men (n=4'669) compared to 40.6% of women (n=1'896) underwent PN. Overall mortality was low, 0.7% in PN (n=13) vs. 1.3% in RN (n=96) procedures.

**Conclusion:** Our study highlights an increase in laparoscopic surgery and PN for the treatment of RCC during the past decade, indicating adherence to international guidelines. Further research is needed to analyze demographic differences. An increase in reported cases suggests initial underreporting. Herewith, missing data was a limitation to this project. Mandatory reporting aims to address this issue.



## P046

### **Retroperitonealer und transperitonealer Zugang bei roboterassistierter Nierenteilresektion von ipsilateralen unifokalen und multifokalen T1-Nierenläsionen – Eine Analyse von n=81 konsekutiven Patienten**

J Anudu; P Wolfsgruber; A Sauer; T Möltgen; S Wyler

Kantonsspital Aarau AG

**Einleitung:** Die roboterassistierte Nierenteilresektion stellt eine an Bedeutung zunehmende, moderne Therapieoption der minimal invasiven Nierentumorchirurgie bei T1-Tumoren dar, die immer mehr die konventionelle offene Nierentumorchirurgie ablöst. Diese Arbeit untersucht die Ergebnisse der robotergestützten Resektion von unifokalen und multifokalen lokalisierten T1-Nierentumoren, den Nierenfunktionsverlust, die Komplikationsrate, die Tumorkomplexität im R.E.N.A.L-Score und den gewählten Operationszugang.

**Material und Methode:** Retrospektive Auswertung von n=81 konsekutiven Patienten hinsichtlich Anzahl von Tumoren, Zugangswege, Komplexität der Operation anhand von R.E.N.A.L-Score, warme Ischämiezeit (WIZ), Operationszeit, Nierenfunktionsverlust durch Kreatininanstieg und e-GFR Verlust (nach MDRD Formel) und Komplikationen nach Clavien-Dindo Klassifizierung sowie Krankenhausverweildauer.

**Ergebnisse:** Es wurden 81 renaler Einheiten operiert im Zeitraum von 2018-2023, davon 75% transperitoneal und 25% retroperitoneal. 90 % waren unifokale Tumoren und 10% multifokale Tumoren. Die Durchschnittliche Tumorgrosse betrug  $2,98 \pm 1,36$  cm (transperitoneal  $3,04 \pm 1,36$ , retroperitoneal  $2,96 \pm 1,45$ ), RENAL-Score  $5,49 \pm 1,33$  (transperitoneal  $5,46 \pm 1,34$ , retroperitoneal  $5,95 \pm 1,69$ ), WIZ  $18,95 \pm 9,92$  (transperitoneal  $19,51 \pm 10,56$ , retroperitoneal  $16,55 \pm 8,27$ ), Operationszeit  $198 \pm 46$  Min. (transperitoneal  $206 \pm 44$ , retroperitoneal  $178 \pm 39$ ), die Gesamtkomplikationsrate bei 6,2 % (n=5, 2x Clavien 2, 2x Clavien 3b, 1x Clavien 4a; transperitoneal 4,9 %, retroperitoneal 1,2 %), und der e-GFR-Verlust bei  $24,39 \pm 20,40$  ml/min/1.73m<sup>2</sup> (transperitoneal  $25,02 \pm 21,42$ , retroperitoneal  $22,6 \pm 16,65$ ), R1-Status bei 3,7% der Patienten (transperitoneal 3,7 %, retroperitoneal 0 %), Krankenhausaufenthalt  $5,7 \pm 3,9$  d (transperitoneal  $6,0 \pm 4,4$ , retroperitoneal  $4,7 \pm 1,1$ ).

**Schlussfolgerung:** Die roboterassistierte Nierenteilresektion von T1-Tumoren ist sicher mit geringer Komplikationsrate. Der retroperitoneal Zugang ermöglichte kürzere Operationszeiten und kürzere Ischämiezeiten und führte zu einem kürzeren Spitalaufenthalt im Vergleich zum transperitonealen Zugang.



## P047

### Funktionelle Bewertung von orthotopen Ersatzblasen: Stellenwert der Video-Urodynamik?

J Tornic; K Böhler; P Kraft; G Frölicher; F Obrecht; C Schregel; B Förster; H John  
Kantonsspital Winterthur KSW

#### Hintergrund und Ziele

Orthotope Ersatzblasen (oEB) bieten eine gute Option für die kontinente Harnableitung nach Zystektomien. Komplikationen wie rezidivierende Harnwegsinfekte (rHWI) oder postrenal bedingte Niereninsuffizienzen treten allerdings nicht selten auf.

Das Ziel dieser Studie ist der Vergleich video-urodynamischer Parameter, des Auftretens von rHWI und der Nierenfunktion bei Patienten mit oEB mit und ohne URR.

#### Material und Methoden

In dieser Fallserie wurden insgesamt 18 Männer und 2 Frauen nach Zystektomie mit Anlage einer oEB von 2015 - 2022 berücksichtigt. Krankenakten wurden auf rHWIs gescreent und die prä- und postoperativen Kreatininwerte erfasst. Video-Urodynamiken (VU) wurden nach Standard der International Continence Society (ICS) durchgeführt.

Die Mittelwerte (mit Ranges in Klammern) der Compliance (CPL; mL/cmH<sub>2</sub>O), der max. zystometrischen Kapazität (V<sub>max</sub>; mL), des Restharns (VPVR; mL), des intravesikalen Drucks (PUUR; cmH<sub>2</sub>O) und des Volumens (VURR; mL) bei Auftreten eines URR wurden mit der Gruppe ohne nachweisbaren URR verglichen.

#### Resultate

Ein URR wurde bei 75% (15/20) festgestellt: 73 % (11/15) bilateral und 27 % (4/15) unilateral. Bei 3/20 (1 ohne und 2 mit URR) fehlten aufgrund externer Behandlung die postoperativen Daten.

Mit URR betragen die CPL 166 (20-400) mL/cmH<sub>2</sub>O, V<sub>max</sub> 456 (160-780) mL, VPVR 230 (0-660) mL, PUUR und VUUR 9,9 (2-20) cmH<sub>2</sub>O bzw. 267 mL (100-445). Das Kreatinin prä- und postoperativ betrug 117 µmol/L (66-505) und 130 µmol/L (60-565). Bei 15 % (2/13) wurden rHWI dokumentiert. Alle diese Patienten entleerten die oNB spontan. In der URR-Untergruppe ohne rHWI wurde die Blasenentleerung bei 18 % (2/11) durch intermittierende Selbstkatheterisierung (ISC) durchgeführt.

Bei den 25% (5/20) ohne URR betrug die CPL 276 (30-750) mL/cmH<sub>2</sub>O, V<sub>max</sub> 656 (440-1000) mL und VPVR 420 (30-800) mL. Das Kreatinin betrug prä- und postoperativ 74 µmol/L (73-111) bzw. 93 µmol/L (65-129). In dieser Gruppe wurden rHWIs bei 75% (3/4) der Patienten behandelt. Einer der Patienten entleerte die Blase mittels ISC.

#### Schlussfolgerung

In unserer Fallserie hatten Patienten ohne URR eine höhere Kapazität der oEB, ein grösseres Restharnvolumen und zugleich häufiger rHWI.

Die Funktionsprüfung mittels VU könnte zur Beurteilung der langfristigen Morbidität der Harnwege von Patienten mit orthotopen Ersatzblasen und zur Verbesserung der Patientenversorgungsqualität eine wichtige Rolle spielen, allerdings werden weitere Studien zu diesem Zweck benötigt.



## P048

### **Botulinum Toxin A Injection in Patients after Augmentation Cystoplasty or Total Bladder Replacement: A Literature Review**

B Breu; I Lucca; N Grilo

Centre Hospitalier Universitaire Vaudois (CHUV)

#### Introduction

The efficacy of intra-detrusor injections of Botulinum Toxin A (BTXA) has been well documented, but it has yet to be explored in patients with residual high detrusor pressure or overactivity within a urinary reservoir after augmentation cystoplasty or total bladder replacement (neobladder or continent pouch).

#### Materials and Methods

We performed a non-systematic review of the literature through the electronic databases MEDLINE, EMBASE, Web of Science, using the keywords “Botulinum Toxin”, “overactive”, “neobladder”, “urinary diversion” and “augmentation cystoplasty”. We included case reports and retrospective studies with emphasis on studies published between 2014 – 2024. Older studies were included if relevant. Outcomes of interest were injections sites (native residual detrusor and/or enteroplasty muscularis), resolution of urinary discomfort (improvement of incontinence, frequency, urgency, urinary infection, bladder pain), urodynamic changes and an overall positive clinical response sufficient to merit repeat BTXA injections. Exclusion criteria encompassed pediatric papers and non-English language articles.

#### Results

Initial searches yielded 171 articles, with 43 undergoing full review. Most articles described BTXA injections as either an alternative or preceding therapy to cystoplasty/bladder replacement in patients with high detrusor pressure/overactivity. However, only a limited number of articles addressed BTXA injections as a post-surgical treatment. Nonetheless, 11 studies meeting inclusion criteria were identified, comprising additional relevant references extracted from initially selected articles. The articles included found a significant improvement in 59% (range 43-86%, n=11). The improvement was variably defined, as symptomatic improvement measured with questionnaires or patient requesting further injections, overall patient response or urodynamic changes, with heterogeneous results. Urodynamic follow-up after BTXA injections was performed in three studies with increase of cystometric capacity in 39% (range 28-50%, n=3) and reduction of maximal detrusor pressure in 46% (range 43-50%, n=3).

#### Conclusion

BTXA injections after failed augmentation cystoplasty or total bladder replacement may be proposed as a salvage option before complex surgical revision. Further studies with larger cohorts are warranted due to the scarcity of data presently available, including urodynamic assessments post BTXA injection.



## P049

### First results of the “Swiss Consensus Conference for functional and oncological follow-up after cystectomy and trimodal therapy”

E Kaufmann<sup>1</sup>; S Aeppli<sup>2</sup>; A Affentranger<sup>1</sup>; W Arnold<sup>1</sup>; F Aschwanden<sup>1</sup>; P Balermipas<sup>3</sup>; J Beyer<sup>4</sup>; U Bieri<sup>5</sup>; J Boormanns<sup>6</sup>; R Cathomas<sup>7</sup>; B De Bari<sup>8</sup>; M Dressler<sup>9</sup>; D Engeler<sup>10</sup>; A Erdmann<sup>5</sup>; A Gallina<sup>11</sup>; T Hermanns<sup>12</sup>; L Ilaria<sup>13</sup>; H John<sup>14</sup>; T Kessler<sup>15</sup>; J Klein<sup>16</sup>; M Laouiti<sup>17</sup>; D Lauffer<sup>18</sup>; S Lerner<sup>19</sup>; A Mattei<sup>1</sup>; M Müntener<sup>20</sup>; D Nguyen<sup>8</sup>; P Niederberger<sup>1</sup>; A Papachristofilou<sup>21</sup>; L Prause<sup>22</sup>; K Reinhardt<sup>23</sup>; E Salati<sup>17</sup>; S Sigg<sup>1</sup>; P Sèbe<sup>18</sup>; H Seifert<sup>21</sup>; M Shelan<sup>4</sup>; R Strebel<sup>7</sup>; T Tawadros<sup>17</sup>; A Templeton<sup>23</sup>; U Vogl<sup>11</sup>; J Wöllner<sup>24</sup>; S Wyler<sup>25</sup>; D Zihler<sup>25</sup>; T Zilli<sup>11</sup>; D Zwahlen<sup>26</sup>; B Roth<sup>4</sup>; C Fankhauser<sup>1</sup>

<sup>1</sup> Luzerner Kantonsspital; <sup>2</sup> Kantonsspital St. Gallen; <sup>3</sup> Universitätsspital Zürich; <sup>4</sup> Inselspital - Universitätsspital Bern; <sup>5</sup> Kantonsspital Baden; <sup>6</sup> Erasmus MC Rotterdam; <sup>7</sup> Kantonsspital Graubünden; <sup>8</sup> Réseau hospitalier neuchâtelois; <sup>9</sup> Zentrum für Onkologie Luzern; <sup>10</sup> Kantonsspital Sankt Gallen; <sup>11</sup> Ente Ospedaliero Cantonale; <sup>12</sup> Zentrum für Urologie Zürich - Klinik Hirslanden; <sup>13</sup> Centre Hospitalier Universitaire Vaudois (CHUV); <sup>14</sup> Kantonsspital Winterthur; <sup>15</sup> Universitätsspital Balgrist; <sup>16</sup> Kantonsspital Münsterlingen; <sup>17</sup> Hôpital Riviera Chablais; <sup>18</sup> University Hospital Geneva; <sup>19</sup> Baylor College of Medicine; <sup>20</sup> Stadtsptal Triemli; <sup>21</sup> Universitätsspital Basel; <sup>22</sup> Kantonsspital Aarau; <sup>23</sup> St. Claraspital Basel; <sup>24</sup> Schweizer Paraplegiker Zentrum Nottwil; <sup>25</sup> Kantonsspital Aarau; <sup>26</sup> Kantonsspital Winterthur

**Introduction:** Follow-up after radical cystectomy and trimodal therapy lacks strong evidence and is mostly based on expert opinion rather than robust clinical data. Current follow-up regimes encompass cystoscopy, urinary cytology, and cross-sectional imaging. In addition, the application of patient-reported outcome measures (PROMs) in follow-up is not yet widespread, although evidence suggests their potential in enhancing life quality, reducing emergency consultations, and even improving survival rates in cancer patients as many symptoms would remain unmasked although they require urgent attention.

**Methods:** We organized a Swiss consensus-meeting (17th of May 2024) of experts in urology, oncology, and radiation-oncology as well as bladder-cancer survivors to evaluate current and future developments for the follow up and therapy after radical cystectomy and trimodal therapy. The participants will be divided into four groups (Oncological or functional follow-up after radical cystectomy or trimodal therapy) and evaluate current and future developments for follow up care. The results will then be discussed with all participants and summarized in a consensus-statement. Subsequently this meeting would be a “kick-off” event to establish and to evaluate the recommendations in the context of a national bladder cancer cohort-study.

**Results:** 21 Swiss healthcare-institutions are registered for the conference. 19 of those clinics have been awarded the service contract for radical and simple cystectomy in highly specialized medicine. From all institutions, 42 national experts have registered for the conference, 21 are urologists, 11 are oncologists and 10 are



radio-oncologists. 3 international experts in the field of urology from the UK, USA and Netherlands will attend the meeting. 4 patient-representatives will be present to advise the experts.

Discussion: Guideline recommendations and institutional follow-up protocols differ regarding the modality, intensity, and timing of follow-up investigations, but are not personalized to the various risk factors for relapse, which can possibly lead to suboptimal care of bladder cancer survivors. To address this issue more prospective trials are needed to assess how bladder cancer patients after radical cystectomy and trimodal therapy can be followed to ensure optimal oncological and functional outcomes, define the role of PROMs and novel biomarkers during follow-up and develop new protocols following new therapeutic modalities.



## P050

### Is there a role of ambulatory urodynamics in neuro-urology

O Gross<sup>1</sup>; CE Anderson<sup>2</sup>; V Birkhäuser<sup>1</sup>; MD Liechti<sup>1</sup>; U Mehnert<sup>1</sup>; R Röthlisberger<sup>1</sup>; L Stächele<sup>1</sup>; S Van der Lely<sup>1</sup>; TM Kessler<sup>1</sup>; L Leitner<sup>3</sup>

1 Department of Neuro-Urology, Balgrist University Hospital, University of Zürich, Zürich, Switzerland; 2 Swiss Paraplegic Research, Nottwil, Switzerland; 3 Universitätsklinik Balgrist

#### Introduction:

Video-urodynamic investigation (VUDI) is the gold standard to assess neurogenic lower urinary tract dysfunction (NLUTD), but in some patients the findings are equivocal. We therefore aimed to investigate if an ambulatory urodynamic investigation (aUDI) could provide additional information in such selected patients and thereby support clinical decision making for the neuro-urological management.

#### Methods:

We investigated 59 neuro-urological patients who underwent an aUDI due to discrepancies between lower urinary tract symptoms (LUTS) and VUDI findings. All these patients had no changes in therapies influencing the lower urinary tract and a stable underlying neurological disorder between VUDI and aUDI. The patients were divided in two groups. Group 1 (n=37): patients reporting urgency symptoms without the presence of detrusor overactivity (DO) in VUDI. Group 2 (n=22): patients with DO and a maximum detrusor storage pressure (pDetmax) jeopardizing the upper urinary tract (>40 cmH<sub>2</sub>O or renal reflux) but without any LUTS. Findings between VUDI and aUDI were compared.

#### Results:

The median time interval between VUDI and aUDI was 215 (Q1-Q3: 40-356) days. Using aUDI a DO could be unmasked in 70% (26/37) of patients in group 1 (median age 52, Q1-Q3: 40-61 years; 59% female subjects), with a median pDetmax of 44 (Q1-Q3: 26-85) cmH<sub>2</sub>O.

In 95% (21/22) of patients in group 2 (median age 49, Q1-Q3: 41-57 years; 23% female subjects) a DO was confirmed performing aUDI. The median pDetmax was 52 (Q1-Q3: 38-56) cmH<sub>2</sub>O and 56 (Q1-Q3: 25-92) cmH<sub>2</sub>O (p=0.787), for VUDI and aUDI, respectively.

Overall maximum cytometric bladder capacity was similar between the groups at time of VUDI (575, Q1-Q3: 383-735 mL) vs. (543, Q1-Q3: 443-746) (p=0.796).

#### Conclusions:

In neuro-urology, aUDI has a role if VUDI findings are equivocal and might be relevant for clinical decision-making warranting more well-designed prospective studies.



## P051

### **Resultate einer randomisierten, Placebo-kontrollierten Pilot-Studie zur Durchführbarkeit einer Studie zur Prävention von Harnwegsinfekten mittels Immunstimulation bei Personen mit einer akuten Querschnittlähmung**

J Krebs<sup>1</sup>; J Wöllner<sup>2</sup>; J Neuenschwander<sup>2</sup>; J Stoyanov<sup>1</sup>; J Pannek<sup>2</sup>

<sup>1</sup> Schweizer Paraplegiker Forschung; <sup>2</sup> Schweizer Paraplegiker-Zentrum Nottwil  
Hintergrund & Ziele

Harnwegsinfekte (HWI) stellen nach wie vor eine erhebliche Belastung für Personen mit einer Querschnittlähmung (QL) dar, und es gibt kaum Evidenz zur Wirksamkeit verschiedener Präventivmassnahmen in dieser Population. Wir haben deshalb die Durchführbarkeit einer Studie zur Wirksamkeit einer Immunstimulation zur Prävention von HWI bei Personen mit einer akuten QL evaluiert.

#### Material & Methoden

In einer mono-zentrischen, randomisierten, quasi-verblindeten, Placebo-kontrollierten, Pilot-Studie wurden Patienten\*innen mit einer akuten QL (Dauer ≤ 56 Tage) zwei parallelen Gruppen mit je 12 Personen zugeteilt. Die Studienteilnehmenden erhielten entweder ein lyophilisiertes E. coli-Lysat zur oralen Anwendung (Uro-Vaxom®, OM Pharma SA, Schweiz) oder Placebo-Tabletten (P-Dragees®, Zentiva Pharma GmbH, Deutschland) für 90 Tage. Die Teilnehmenden wurden nicht über ihre Zuteilung informiert (quasi-verblindet). Während der Behandlung und einer dreimonatigen Nachbeobachtungszeit wurden symptomatische HWI und Nebenwirkungen erfasst. Am Studienende bewerteten die Teilnehmenden ihre Erfahrungen in der Studie.

#### Resultate

Von 446 gescreenten Patienten\*innen (01.06.2020 bis 28.02.2022) qualifizierten 85 (Screeningrate: 19.1%) für die Studienteilnahme. Davon willigten 24 Personen ein teilzunehmen (Rekrutierungsrate: 28.2%) und 22 wurden randomisiert (Randomisierungsrate: 25.9%). In beiden Gruppen musste je eine Person ausgeschlossen werden (Verbleibraten: 90.9%). Zwei Personen in der Uro-Vaxom-Gruppe schlossen die Behandlung nicht vollständig ab (< 60 Kapseln eingenommen) (behandlungsspezifische Adhärenz-Rate: 72.7%).

Die Daten von 7 Frauen und 13 Männern mit einem Durchschnittsalter von 41 ± 13 Jahren wurden analysiert. Die Behandlung mit Uro-Vaxom verhinderte bei drei Personen das Auftreten von HWI, währenddessen eine Person in der Placebo-Gruppe keinen HWI erfuhr (p = 0.58).

Sechs Personen in der Uro-Vaxom und vier in der Placebo-Gruppe berichteten über Nebenwirkungen (p = 0.66). Am häufigsten wurden Kopfschmerzen (11 / 27, 40.7%) und Magen-Darmbeschwerden (7 / 27, 25.9%) genannt.

Achtzehn Personen erklärten sich bereit, an einer ähnlichen Studie in Zukunft erneut teilzunehmen.

#### Schlussfolgerungen

Die hohen Verbleib- und Adhärenzraten sowie die gute Akzeptanz des Studienprotokolls sprechen für die Durchführbarkeit einer Hauptstudie. Breitere Einschlusskriterien sollten in Betracht gezogen werden, um die Rekrutierung von Teilnehmenden zu verbessern.





## P052

### **Bladder washing cytology for detection of urothelial carcinoma using catheter or flexible cystoscope: preliminary results of a prospective randomized study. (The Bwash Study)**

S Reale; I Lucca; E Hewer; E Dubruc; F Crettenand

CHUV Centre Hospitalier Universitaire Vaudois (CHUV)

#### Context & Objectives

Bladder cancer (BC) is the seventh most prevalent malignancy in men globally. Bladder washing cytology serves as a key diagnostic tool for BC detection and follow up. While its specificity is high (73% to 100%), its sensitivity varies considerably (40% to 85%) depending on tumor grade. A crucial determinant of the efficacy of this urine test lies in the quality of the sample collected. Urine collection methods are intermittent bladder catheterization after cystoscope removal and via the working channel of the flexible cystoscope itself. To our knowledge, there is no study addressing which method is the best and should be adopted as gold standard. This study aims to demonstrate that the use of a flexible cystoscope is non-inferior in terms of urine collection quality and less painful for patients compared to intermittent catheterization.

#### Materials and Methods

This randomized controlled prospective trial is currently carried out at our department in Lausanne. Patients are randomized during each visit into either group A (catheter) or group B (flexible cystoscope). The primary objective is to compare urinary cytology quality, based on the Paris System for Reporting Urinary Cytopathology, categorizing Category I as poor quality and on the cell count. The secondary endpoint involves assessing patient discomfort using 0 to 10 Visual Analogue Scale (VAS) for pain. Statistical analysis will employ t-tests or Mann-Whitney U test.

#### Results

Between February 2023 and February 2024, 219 male patients were recruited, of whom 199 met inclusion criteria and were included in the analysis. Hematuria (7.5%), BC follow-up (60.3%), and functional issues (19.6%) were the most common indications for cystoscopy. Trainees conducted procedures in 50.3% of cases. Group A comprised 102 patients, while Group B included 97 patients. Poor cytology quality was observed in 2% of group A cases and 5% of group B cases ( $p = 0.11$ ). There was no significant difference in cell count between the two groups ( $p = 0.08$ ). Patients in Group A reported a VAS score of 2 (SD 2.2), whereas Group B reported a 1.3 VAS score (SD 1.6) ( $p = 0.04$ )

#### Conclusion

Preliminary findings suggest that cystoscope-assisted urine cytology collection seems to be non-inferior to catheter collection. Nevertheless, the use of cystoscopy resulted in lower pain levels and better overall patient experience and avoids the extra cost of the catheter. Hopefully, these results will be confirmed by the end of 2025.



## P053

### Prevalence of asymptomatic bacteriuria after radical cystectomy, a retrospective cohort study

A Richter; CD Fankhauser; P Baumeister; A Mattei; A Affentranger

Luzerner Kantonsspital (LUKS)

**Background:** Urinary tract infections are a common complication after cystectomy, affecting approximately 20% of patients (Antonelli et al, Eur Urol Focus, 2023). Current guide-lines recommend preoperative screening and treatment of asymptomatic bacteriuria as well as perioperative antibiotic prophylaxis. In addition, postoperative strategies include screen-ing for bacteriuria and prophylactic antibiotic administration prior to stent removal. The aim of this study is to investigate the prevalence of asymptomatic bacteriuria 3-5 days after cystectomy and to compare the bacterial profiles between ureteral stents and urinary diver-sions.

**Methods:** We conducted a retrospective cohort study of patients who underwent radical cystectomy. Patients with available post-cystectomy urine samples (from ureteral catheters, ileum conduit or neobladder) were included. Differences in the bacterial spectrum between urine cultures were analysed. A positive urine culture was defined as uropathogenic bacteria >10<sup>4</sup> CFU.

**Results:** Postoperative urine cultures from ureteral catheters and conduit/neobladder were obtained from 38 patients. Within 3-5 days postoperatively, 74% (28/38) of patients had positive urine cultures. In 7% (2/28) of cases, cultures from ureteral catheters had a broader bacterial spectrum than cultures from conduit/neobladder alone. Postoperative urinary tract infections occurred in 34% (13/38) of patients.

**Conclusion:** One in three patients suffered from a postoperative urinary tract infection, which is consistent with the published literature. Strategies to minimise the risk of infection while adhering to the principles of antibiotic stewardship are crucial. Collecting urine cul-tures exclusively from the ileum conduit or neobladder and not also from the ureteral stents can effectively detect most cases of asymptomatic bacteriuria. A prospective intervention study is warranted to evaluate the impact of postoperative screening for asymptomatic bac-teriuria and the administration of prophylactic antibiotics prior to stent removal.



## P054

### Prevalence and clinical implications of post-obstructive polyuria in patients with urinary retention, a systematic review

U Rigonalli<sup>1</sup>; CD Fankhauser<sup>2</sup>; S Von Moos<sup>3</sup>; P Baumeister<sup>2</sup>; A Mattei<sup>2</sup>; A Affentranger<sup>2</sup>

1 Universität Luzern; 2 Luzerner Kantonsspital (LUKS); 3 Universität Zürich

**Background:** Urinary retention, a prevalent urological emergency, requires immediate bladder decompression through urinary catheterization. Complications following decompression, such as post-obstructive polyuria and subsequent electrolyte imbalances, are well documented, but the optimal monitoring and duration of treatment remain unclear. This study systematically reviews the literature to determine the prevalence of these complications and assess management strategies following urinary retention.

**Methods:** We conducted a systematic review of the PubMed database to identify studies reporting on the prevalence, risk factors and management of post-obstructive polyuria following urinary retention.

**Results:** Of 1003 screened articles, we included eight studies, encompassing 371 patients, most of whom were men (87%, n = 322) with chronic urinary retention primarily due to prostatic diseases including prostate cancer. The mean decompressed urine volume ranged from 968 ml to 2400 ml. Post-obstructive polyuria was observed in 15% to 78% of reports, with a median duration of 1.8 to 4.8 days. No single study accurately reported the proportion of patients with electrolyte disturbances requiring medical intervention, intensive care unit admission or mortality. Risk factors for post-obstructive polyuria included elevated serum creatinine at presentation (OR 1.002, 95% CI 1.000 – 1.004, per 1 µmol/L, p = 0.004), high bicarbonate (OR 1.36, 95% CI 1.13 – 36.23, per 1 µmol/L, p < 0.001] and high urea levels (no OR reported), increased bladder volume at catheterisation (OR 1.21, 95% CI 1.06 – 1.40, per 100ml, p = 0.006). Other risk factors discussed but not statistically proven were hypertension, peripheral edema and mental confusion.

**Conclusion:** Despite the frequency of urinary retention as a urological emergency, data on the prevalence, risk factors, and management strategies for post-obstructive polyuria remain scarce. There is an urgent need for prospective cohorts and standardized protocols to improve the evidence base in this critical area.  
**LUCERNE SOP suggestion:** We recommend in-patient management only for patients with AKIN > 1 or for patients who are unable to care for themselves due to comorbidities, age or altered mental status.



## P055

### Post-operative complication after radical cystectomy in the elderly: a monocentric retrospective cohort study

A Gregoris; P Sebe

Hopitaux Universitaires de Genève-HUG

Bladder cancer ranks 7th globally in men and 10th overall(1). Radical cystectomy (RC) with pelvic lymph-node dissection (PLND) is the standard for non-metastatic muscle-invasive bladder cancers (BC). Although RC isn't discouraged in the elderly, some studies link it to higher post-operative morbidity(2). Conversely, other studies emphasize the importance of geriatric assessment in predicting postoperative complications without chronological age being identified as a risk factor(3). Our study compares complication rates using Clavien-Dindo classification post-RC in the elderly, aiming to identify risk factors.

Baseline data were collected from 101 patients undergoing RC and PNLD at Hôpitaux Universitaires de Genève over 5 years. Patients were categorized as < 75 or ≥ 75 years old. Primary outcome was CD complications ≥ 3. Secondary outcomes were postoperative length of stay (LoS), surgical margins, adjuvant treatment, operative time, perioperative blood loss, Charlson Score, and overall survival (OS). Descriptive statistics summarized variables. Statistical tests included t-tests, Mann-Whitney U tests, Chi-square tests, Fisher's exact tests, log-rank tests and logistic regression, with a significance level set at 0.05.

The analysis included 101 patients, with a median age at surgery of 65.5 (11) years for the < 75 group and 79 (6) years for the ≥ 75 group. There was no significant difference in the rate of CD complications ≥ 3 between the < 75 and ≥ 75 age groups (8, 14.3% vs. 6, 16.2%, respectively,  $p = 0.924$ ). Postoperative LoS was longer in the group aged ≥ 75 years but did not reach statistical significance ( $p = 0.749$ ). In univariate analysis, CD complications ≥ 3 were associated with the ≥ 75 years group without reaching statistical significance (OR 1.15 (95% CI 0.37 to 3.67),  $p = 0.799$ ).

Multivariate analysis showed that post-operative LoS was an independent risk factor for CD complications ≥ 3 (OR 1.05 (95% CI 1.01 to 1.09)) while neoadjuvant chemotherapy, perioperative blood loss, and age group were not. Overall survival (OS) did not significantly differ between age groups ( $p = 0.322$ ) with a mean follow-up of 1.01 (0.85) years.

RC is safe with no increased complications in elderly individuals and should therefore be offered to them regardless of their chronological age. Conducting a preoperative geriatric assessment that considers the patient's overall health and comorbidities appears more appropriate and should be encouraged in decision-making.



## P056

### Risk of Postoperative Bleeding and Thromboembolic Events in Anticoagulated Patients Undergoing TURB

T Scherer<sup>1</sup>; C Dam<sup>2</sup>; U Bieri<sup>1</sup>; D Eberli<sup>1</sup>; R Strebel<sup>3</sup>

1 Universitätsspital Zürich; 2 Universität Zürich; 3 Kantonsspital Graubünden

#### Objectives

Transurethral resection of the bladder (TURB) harbors a high-risk for postoperative bleeding. Notably, over 20% of patients diagnosed with bladder cancer have atrial fibrillation and require anticoagulation. In the past decade, new oral anticoagulation drugs (DOAC), an alternative to vitamin K-antagonist (VKA), received widespread adoption. The risk of TURB complications, depending on the type of anticoagulant, is not known. This study assessed the postoperative complications of TURB between patients receiving DOACs and VKAs.

#### Materials and methods

We retrospectively identified anticoagulated patients undergoing a TURB at our institution between 2012 and 2022 and divided them into two groups: whether they received VKA or DOAC. Follow-up of each patient was performed for 3 months. Occurrence and time to event of postoperative bleeding and thromboembolic events were recorded. A multivariable regression analysis was performed to assess risk differences.

#### Results

A total of 167 patients (11.7%) fulfilled the inclusion criteria, of which 102 patients (61.1%) received a DOAC and 65 patients (38.9%) a VKA. Postoperative bleeding led to re-catheterization in 13 (12.8%) DOAC and 6 (9.2%) VKA patients (OR 1.67, 95%CI: 0.57 – 4.88;  $p = 0.35$ ) and re-intervention in 7 (6.9%) DOAC and 4 (6.2%) VKA patients (OR 1.16, 95%CI: 0.30 – 4.44;  $p = 0.83$ ). Blood transfusions were administered to 3 DOAC patients (2.9%), none in the VKA group. No thromboembolic events were reported.

#### Conclusion

TURB carries low morbidity in anticoagulated patients. Thromboembolic events and the need for blood transfusion are infrequent. A significant difference between the postoperative bleeding risk of patients receiving DOAC or VKA could not be found. All postoperative bleeding complications occurred within 2 weeks, marking it a potentially safe point in time to restart the OAC thereafter.



## P057

### Bladder tumor with extreme leukocytosis

A Naiem; GB Ineichen; G Thalmann

Inselspital - Universitätsspital Bern

#### Abstract

**Background:** The WHO classifies giant cell urothelial carcinoma as a rare, aggressive variant of infiltrative urothelial carcinoma of the urinary bladder. Some of them produce colony-stimulating factor (G-CSF).

#### Case Report:

A 68-year-old patient presented with hematuria and dysuria. Laboratory tests showed leukocytosis 50 G/l and CRP 50 mg/l. Clinically, there was tenderness on prostate palpation and right-sided flank pain at examination. CT scan showed an intravesical mass, right-sided pyelonephritis and uncomplicated diverticulitis adjacent to the urinary bladder. We treated pyelonephritis, prostatitis and diverticulitis with antibiotics for 2 weeks in total. The patient was undergoing treatment in his home country for pTa G2 urothelial carcinoma of the bladder and a second TUR-B was scheduled upon return. Despite antibiotic therapy there was no significant decrease in the leukocyte count. Proliferative hematological disorders were ruled out. One week later, he presented with lower abdominal pain, hematuria, and leukocytosis (140 g/L). He developed 4-quadrant peritonism and CRP level increased to 290 mg/l. A renewed CT scan showed colonic ileus with wall thickening of the sigmoid adjacent to the urinary bladder. Emergency laparotomy with cystoprostatovesiculectomy, sigmoid resection, a uretero-ureterostomy from left to right with ureterocutaneostomy on the right and a terminal descendostomy was performed. Due to the emergency situation no lymphadenectomy was performed. The specimens showed progression from pTaG2 to pT3b G3 pNx, of a poorly differentiated giant cell urothelial carcinoma of the urinary bladder. Leukocytosis decreased to normal levels postoperatively.

**Discussion:** G-CSF induced neoangiogenesis leads to rapid tumor growth. This is why G-CSF producing tumors are mostly found in advanced stages and have worse outcomes. Early G-CSF determination leads to diagnosis and can be used as a tumor marker. The rapid tumor growth necessitates cystectomy. But these tumors also show chemoresistance and reduced response to immunotherapy. Therefore, it is controversial whether these tumors should be treated in the same manner as conventional urothelial carcinomas.

**Conclusion:** The rarity of G-CSF-producing tumors and their aggressive clinical behavior make them a clinical challenge. Knowledge of this tumor, early G-CSF assessment, and performance of cystectomy can improve the outcomes and reduce complications in patients.



## P058

### Prevalence and Prognostic Significance of Preoperative Anemia in Radical Cystectomy Patients: A Multicentre Retrospective Analysis

E Kaufmann<sup>1</sup>; L Antonelli<sup>2</sup>; L Afferi<sup>1</sup>; V Asero<sup>2</sup>; F Prata<sup>3</sup>; S Rebuffo<sup>4</sup>; A Veccia<sup>5</sup>; M Culpan<sup>6</sup>; K Tully<sup>7</sup>; L Ribeiro<sup>8</sup>; T Roumeguere<sup>9</sup>; K Hendricksen<sup>10</sup>; L Lambertini<sup>11</sup>; R Pichler<sup>12</sup>; N Pavan<sup>13</sup>; J Yuen-Chun Teoh<sup>14</sup>; M Roumigué<sup>15</sup>; GB Schulz<sup>16</sup>; F Soria<sup>17</sup>; A AlGhamlas<sup>18</sup>; P Desprez<sup>19</sup>; L Orecchia<sup>20</sup>; C Poyet<sup>21</sup>; M Alrumayyan<sup>22</sup>; M Rink<sup>23</sup>; S Zamboni<sup>24</sup>; MR Montes<sup>25</sup>; S Okoye<sup>26</sup>; M Lo Re<sup>11</sup>; W Krajewski<sup>27</sup>; PD Wendel-Garcia<sup>28</sup>; L Lavalée<sup>29</sup>; M Moschini<sup>30</sup>; C Fankhauser<sup>1</sup>

<sup>1</sup> Luzerner Kantonspital; <sup>2</sup> Sapienza University of Rome; <sup>3</sup> Fondazione Policlinico Universitario Campus Bio-Medico of Rome; <sup>4</sup> IRCCS Ospedale Policlinico S. Martino; <sup>5</sup> Azienda Ospedaliera Universitaria Integrata Verona; <sup>6</sup> Faculty of Medicine, Istanbul Medeniyet University; <sup>7</sup> Marien Hospital Herne – University Clinic of the Ruhr-University Bochum; <sup>8</sup> St. George's University Hospital; <sup>9</sup> Hôpital Universitaire de Bruxelles (HUB), Université Libre de Bruxelles (ULB); <sup>10</sup> Netherlands Cancer Institute; <sup>11</sup> Careggi Hospital, University of Florence; <sup>12</sup> Medical University of Innsbruck; <sup>13</sup> University of Trieste; <sup>14</sup> The Chinese University of Hong Kong; <sup>15</sup> CHU-IUCT Toulouse; <sup>16</sup> LMU Klinikum München; <sup>17</sup> Torino School of Medicine; <sup>18</sup> Pitie-Salpetriere Hospital, Sorbonne University; <sup>19</sup> Claude Huriez Hospital; <sup>20</sup> Tor Vergata University Hospital; <sup>21</sup> University Hospital Zürich; <sup>22</sup> Princess Margaret Cancer Centre, University Health Network, University of Toronto; <sup>23</sup> Marienkrankenhaus Hamburg; <sup>24</sup> ASST Spedali Civili di Brescia, University of Brescia; <sup>25</sup> Galdakao-Usansolo Hospital; <sup>26</sup> Charité-Universitätsmedizin Berlin; <sup>27</sup> Wrocław Medical University; <sup>28</sup> Department of Biostatistics at the Epidemiology, Biostatistics and Prevention Institute, University of Zurich; <sup>29</sup> University of Ottawa and Ottawa Hospital Research Institute; <sup>30</sup> Urological Research Institute, Vita-Salute San Raffaele

**Introduction:** Hematuria represents the first sign for many bladder cancer patients, making anemia a common comorbidity in this patient population. Despite its frequency, comprehensive data on the prevalence and prognostic effect of preoperative anemia on oncological and non-oncological outcomes post-radical cystectomy remain limited.

**Methods:** We retrospectively examined 4,886 patients diagnosed with non-metastatic localized or locally advanced bladder cancer who received radical cystectomy across 28 centers in 13 countries in Europe, North America, and Asia. A multivariable linear regression model was run to identify predictors for hemoglobin levels before cystectomy and a binary logistic regression to identify predictors for the need of postoperative blood transfusions. To examine the impact of preoperative hemoglobin levels on mortality and oncological outcomes, an adjusted multivariable Cox Proportional-Hazards Regression was performed.

**Results:** Between January 1990 and December 2021, out of 4,886 patients (mean age 69) who underwent cystectomy, Hb levels before cystectomy were available for



4,555 patients (including 1007 females). The mean Hb before radical cystectomy was 126 g/l (IQR 111 – 142). The prevalence of anemia before radical cystectomy was 44% in females and 48% in males. Post-cystectomy bleeding events necessitating medical intervention occurred in 10% of patients. Among anemic patients, 73% received no substitution, 23% were administered packed red blood cells, 4% were given either oral or intravenous iron, 3% received Vitamin B12, 4% were given folate and 2% received Erythropoietin injections.

Higher Hb levels at TURBT and a lower Charlson comorbidity score were associated with higher Hb levels before cystectomy ( $p < 0.001$ ). Further, patients with higher Hb levels at TURBT and before cystectomy needed less postoperative blood transfusions (OR 0.98,  $p < 0.001$ ).

In multivariable Cox Regression analysis, higher Hb-values before cystectomy were independent predictors for reduced all-cause mortality (HR 0.993,  $p < 0.05$ ), cancer-specific mortality (HR 0.987,  $p < 0.001$ ) and disease relapse (HR 0.993,  $p < 0.05$ ).

Discussion: Despite the high prevalence of preoperative anemia, interventions like vitamin or iron supplementation appear underutilized. Preoperative Hb value is an important modifiable risk factor for adverse outcomes and early patient blood management post-TURBT may improve outcomes.





## P059

### Feasibility of <sup>99m</sup>Tc-MIP-1404 PSMA Radioguided Surgery in a Patient with Lymph Node Metastases in Recurrent Prostate Cancer

E Karrer<sup>1</sup>; C Babst<sup>1</sup>; H Geiger<sup>2</sup>; O Maas<sup>2</sup>; F Forrer<sup>2</sup>; D Engeler<sup>1</sup>

<sup>1</sup> Kantonsspital St. Gallen, Department of Urology; <sup>2</sup> Kantonsspital St. Gallen, Department of Radiology and Nuclear Medicine

Background:

<sup>99m</sup>Tc-MIP-1404 enables radioguided surgery (RGS) in metastatic prostate cancer (PCa). To demonstrate its feasibility, we report on its first implementation in Switzerland.

After histological confirmation of PCa in a 61-year-old patient, radical prostatectomy with lymphadenectomy was performed in October 2019. With rising PSA levels, a salvage radiotherapy of the prostate region was performed from August to September 2020. As PSA levels continued to rise, imaging without evidence of local recurrence was performed in October 2021 (PSMA-PET/CT), in July 2022 (Choline-PET/CT) and in January 2023 (Choline-PET/CT). Only in April 2023, a PET/CT detected two pelvic PSMA-positive lymph node metastases. The decision of fulfilling a surgical salvage lymphadenectomy was made, compared to radiation of the lymph nodes in combination with ADT. We proceeded the first robotic assisted laparoscopic radioguided dissection of the two radiolabeled lymph nodes in Switzerland.

Material und Methods:

We used <sup>99m</sup>Tc-MIP-1404 (ROTOP Pharmaka GmbH), a <sup>99m</sup>Tc-labelled PSMA-radioligand for preoperative labelling of the metastatic lymph nodes. 740 MBq <sup>99m</sup>Tc-MIP-1404 was administered preoperatively. 18 hours p.i. a preoperative SPECT/CT demonstrated activity only in one (of two) PET/CT-positive lesions.

Results:

Regardless of visualization on SPECT/CT, intraoperatively both lymph nodes could be reliably detected using a laparoscopic gamma probe. Histopathological work-up of the resected specimens confirmed metastases of the known adenocarcinoma of the prostate. Six weeks after PSMA-RGS, serum PSA decreased from 4.22 ng/ml to 0.02 ng/ml (complete biochemical response).

Visualization rates are expected to be lower for SPECT than for PET because of the inferior spatial resolution of SPECT.

Conclusion:

<sup>99m</sup>Tc-MIP-1404 represents a promising radiotracer for RGS and further use in selected cases is encouraged in the future.



## P060

### **Persistierende Hämatospermie als alleinige klinische Präsentation eines signifikanten Prostatakarzinoms: Ein Fallbericht**

A Koutava; S Preusser; D Savinova

Kantonsspital Schaffhausen

Hintergrund und Ziele: Hämatospermie, ist ein seltenes, aber alarmierendes Symptom, welches in der meisten Fällen eine benigne Ätiologie hat. Sie ist sehr selten (ca 5%) mit urologischen Malignitäten assoziiert, das Prostatakarzinom stellt jedoch ca 90% davon. Trotz der Seltenheit von Hämatospermie als erstem Anzeichen eines Prostatakarzinoms ist es von entscheidender Bedeutung, diese Möglichkeit zu berücksichtigen, insbesondere bei Männern mittleren Alters. Ebenso von grosser Bedeutung ist der diagnostische Prozess, um sowohl von Überdiagnose als auch von Unterdiagnose zu unterscheiden.

#### Material und Methoden

Wir präsentieren den Fall eines 52-jährigen Mannes, der seit sechs Monaten an persistierender Hämatospermie als einzigem Symptom litt. Die initiale Diagnostik mittels rektaler Palpation, Urinanalytik, PSA-Test und Zystoskopie, zeigte sich unauffällig. Bei persistierende Hämatospermie wurde ergänzend ein Prostata-MRT durchgeführt, welches ein PIRADS 4 Befund apikal zeigte, dies wurde als fokale Prostatitis interpretiert. Dem Patienten wurden Antibiotika verschrieben und er wurde über ein abwartendes Vorgehen aufgeklärt. Im weiteren Verlauf nach 3 Monaten war das PSA noch niedriger als der initiale normwertige Befund allerdings mit Persistenz der Hämaturie. Erneute MRI-Darstellung der Prostata zeigte Persistenz des PIRADS-4 Befundes. Die darauffolgende Prostatabiopsie bestätigte schliesslich ein signifikantes Prostatakarzinom mit einem Gleason-Score von 3+4=7.

#### Resultate

Das Stadium wurde als cT2a/b mit ISUP-Gradierungsgruppe 2 und daher mit unfavorable risk. Es erfolgte die Vorstellung im interdisziplinären Tumorboard, wobei hinsichtlich des Patientenalters und des Stadiums eine kurative Therapie mit radikaler Prostatektomie empfohlen wurde. Diese erfolgte zeitnah.

#### Schlussfolgerungen

Dieser Fall unterstreicht die Bedeutung einer sorgfältigen Abklärung bei Patienten mit isolierter Hämatospermie, auch wenn die Standarddiagnostik zunächst unauffällig erscheint. Gemäss der Literatur sollten die initialen Untersuchungen mit rektaler Palpation und PSA-Kontrolle suffizient um die Diagnose eines signifikanten Prostatakarzinoms sein. Ein wiederholtes bildgebendes Verfahren mit MRT ist derzeit durch die Literatur nicht empfohlen, da es zu einem Anstieg der Prostatabiopsien ohne relevante Erhöhung zur Karzinom-Detektionsrate führen kann. Eine sorgfältige klinische Überwachung, gegebenenfalls mit Wiederholung der Bildgebung und Prostatabiopsie sind entscheidend.



## P061

### Fallbericht: Herausforderung einer Androgendeprivation bei Patienten mit Prostatakarzinom und adrenogenitalem Syndrom.

GL De Giorgi; M Thomas; M Kwiatkowski; S Wyler

KSA Aarau

Hintergrund und Ziele: Das Adrenogenitale Syndrom (AGS) gehört zu einer Gruppe von erblichen Stoffwechselerkrankungen, die autosomal-rezessiv vererbt werden. Diese Erkrankungen werden durch Mutationen in den Genen verursacht, die für Enzyme im Steroidbiosyntheseweg kodieren, insbesondere die 21-Hydroxylase. Die 21-Hydroxylase-Defizienz, welche die häufigste Form des AGS darstellt, führt zum Cortisol- und Aldosteronmangel und Überproduktion von Testosteron. Hingegen ist eine Androgendeprivation der Baustein der heutigen Therapie eines metastasierten oder lokalfortgeschrittenen Prostatakarzinoms. Das Therapieziel besteht darin, für Patienten mit adrenogenitalem Syndrom und gleichzeitig einem Prostatakarzinom eine adäquate Androgendeprivation zu gestalten.

Material und Methoden: Bei unserem 70-jährigen Patienten mit bekanntem AGS ohne Salzverlust mit primärer 21-Hydroxylasemangel sowie Nebennieren-Myelolipom wurde im März 2023 bei initialem PSA von 22.6 ug/l und MRT mit PI-RADS von 5 ein lokalfortgeschrittenes Adenokarzinom der Prostata, Gleason-Score 9=4+5 mittels MRT-TRUS-Fusionsbiopsie gesichert. Bei obstruktiven Miktionsbeschwerden und Multimorbidität wurde eine primäre perkutane Radiotherapie nach TUR-P mit begleitender 36-monatiger ADT gewählt. In wiederholten laborchemischen Kontrollen zeigte sich kein adäquater PSA- und Testosteronabfall, a.e. auf Grund des AGS. Es wurde eine Kombinationstherapie mit Abiraterone und Prednisolon analog STAMPEDE eingeleitet.

Resultate: Bereits nach zwei Wochen zeigte sich ein signifikanter Abfall von PSA- und Testosteronwerten. Die Therapie mit Abiraterone und ADT wird vom Patienten gut vertragen und scheint gleichzeitig im Licht der Literatur eine positive Auswirkung auf die Therapie von AGS zu haben.

Schlussfolgerung: Bei Patienten mit lokalfortgeschrittenem oder metastasierten Prostatakarzinom mit gleichzeitigem AGS oder ektopter Androgenproduktion ist ein individuelles Therapiedesign erforderlich. Die Berücksichtigung der zusätzlichen Androgenquellen aus den Nebennieren ist entscheidend, um eine adäquate Hemmung der Gesamtandrogenbelastung zu gewährleisten, da die Effektivität der herkömmlichen Androgendeprivation negativ beeinflusst werden kann.



## P062

### "Rare primary paraganglioma of the seminal vesicle: a case report"

B Sommerhalder<sup>1</sup>; B Roth<sup>2</sup>

1 Inselspital - Universitätsspital Bern; 2 Inselspital - Universitätsspital Bern;  
Universität Bern

#### PRELIMINARY SUBMISSION

##### Background

Paragangliomas are rare neuroendocrine tumours derived from neural crest cells producing catecholamines. According to the latest WHO classification, all pheochromocytomas and paragangliomas have metastatic potential and therefore they should not be classified as benign or malignant. This report describes a rare case of a norepinephrine-secreting extraadrenal paraganglioma in the right seminal vesicle.

##### Case report

A 44-year-old patient presented with intermittent macrohaematuria and dysuria for several months. There were no other urological symptoms such as voiding difficulties or erectile dysfunction. An external CT showed a tumour in the right seminal vesicle with possible infiltration of the bladder and rectum. There was no evidence of lymphadenopathy or metastasis. A transurethral biopsy showed a paraganglioma with muscle invasion. Arterial hypertension was clinically present, and laboratory results showed elevated plasma normetanephrines. An indication for primary surgical treatment was given after review of the findings and consultation with the relevant multidisciplinary tumour board.

At this point in time, further diagnostics with FDG-PET / CT and the surgical procedure with the final histopathological findings are still pending.

##### Conclusions

Will be added as soon as all findings are available.



## P063

### Initial Swiss Experiences with Pelvic Surgery Using the DaVinci Single Port Surgical System

FJ Haselhoff; CD Fankhauser; C Würnschimmel; P Baumeister; A Mattei

Luzerner Kantonsspital (LUKS)

**Introduction:** The evolution of minimally invasive surgical techniques and the increasing desire to enhance perioperative and functional outcomes have facilitated the introduction of the innovative Single-Port (SP) robotic system. This system offers numerous advantages, including the potential for same-day discharge, reduced postoperative opioid usage, less extreme patient positioning enhancing ventilation, and minimal access that simplifies extraperitoneal or limited transabdominal interventions, especially in patients with previous abdominal surgeries. This video-presentation aims to illustrate the surgical steps and perioperative outcomes of SP robotic radical prostatectomy (SP-RARP) at our institution.

**Methods:** Since mid-April 2024, our institution has been utilizing the Da Vinci SP robotic platform for SP-RARP employing Extraperitoneal (EP) techniques. The procedures are performed via a 2.7-cm sub-umbilical incision using the DaVinci access port that accommodates an articulating robotic camera and three articulating robotic instruments. An additional 12mm assistant's port is positioned at the right para-rectal line. Baseline clinical and perioperative data were collected and analyzed using descriptive statistics in R.

**Results:** In the initial series of 5 cases, there were no intraoperative complications or conversions. Postoperative complications included one case of central pulmonary embolism with subsequent bleeding triggered by the initiation of anticoagulation therapy. No hospital readmissions were reported.

**Conclusion:** Our initial findings confirm the feasibility and safety of SP-RARP, demonstrating low rates of intraoperative complications and hospital readmissions. The minimal morbidity associated with EP SP-RARP in this series supports its broader adoption as a contemporary minimally invasive surgical option for prostate cancer treatment.



## P064

### Creating a comprehensive world-map of robotic training facilities for novice robotic surgeons: an investigative survey by the YAU Robotics in Urology working group

C Würnschimmel<sup>1</sup>; F Haselhoff<sup>1</sup>; S Sigg<sup>1</sup>; A Mattei<sup>1</sup>; C Fankhauser<sup>1</sup>; P Baumeister<sup>1</sup>; F Piramide<sup>2</sup>; M Wenzel<sup>3</sup>; A Larcher<sup>4</sup>

<sup>1</sup> Luzerner Kantonsspital, Department of Urology; <sup>2</sup> San Luigi Gonzaga Hospital, Turin; <sup>3</sup> Goethe University Frankfurt, University Hospital Frankfurt; <sup>4</sup> Department of Urology, Urological Research Institute, San Raffaele Scientific Institute, Milan, Italy

#### Introduction

Novice robotic surgeons seek centers of excellence providing structured training, and an appropriate caseload and surroundings for adequate education. We aimed to create a comprehensive “world-map” for robotic surgery education.

#### Methods

An online survey investigated modalities and infrastructure provided for training, including the type of robotic system(s) and/or simulators provided, and the caseload and case-mix per surgeon per year. In the current round of assessment, the survey was distributed within Young Academic Urologists (YAU) groups and within European Association of Urology Robotic Urology Section (ERUS) and resembles the current results. Similar academic societies will be contacted, to reach world-coverage. By the means of peer-recommendations gathered through the survey, it will be distributed again. A systematic web-search will be performed to identify further institutions that have not been identified within societies or by recommendations.

#### Results

67 responses from 59 institutions were recorded, including predominantly European institutions. 81% provide training. All provide Da Vinci multi-port systems (n=59). Additionally available systems mentioned were HUGO-RAS (n=11), Versius (n=5) and Da Vinci SP (n=6). Of those providing training, 94% provide it within the operating theatre. 61% provide an additional second console. 82% reported of an additionally available software-based simulator program. Dry-lab and wet-lab possibilities were offered in 31 and 13%, respectively.

With regards to surgical cases per institution per year, < 200 cases were reported in 12%, followed by 200-500 cases in 54% and more than 500 cases in 34%. The majority (56%) reported of 1-4 surgeons at the institution, followed by 5-9 surgeons in 31% and more than 10 surgeons in 12%. The majority provides training during up to one half of the cases of the total institutional surgical volume (77% and 84.5% taught in oncological and non-oncological cases, respectively), a minority receives teaching in more than half of the cases (19 and 12%) or even in all cases (4 and 3.5%).

#### Conclusion

Many institutions appear to provide a capable surrounding for teaching novice robotic surgeons, however, with varying surgical exposure. For institutions without an adequate caseload per surgeon, auxiliary measures for a comprehensive training including dry-lab and wet-lab and reliable educational tools such as proficiency-based-progression may be considered.



## P065

### **Complex combined urologic and plastic surgical reconstruction following a Fournier gangrene with severe urethral involvement to restore quality of life**

F Heining; B Kranzbühler; S Uyulmaz

USZ UniversitätsSpital Zürich

#### Introduction & Objectives

Fournier gangrene is a rare but potentially life-threatening form of necrotizing fasciitis. It is a rapidly spreading bacterial infection affecting the soft tissue, particularly in the genital area. Early diagnosis and aggressive treatment, involving radical surgical debridement and antibiotics, are essential to prevent further spread of infection. In cases of severe tissue damage, surgical reconstruction can be challenging and may require collaboration between different surgical disciplines.

#### Materials & Methods

Mr. R-G. is a 65-year-old patient who presented to the emergency department in November 2023 due to a painful genital soft tissue swelling. Apart from nicotine abuse, no other risk factors were identified. Clinical, laboratory and image morphological findings showed a pronounced Fournier gangrene. A 140-minute radical debridement was performed extending to the suprasymphatic level with insertion of a suprapubic and transurethral indwelling catheter. After three successive debridements the patients presented a large urethral defect of 6-7 cm with extensive loss of Corpus spongiosum and the ventral part of the penile urethra. To restore quality of life and voiding integrity a ventral onlay urethroplasty with 7 cm oral mucosa, gracilis flap and mesh graft coverage was performed in a combined urologic and plastic reconstructive procedure.

#### Results

The patient was discharged after a total of 34 days of hospitalization. A first urethrography 8 weeks postoperatively showed a small extravasation of contrast in the proximal bulbar urethra. A repeated urethrography 16 weeks postoperatively showed closed urethral conditions with a small dorsal bulge in the area of the reconstructed urethra. Following catheter removal 18 weeks postoperatively the patient presented with subjective well compensated micturition with a Qmax of 13.4 ml/s voided in 30 seconds and without postvoid residual urine.

#### Conclusion

Fournier gangrene is a life-threatening disease with high mortality and major impact on the quality of life. Following radical debridement, our patient suffered from a massive soft tissue defect with loss of large parts of the Corpus spongiosum and a large urethral defect. Due to an interdisciplinary management with reconstruction of the urethra, good cosmetic results and a satisfactory functional outcome could be achieved.



## P066

### Fallbericht: Sind synchrone bitestikuläre Hodentumore vereinbar mit einem bestehenden Kinderwunsch?

F Sadiku; M Thomas; M Kwiatkowski; S Wyler

Kantonsspital Aarau

#### Hintergrund

Synchrone bitestikuläre Hodentumore sind in nur 1-2% der Fälle zum Zeitpunkt der Erstdiagnose vorhanden. Die inguinale Ablatio testis stellt den Goldstandard zur Diagnostik und Therapie des Hodentumors dar, wobei eine Hoden-erhaltende Operation bei synchronen bitestikulären Hodentumoren angewendet werden kann, um das Risiko eines Hypogonadismus und Infertilität insbesondere von jungen Patienten mit Kinderwunsch zu verringern.

#### Fallbericht

Notfallvorstellung eines 28-jährigen Patienten mit atraumatischen linksseitigen Hodenschmerzen. Klinisch zeigte sich ein druckdolenter linker Hoden bei unauffälliger Gegenseite. Sonographisch zeigte sich rechtsseitig ein 5cm grosser Hodentumor mit linksseitig ca. 1cm grossem nodulärem Befund bei unauffälligen Tumormarkern. Bei einem bestehenden Kinderwunsch wurde die Indikation zur inguinalen Ablatio testis links mit Hoden-erhaltender Tumorenukleation rechts gestellt. Histologisch zeigte sich links ein klassisches Seminom (ø5cm) mit Infiltration des Rete testis mit umgebender GCNIS (pT1 L0 V0 S0 R0). Rechts zeigte sich im 8mm Exzusat ein embryonales Karzinom (mind. pT1) mit GCNIS. Sowohl eine adjuvante Radiotherapie, als auch die inguinale Ablatio testis wurden durch den Patienten bei bestehendem Kinderwunsch abgelehnt. Die active surveillance mittels 3-monatigen sonographischen Kontrollen und 6-monatigen Bildgebungen des Abdomens zeigten 1 Jahr postoperativ bildmorphologisch keinen Hinweis auf ein Rezidiv bei jedoch steigendem B-HCG auf max. 16 U/l. Sonographisch demarkierte sich 14 Monate nach Erstdiagnose eine erneute Läsion am rechten Hoden. Bei zwischenzeitlich erfülltem Kinderwunsch erfolgte die inguinale Ablatio testis rechts, wobei sich histologisch ein klassisches Seminom (pT1 L0 V0 R0) zeigte ohne Hinweis auf Embryonalzellanteile. Postoperativ normalisierte sich das B-HCG. Es folgte die adjuvante Chemotherapie mit einem Zyklus PEB.

#### Fazit

Gemäss AUA- und EAU-Guidelines kann eine Hoden-erhaltende Operation durchgeführt werden bei synchron auftretenden Tumoren und bei einem Einzelhoden. Bei einer Keimzellneoplasie in situ (GCNIS) ist die Radiotherapie die Therapie der Wahl. Bei jedoch bestehendem Kinderwunsch kann die Radiotherapie unter regelmässigen Verlaufskontrollen aufgeschoben werden. An unserem Fallbeispiel zeigten sich 3-monatige Verlaufskontrollen mittels Sonographie des Hodens und Abnahme der Tumormarker effektiv im Erkennen eines Rezidives mit zwischenzeitlich erfülltem Kinderwunsch.





## P067

### Testikuläre adrenale Resttumore - ein Fallbericht

S Fassbind

Kantonsspital Baselland

Einleitung

Testikuläre adrenale Resttumore (TART) sind seltene, benigne Hodentumore, welche bei ungefähr 40% aller Patienten mit einem adrenogenitalen Syndrom auftreten. Das Adrenogenitale Syndrom ist eine angeborene, autosomal-rezessiv vererbte Stoffwechselkrankheit, die durch eine Störung der Hormonbildung in der Nebennierenrinde gekennzeichnet ist. Es tritt mit einer Häufigkeit von 1:10.000 bis 1:20.000 auf. Es kommt zur verminderten Bildung von Cortisol und Aldosteron sowie zu einer vermehrten Bildung männlicher Hormone. Der Begriff Adrenogenitales Syndrom beschreibt mehrere Erkrankungen, die häufigste Form ist der 21-Hydroxylasemangel.

Fallvorstellung

Der 44-jährige Patient wurde elektiv durch die Endokrinologie des Hauses für eine urologische Abklärung bei bekanntem kongenitalem adrenogenitalem Syndrom mit 21-Hydroxylase-Defizit mit Salzverlust vorgestellt. Der Patient war bisher noch nie urologisch vorstellig und hatte diesbezüglich auch keine Beschwerden. Ein Kinderwunsch bestand nicht. Am Hodenoberpol bds. Tastete man eine indolente Induration. Sonographisch zeigte sich ein normovolämer Hoden beidseits und bilateral im Bereich des Oberpoles inhomogene, hyperperfundierte Läsionen, welche sich in einer Folgekontrolle nach einem halben Jahr stationär zeigten. Die Hodentumormarker zeigten sich normwertig.

Bei asymptomatischem Patienten mit typischem sonographischem Befund ohne Kinderwunsch wurden keine weiteren therapeutischen oder diagnostischen Massnahmen ergriffen. Es wurden jährliche klinisch-sonographische Verlaufskontrollen vereinbart. Zudem wird der Patient regelmässig durch die Kollegen der Endokrinologie betreut. Zum Zeitpunkt der urologischen Vorstellung wurde er mit Spiricort und Florinef behandelt und zeigte sich hierunter kompensiert.

Schlussfolgerung

Die Seltenheit der Krankheit, das Vorherrschen kleiner Kohorten und Fallberichte sowie die Heterogenität der Forschung erschweren das Verständnis dieser Erkrankung.

Das Wissen über TART sollte unter Laien verbreitet werden, um unnötige Orchiektomien und Fehldiagnosen von bösartigen Hodentumoren zu vermeiden. Unfruchtbarkeit ist häufig, wird aber von den Ärzten, selbst von Experten, nicht zufriedenstellend behandelt. Die rechtzeitige Erkennung der Krankheit ist wichtig, um eine irreversible Funktionsstörung der Keimdrüsen zu verhindern.



## P068

### A Case Report of a 47-Year-Old Swiss Male: Highlighting the Importance of Enhancing Testicular Cancer Awareness

C Eckert; R Grams; M Umbehrr

Triemli Hospital Zurich

**Background & Objective:** While there is an ongoing debate about testicular cancer screening, the key to an early diagnosis lies in awareness [1]. A recent study indicates large educational neglect regarding testicular cancer knowledge and reluctance to perform testicular self-examinations [2]. A retrospective analysis revealed that delayed diagnosis was often associated with rural residency, age over 33, lack of a regular intimate partner, and feelings of shame [3]. The aim of this case report is to highlight the importance of enhancing testicular cancer awareness by increasing disease knowledge, promoting self-examinations, and addressing the taboo of not discussing intimate issues due to shame.

**Case Description & Findings:** The patient presented with a significant testicular mass, increasing in size for a year. Encouraged by his colleagues, he sought medical help. A CT scan revealed a 16x19 cm testicular tumor, iliac lymphadenopathy, and pulmonary lesions indicative of metastases. Preoperative tumor markers were AFP: 8.1 µg/l, bHCG: 145 mIU/ml, and LDH: 2057 IU/L. A complication-free semicastration of the 2.9-kilogram tumor was performed and the post-operative tumor markers halved. The patient was diagnosed with a primary pulmonary metastasized testicular seminoma, staged as pT2c cN3 cM1a S1 CS IIIB, according to the IGCCC intermediate prognosis group. Rapid lymphogenic progression necessitated bilateral kidney drainage. Chemotherapy with four cycles of cisplatin, etoposide and ifosfamide was applied and tumor markers normalized. Six weeks later, imaging showed lung metastases had decreased to one-third of their original size, but iliac lymph nodes remained enlarged (>40 mm), indicating incomplete remission.

**Conclusion:** This case impressively exemplifies a delayed diagnosis of testicular cancer; although extreme, it is not a unique exception. Various factors contribute to delayed reactions, including lack of knowledge about testicular cancer, psychological factors neglecting an obvious problem, and shame addressing intimate issues. Early detection in a non-advanced stage is crucial in testicular cancer treatment, alongside modern chemotherapy options. Improvements in education, particularly by raising awareness in schools, are meaningful steps in the future. Despite existing testicular cancer awareness projects and initiatives [4], research into their efficacy remains very limited, highlighting the necessity for more comprehensive educational strategies.



## P069

### Fallbericht: Leiomyom der Harnröhre

J Aebi<sup>1</sup>; L Wernli<sup>2</sup>; S Subotic<sup>3</sup>

1 Kantonsspital Baselland; 2 Kantonsspital Baselland; 3 Kantonsspital Baselland

#### Hintergrund

Das Leiomyom ist ein benigner Tumor der glatten Muskulatur, der in allen Organen mit glatter Muskulatur vorkommen kann. Hauptsächlich tritt es jedoch im Urogenitaltrakt auf, vor allem im Uterus (1). Extrauterine Leiomyome sind selten, in der Literatur sind lediglich knapp 50 Fälle eines urethralen Leiomyoms beschrieben (1). Dabei sind Frauen, bei nur drei beschriebenen Fällen an Männern, deutlich häufiger betroffen (2). Das Wachstum ist wahrscheinlich Östrogen abhängig, sodass die Tumoren meist bei Frauen zwischen 30 und 40 Jahren auftreten (1). Der Tumor geht meist von der Hinterwand der proximalen Urethra aus (1) und ist typischerweise 1-2 cm gross (3).

#### Fallpräsentation

Im Januar 2022 wurde auf der Notfallstation des Kantonsspitals Baselland eine 48-jährige Patientin mit einem Harnverhalt von ca. 400 ml vorstellig. Klinisch präsentierte sich ein ca. 3 cm grosser prolabierender, livide verfärbter Tumor. Da eine gynäkologische Genese vermutet wurde, erfolgte eine gynäkologische Untersuchung inkl. transvaginalem Ultraschall. Hierbei wurde die Lokalisation des Tumors im Bereich der ventralen Vaginalwand vermutet, sodass von einer vaginalen Zyste ausgegangen wurde. Am selben Tag erfolgte die notfallmässige Operation zur Tumorentfernung. Intraoperativ wurde bei V.a. eine Beteiligung der Urethra die Urologie hinzugezogen. Es zeigte sich ein prolabierender Tumor, ausgehend von der Urethra, welcher klinisch als Harnröhrenkarunkel gedeutet wurde. Nach Resektion mit monopolarer Strom erfolgte eine Naht der Harnröhrenränder und anschliessender Dauerkatheter-Einlage. Aufgrund des auffällig grossen Befundes wurde eine Schnellschnittuntersuchung durchgeführt, welche ein Leiomyom der Harnröhre ohne Malignitätszeichen zeigte. Postoperativ wurde der Dauerkatheter nach 48 Stunden entfernt und es erfolgte eine problemlose, restharnfreie Spontanmiktion.

#### Schlussfolgerung

Leiomyome der Harnröhre wurden nur rund 50-mal in der Literatur beschrieben (1). Über einen Harnverhalt aufgrund eines prolabierten Leiomyoms aus dem Meatus urethrae externus gibt es in der aktuellen Literatur nur drei beschriebene Fälle. Speziell an diesem Fall ist die untypische distale Lokalisation des Befundes. Die Therapie der Wahl ist eine chirurgische Resektion mit anschliessender histopathologischer Aufarbeitung (4,5). Eine maligne Entartung wurde in der Literatur noch nie beschrieben, ein Lokalrezidiv ist jedoch bei unvollständiger Exzision möglich (5)



## P070

### 76 year old man with left-sided cryptorchidism and fibrothecoma in the left inguinal canal – a case report

Y Terziyska; B Kiss; V Obmann; JA Rodriguez; N Arnold

Insel Gruppe AG, Inselspital Bern

Tumors of the fibroma-thecoma group are benign tumors, typically found in the ovaries of postmenopausal women. Testicular tumors of the thecoma-fibroma group are exceptionally rare, with around 30 documented cases, typically diagnosed between ages 30 and 50. They manifest as painless testicular enlargement. These tumors have an excellent prognosis, with no reported metastases or recurrences. A 76-year-old male was referred to the urological clinic due to a suspected inguinal testicle on the left side noted in a PET-CT-scan performed as follow-up examination of a melanoma. The patient was completely asymptomatic and in good general condition. Anamnesis revealed fatherhood of three children, and no history of hypogonadism.

Upon physical examination, only one testicle was palpable in the right scrotal compartment while a mass, suspected to be the left testicle, was detected in the left inguinal canal. The mass was non mobile and indurated while the orthotopic right testicle was clinically inconspicuous. Ultrasound examination revealed the right testicle to be euvolemic and normoechoic while the suspected left-sided inguinal testicle exhibited hypoechoic and inhomogeneous characteristics. Testicular tumor markers were negative. The conducted PET-CT scan showed a homogenous 59 x 38 x 38 mm mass in the left inguinal canal, with no evidence of metastasis.

Based on these findings the patient was considered to have a malignant tumor of the ectopic left-sided testicle, and a inguinal orchiectomy was performed. Intraoperatively the spermatic cord was macroscopically identified and the mass attached to it was successfully removed. The post-operative recovery was uneventful.

The gross pathological examination revealed a tumor measuring 60 x 45 x 45 mm, enclosed within a fine, intact capsule. On the cut surface, there was a tumor conglomerate consisting of four confluent nodules with varying consistencies, extending to the capsule. The cut surface was partly whitish and indurated, partly beige, fleshy, and soft with a dark brownish area, presumably hemorrhage.

Microscopically the diagnosis of fibrothecoma was made. There was no microscopically recognizable normal testicular or epididymal parenchyma. An interdisciplinary reevaluation of the PET-CT scan indicated no further intraabdominal masses. A vein supplying the fibro-thecoma was traced to the left-sided V. renalis. These findings support the hypothesis that the fibro-thecoma originated from the left-sided testicle



## P071

### Seltene Tumoren der Hoden- Präsentation von zwei Fällen mit spermatozytischen Tumoren in unserem Kantonsspital

A Koutava; S Preusser; B Weltzien

Kantonsspital Schaffhausen

Hintergrund und Ziele: Spermatozytische Hodentumoren sind äußerst seltene Neoplasien, die weniger als 2% aller Hodentumoren ausmachen. Ihre Seltenheit führt zu Herausforderungen hinsichtlich der Standardisierung des Stagings und der Nachsorge.

Material und Methoden: Wir präsentieren hier zwei Fälle von spermatozytischen Hodentumoren, die in unserem Kantonsspital operiert wurden. Beide Fälle präsentierten sich mit unterschiedlichen klinischen Merkmalen. Die diagnostischen Ansätze und therapeutischen Strategien werden nach Erhalt der Histologie interdisziplinär diskutiert, insbesondere im Hinblick auf das Staging und die Nachsorge.

Beide Patienten präsentierten sich mit Hodenmassen, die bei der körperlichen Untersuchung deutlich palpabel waren. Während sich die Klinik des ersten Patienten vor allem durch die rasch wachsende schmerzhafte Hodenschwellung bezeichnend war, wurde bei anderen lediglich in der klinischen Untersuchung eine indolente Hodenmasse entdeckt. Die Sonographie ergab grosse, gut umschriebene, nicht infiltrierende Läsionen. Bei dem einen Patienten mit deutlich grossen zystischen Komponenten und bei dem anderen mit mikrozystischen Veränderungen in einem grossenteils soliden Tumorbett.

Ergebnisse: Die endgültige Diagnose wurde durch die histopathologische Untersuchung nach Orchiektomie gestellt. Aufgrund der seltenen Natur der Tumoren und der begrenzten Evidenzbasis wurden anhand Tumorboard Empfehlungen und Empfehlungen von Spezialisten der Uro-Onkologie Nachsorgepläne entwickelt, die regelmäßige klinische Bewertungen und Bildgebung umfassen.

Schlussfolgerung: Die initiale Diagnostik sowie die Nachsorge von Patienten mit spermatozytischen Hodentumoren stellt eine Herausforderung dar. Ursächlich hierfür sind das Fehlen von randomisierten Kontrollstudien, sodass Empfehlung meistens auf Review-Studien und Expertenkonsens basieren, aber auch die unterschiedliche sonographische Bildmorphologie. Die Rolle und Effektivität der Chemotherapeutika und Radiotherapie zeigt sich limitiert und in grosser Abhängigkeit der histologischen Variante. Eine individualisierte Nachsorge unter Berücksichtigung der klinischen Merkmale jedes Patienten ist daher entscheidend. Um den gemeinsamen Wissenspool zu erweitern, schlagen wir die Registrierung der Fälle in einem internationalen Register vor.



## P072

### Spermatocytic testicular tumor coexisting with sarcoma: A case report

P Kraft; L Surer; N Abo Youssef; P Bode; H John

Kantonsspital Winterthur, Winterthur, Switzerland

#### Introduction:

Spermatocytic tumors represent rare neoplasms of the testicles, characterized by unique genetic alterations, and were formally recognized as a distinct entity in the WHO classification of 2019. While spermatocytic tumors are mostly indolent with favorable prognosis in the non-metastatic stage, they can rarely undergo sarcomatoid transformations, significantly worsening prognosis. This case highlights a patient harboring a spermatocytic testicular tumor concomitant with an inguinoscrotal sarcoma.

#### Case report:

A 77-year-old male patient presented with a left scrotal mass and a suspected right inguinoscrotal hernia. Laboratory values showed a slightly elevated alpha-1-fetoprotein while beta-HCG and LDH were normal. Ultrasound imaging revealed a diffusely enlarged, inhomogeneous, left testicle highly suspicious for testicular malignancy. Staging by thoracoabdominal computed tomography was not indicative of lymphatic or distant metastases. The patient underwent left semicastration, alongside testicular biopsy on the right. During exploration of the suspected inguinoscrotal hernia, a suspicious mass was encountered and biopsied. Histological analysis revealed a spermatocytic tumor in the left testicle (TNM: pT1 cN0 L0 V0 Pn0 cM0) and absence of malignancy in the right testicle. The right inguinoscrotal mass was identified as a neoplasm with sarcomatoid parts. Subsequent management entailed radiotherapy (25 x 2 Gy = 50 Gy), followed by radical resection and scrotectomy with preperitoneal mesh reinforcement. Molecular genetic testing including Archer panel, MDM2 FISH analysis, and DMRT1 amplification, ruled out diagnostic gene alterations. Final pathology revealed a coexisting sarcoma (TNM: ypT2, L0, V0, Pn0, R0, FNCLCC Grade 2, Score 5 (3/1/1)).

#### Conclusion:

Despite uncommon and generally less aggressive compared to other testicular malignancies, particularly large spermatocytic tumors necessitate vigilance for potential sarcomatoid transformation. In this case, different transformations of the same spermatocytic tumor were excluded. The rarity of these entities underscores the importance of multidisciplinary team meetings for accurate diagnosis and optimal treatment decision-making.



## P073

### Fallbericht: Seröser Borderline-Tumor der testikulären Adnexe

J Aebi<sup>1</sup>; K Mertz<sup>2</sup>; S Subotic<sup>2</sup>

1 Kantonsspital Baselland; 2 Kantonsspital Basel

#### Hintergrund

Hodentumore können gemäss der WHO-Klassifikation von 2022 in Keimzelltumore, Gonadenstromatumore und testikuläre Adnextumore unterteilt werden. In der Gruppe der testikulären Adnextumore gibt es die Untergruppe der Tumoren der Sammelkanälchen und des Rete testis vom ovariellen Typ, zu denen unter anderem der seröse Borderline-Tumor gehört (1). Es handelt sich um eine sehr seltene Entität mit lediglich knapp 50 beschriebenen Fällen (2). Histopathologisch handelt es sich um einen Tumor epithelialen Ursprungs des Rete testis und der Sammelkanälchen, die histologisch einer ovariellen Neoplasie gleichen (3). Borderlinetumore haben zytologische, aber keine histologischen Malignitätskriterien. Typisch ist ein zystisches Erscheinungsbild mit fibröser Begrenzung und papillärer Struktur (3).

#### Fallpräsentation

Im März 2024 stellte sich ein 65-jähriger Patient aufgrund von intermittierenden Hodenschmerzen links und neu entdecktem Gewebepplus im Bereich des Hodenoberpols in der urologischen Sprechstunde vor. Klinisch präsentierte sich der linke Hoden palpatorisch vergrössert und im Bereich des Hodenoberpols konsistenzvermehrte. Sonographisch konnte eine tumorverdächtige Formation am Hodenoberpol von etwa 2.4 cm Durchmesser mit diskreter Begleithydrozele dargestellt werden. Der rechte Hoden war klinisch und sonographisch unauffällig. Die Hodentumormarker waren normwertig. Zur weiteren Diagnostik wurde eine CT-Thorax/Abdomen zur Metastasen-Suche durchgeführt, welche jedoch unauffällig war. Es erfolgte eine zeitnahe inguinale Orchiektomie links und histopathologische Aufarbeitung des Exzidats. Nach der Diagnose eines serösen Borderline-Tumors der testikulären Adnexe erfolgte eine Besprechung des Falls in der Tumorkonferenz. Es wurden regelmässige klinische und sonographische Nachkontrollen des Skrotums und des Gegenhodens empfohlen.

#### Schlussfolgerung

Histopathologisch zeigte sich ein sehr seltener seröser Borderline-Tumor der testikulären Adnexe. Aufgrund der geringen Anzahl beschriebener Fälle gibt es in der Literatur nur unzureichende Daten über die Behandlung, Nachsorge und Prognose. Histologisch zeigen sich jedoch keine Malignitätskriterien und ein Rezidiv oder eine Metastasierung wurde in der Literatur nicht beschrieben (4,5). Somit ist nach erfolgter Orchiektomie keine weitere Therapie notwendig. Eine regelmässige klinische Nachsorge über mehrere Jahre ist jedoch aufgrund der unzureichenden Erfahrungswerte zu empfehlen (5).



## P074

### A Rare Cause of Epididymo-orchitis: Testicular Brucellosis. A Case Report.

A Ebner<sup>1</sup>; A Höhn<sup>2</sup>; D Eberli<sup>1</sup>; G Rizzi<sup>1</sup>

1 Universitätsspital Zürich, Klinik für Urologie; 2 GZO Spital Wetzikon

Brucellosis, also known as 'Malta-fever', is caused by intracellular gram-negative coccobacilli *Brucella* spp.. It is predominantly transmitted through the consumption of unpasteurized dairy products from infected animals. Brucellosis manifests as a systemic infection with fever, malaise and night sweats. If complicated, brucellosis can affect every organ system. Among focal brucellosis presentations, genitourinary involvement, particularly orchitis and/or epididymitis, ranks as the second most common. Although primarily endemic to the Mediterranean and Arabian regions, the disease is exceptionally rare in non-endemic areas.

Here, we present the first reported case of brucellar epididymo-orchitis in Switzerland, with a 50-year-old man presenting with acute scrotal pain, swelling, persistent fever, and a recent history of travelling to Turkey. *Brucella melitensis* was isolated from his blood culture and antibiotic treatment with a regimen of Rifampicin and Doxycycline over 6 weeks was administered.

Brucellosis should be considered among the differential diagnoses of testicular swelling and persistent fever, especially in patients with a recent history of travel to or from a brucellosis-endemic area.





## P075

### Thrombosed urethral caruncle : case report and a review of the literature

A Gopalakrishnan; P Kadula; A Thomas; P Fontanella

EHC Hôpital de Morges

**Background and Aim :** A urethral caruncle is an uncommon eversion of the urethral mucosa, presenting as a circular benign polypoid lesion, often presenting in post-menopausal women. Rarely, it can become thrombosed, as it was in the case of our patient. The aim of this report is to illustrate a case of a thrombosed urethral caruncle, its clinical presentation and management strategy.

**Case description :** a 71 year-old female patient presented to the emergency department with dysuria, alguria, localised genital discomfort and pollakiuria. A recent gynaecological evaluation was inconspicuous. Upon clinical examination, we observed a cyanotic, thrombosed, spherical mass, about 2cm in size, surrounding the meatus of the urethra, painful upon examination. Initially, a treatment of localised prednisolone was applied 2-3x a day for one week, leading to a reduction in pain and in local tumefaction. Due to the persistent thrombosis and patient discomfort, we proceeded to a surgical excision of the lesion. The post-operative recovery was successful with a resolution of initial symptoms and no bladder outflow obstruction or relapse at follow-up controls. The pathology confirmed a thrombosed urethral caruncle, without any signs of malignancy. An extensive literature review (1994-2024) on diagnosis and management of urethral caruncle concludes our study.

**Conclusions :** although usually inconspicuous, a urethral caruncle that is thrombosed can become very symptomatic and does require proper treatment. Due to the risks of intra-operative urethral sphincter lesions and post-operative urethral stenosis, adequate surgical experience and a proper follow up are mandatory to grant successful short- and longterm functional results.



## P076

### First Description of the Transperineostomal Resection of the Prostate (TPR-P): A Case Report

S Hofmann<sup>1</sup>; L Funk<sup>1</sup>; A Nikitin<sup>1</sup>; L Hefermehl<sup>1</sup>; U Bieri<sup>2</sup>

1 Department of Urology, Kantonsspital Baden, Baden, Switzerland; 2 Department of Urology, Kantonsspital Baden, Baden, Switzerland, Department of Urology, Universitätsspital Zürich, Switzerland

We report a case of transperineostomal bipolar resection of the prostate (TPR-P) for lower urinary tract symptoms (LUTS). To our knowledge, this is the first description in the scientific literature. A 67-year-old man with a medical history of multiple penile debridements and forming of a perineostomy due to an episode of severe Fournier gangrene in 2015, was admitted to the emergency room with acute urinary retention. Consecutively, a suprapubic catheter was inserted. Attempts of transperineal catheterisation failed due to bulbar stenosis and an obstructive prostatic urethra. After the resolution by dilatation of the bulbar stenosis up to 18 french, post-voiding residual volume persisted at up to 150 ml. The prostatic volume measured 60ccm. The surgery was performed in lithotomy position under general anaesthesia. Gyrus<sup>TM</sup> PlasmaKinetic System resectoscope was used to perform the resection according to the method of Mauermayer.

The intra- and postoperative course after TPR-P was uneventful. No adverse events occurred. The assessment after 6 weeks revealed an International Prostate Symptom Score (IPSS) improvement of nearly 50% for the symptoms and >60% for overall satisfaction (preoperative: IPSS: 24, L: 6; postoperative IPSS: 13, L: 2). Micturition protocols showed a decrease in the average post-voiding residual volume from 150 ml preoperatively to 15 ml (range 0-30 ml) postoperatively.

In TPR-P haptic feedback of the resectoscope is different than accessing the resection zone through the normal length of the urethra as performed in the standard technique of transurethral resection of the prostate (TUR-P). While in our hands the augmented range of motion seemed almost too loose for TUR-P, we believe that this might be an advantage for enucleation techniques.



## P077

### Case Report of Ureterocele Prolapse in a 41-Year-Old Female Patient: A Rare Presentation with Partial Ureterocele Necrosis

A Gugerli Lazos<sup>1</sup>; D Eberli<sup>2</sup>; EX Keller<sup>3</sup>; TS Schmidli<sup>1</sup>

1 Univeristätsspital Zürich; 2 Universitätsspital Zürich; 3 Universtitätsspital Zürich

Background: Ureterocele prolapse, particularly in adult females, is a rare condition with limited documented cases. It is more commonly observed in pediatric populations. Presentation typically includes lower urinary tract symptoms such as dysuria, urinary retention, and hematuria. However, the protrusion of a partially necrotic ureterocele, as observed in our patient, is an unusual manifestation, often leading to misdiagnosis or delayed diagnosis.

Methods: This case report follows a structured approach, incorporating detailed history-taking, physical examination findings, radiological imaging, and surgical intervention. A thorough literature review was conducted to contextualize the rarity of the presentation and to understand its management strategies.

Case report: We present the case of a 41-year-old healthy female who initially presented with complaints of dysuria and recurrent small urethral mass which was thought to be a urethral caruncle. In her medical history she reported of recurrent urinary tract infections (twice per year) and a cesarean delivery; other comorbidities were denied.

Initial imaging with ultrasound revealed evidence of right upper urinary tract obstruction along with the presence of an ureterocele. The laboratory showed normal renal function. The CT scan not only confirmed the presence of the obstructive ureterocele, but also unveiled a 4mm urinary stone lodged in the distal ureter. We scheduled a follow up consultation for cystoscopy and preoperative planning of a ureterocele resection.

In an emergency consultation, the patient reported a recent onset of urinary incontinence and noticed a large protruding mass from her urethra, which was associated with urethral pain and bleeding. Physical examination showed a partially necrotic and bleeding urethral mass, which was initially reduced intravesically. The patient presented with recurrent prolapse of the ureterocele, such that an emergency transurethral bipolar ureterocele resection and DJ-stenting was performed, with an uneventful postoperative course. Secondary ureterorenoscopy was scheduled for the stone-management.

Conclusion: This case underscores the importance of considering ureterocele prolapse in the differential diagnosis of urethral masses, especially in females presenting with lower urinary tract symptoms. Early recognition and appropriate surgical management can alleviate symptoms and prevent complications, thereby improving the patient's quality of life



## P078

### **Testicular fibrothecoma: a case report of an exceedingly rare entity**

P Lyatoshinsky; J Blaser; R Seiler-Blarer; D Abt

Spitalzentrum Biel

#### Introduction

Intratesticular fibrothecomas are very rare entities associated with benign behavior. Only a few small series of testicular fibrothecomas have been published so far. We report a case of a pure testicular fibrothecoma in a 30-year old male patient.

#### Case Presentation

A 30-year old male patient was referred to our unit for further evaluation of an indolent mass of the left testicle, which he had noticed a day before. During the clinical examination, the mass could barely be palpated in the upper pole of the left testicle. The subsequent scrotal ultrasound revealed a slightly hyperechogenic intratesticular tumour of 5x5mm. Testicular tumour markers were within normal range. Due to the atypical clinical presentation, we decided to perform a tumour-enucleation with intraoperative frozen section analysis. Intraoperatively, the tumour was completely enucleated. The frozen section revealed an unusual nodular tumour proliferation, and germ cell neoplasia could not be excluded. Therefore, we decided to proceed with orchiectomy, which was followed by an uncomplicated postoperative course.

Histopathological evaluation revealed a spindle-cell tumour measuring 5x5mm, completely excised. Considering the positivity for inhibin, calretinin, melan A, and SMA, as well as the negativity for S100 and desmin, the findings were consistent with a testicular fibrothecoma. No evidence of malignancy or germ cell neoplasia in situ (GCNIS) was found in the remaining testicular tissue. Six weeks after surgery the patient presented in good general condition.

#### Discussion

Testicular fibrothecomas are exceedingly rare. The most recent series with morphological and immunohistochemical analysis was reported by Zhang et al. in 2013. Prior to this, series consisting of 4 and 3 cases were described in 1964 and 1997, respectively. Since 2013, four additional case reports have been published. Similar to our case, most patients with testicular fibrothecoma underwent radical orchiectomy. Only one patient in Zhang et al.'s series underwent solely tumour-enucleation. Due to the histopathological variety of testicular masses and the necessity of immunohistological analysis in most cases, achieving a reliable exclusion of malignant tumours during frozen section seems unattainable. Despite the lack of substantial evidence, fibrothecomas do not appear to behave malignantly and are associated with a good prognosis. In our case, we did not schedule routine follow-up.



## P079

### Case report: Posttraumatischer high flow Priapismus bei einem 10-jährigen Patienten

M Wengi; J Klein; T Herrmann

STGAG Kantonsspital Münsterlingen

Beim Priapismus handelt es sich um einen urologischen Notfall. Es werden 2 Formen unterschieden: high flow (nicht-ischämischer) und low flow (ischämischer) Priapismus.

Wir berichten über einen 10-jährigen Patienten, der sich 8 Tage nach perinealem Trauma mit einem intermittierenden Priapismus auf der pädiatrischen Notfallstation vorstellte. Die Diagnose eines high flow Priapismus wurde mittels kaverner Blutgasanalyse gestellt. Ein MRI des Beckens bestätigte einen anterior-kavernösen Shunt als Ursache des high flow Priapismus. Unter der konservativen Therapie mittels Kühlung und Kompression des Dammbereichs war der Priapismus nach wenigen Tagen regredient. Auf eine interventionell-radiologische oder operative Therapie konnte verzichtet werden.



## P080

### **Autologous fascial pubovaginal sling procedure to treat female stress urinary incontinence.**

A Perrin<sup>1</sup>; L Campeau<sup>2</sup>

1 Hôpitaux universitaires de Genève; 2 Université McGill

#### Contexte & Objectifs:

The autologous fascial pubovaginal sling (AFS) has been considered the gold standard treatment for simple and complex female stress urinary incontinence (FSUI) since the late 1990s. Despite synthetic midurethral sling (SMUS) gained popularity thanks to their minimal invasiveness linked to a quicker recovery and reduced perioperative morbidity, raising concerns about its long-term safety tells us that AFS are still a descent option as a first line surgical treatment for uncomplicated FSUI, and strongly recommended for complex cases. This video presentation aims to demonstrate the AFS procedure, providing a detailed step-by-step guide for specialised surgeons in the field of urinary incontinence.

#### Matériel & Méthode:

In this video, we present a case of a woman with clinically confirmed bothersome pure stress urinary incontinence. She would rather not undergo a synthetic mesh procedure, which is why she has been counselled for AFS. The video emphasizes key equipment, patient positioning, and surgical steps.

#### Résultats:

The video shows a successful AFS procedure. Key surgical steps include harvesting the rectus fascial sling using a suprapubic transverse incision, performing a midline vaginal incision regarding the bladder neck, dissecting carefully towards the ipsilateral shoulder until reaching the retropubic space through the endopelvic fascia, inserting dedicated trocars using a retropubic “up-down” approach until their tip is visible through the vaginal incision, pulling the sutures attached to the sling through the trocars, repeating this procedure on the opposite side, ruling out injuries of the urethral, bladder or ureters using a cystoscopy, securing the correct position of the sling at the bladder neck, tying the sutures attached to the sling in the suprapubic incision in a tension free fashion before closing both incisions.

The procedure resulted in resolution of the patient’s incontinence, highlighting the effectiveness of this surgical approach.

#### Conclusion:

As raising concerns with long-term safety outcomes of SMUS surgery come to light, with most studies showing similar cure rates in terms of objective and subjective cure rates, the AFS remains a gold standard for surgical treatment of FSUI.



## P081

### Transurethral Bulkamid® injection as treatment for female stress urinary incontinence

A Perrin<sup>1</sup>; L Campeau<sup>2</sup>

1 Hôpitaux universitaires de Genève; 2 McGill University

#### Contexte & Objectifs:

Urethral bulking agents are well-recognized therapeutic options for the management of female stress urinary incontinence in women candidate or seeking for a low-risk surgical treatment, particularly in the context of intrinsic sphincter deficiency. So far, no evidence shows that one type of bulking agent is better than another. This video aims to demonstrate the transurethral injection of polyacrylamide hydrogel (Bulkamid®) procedure in an outpatient setting under local anaesthesia.

#### Matériel & Méthode:

In this video, we present a case of a woman with clinically confirmed bothersome pure stress urinary incontinence due to intrinsic sphincter deficiency, which is why she has been counselled for Bulkamid® transurethral injections. The video emphasizes key equipment, patient positioning, and surgical steps.

#### Résultats:

The video demonstrates a successful transurethral Bulkamid® procedure in an outpatient setting. Key surgical steps include local anesthesia using intraurethral xylocaine gel 2% and periurethral injections of 5-10ml of lidocaine 1%, urethroscopy using a rigid pediatric urethroscope, injecting the bulking agent using the Bulkamid® rotatable sheet and a specific 23G x 12cm needle, 2cm distal to the bladder neck through the urethral wall, usually at the 2, 5, 7 and 10 O'clock position. The amount bulking agent used will depend on the coaptation induced by the injections, but most of the time a total of 2ml is injected. A postvoid residual volume has been measured after the procedure and the patient successfully emptied her bladder before going home.

The procedure resulted in resolution of the patient's incontinence, highlighting the effectiveness of this surgical approach.

#### Conclusion:

Transurethral Bulkamid® injection is a safe and effective surgical option to treat female stress urinary incontinence in patient candidate or seeking for a low-risk surgical management, especially in the context of intrinsic sphincter deficiency.



## P082

### Das Wunderlich-Syndrom, ein Fallbericht

A Satari<sup>1</sup>; TRW Herrmann<sup>1</sup>; J Johannsen<sup>2</sup>

1 STGAG Frauenfeld; 2 STGAG Münsterlingen

Hintergrund & Ziele: Spontane nicht-traumatische Nierenblutungen sind selten. Das "Wunderlich-Syndrom" beschreibt akute Blutungen im subkapsulären und perirenalraum. Die Ursachen sind meist neoplastisch (57 %), wobei dabei das Angiomyolipom am häufigsten auftritt (74 % der Neoplasie), gefolgt von der Vaskulitis Polyarthritidis nodosa (75 % der Nicht-Neoplasien). An dritter Stelle steht das maligne Nierenzellkarzinom (12 % der Neoplasie). Gefässmalformationen, Aneurysmen und Nephritiden sind selten. Ziel dieses Fallberichts ist die Aufarbeitung einer unklaren nicht-traumatischen Nierenblutung.

Material & Methoden: Wir berichten über einen 56-jährigen Patienten, welcher sich mit plötzlich aufgetretenen Oberbauchschmerzen rechts vorstellte. CT-grafisch zeigte sich ein akutes retroperitoneales Nierenhämatom rechts mit Überschreitung der Gerota-Faszie und Komprimierung der V. cava inferior. Bei Kreislaufinstabilität erfolgte ein zweifaches notfallmässiges Coiling. Im Verlauf stellte sich der Verdacht einer Sickerblutung, welches eine offene Exploration und Hämatomausräumung erforderte. Bei einer intraoperativen nicht kontrollierbaren diffusen Blutung des Nierenparenchyms war eine Nephrektomie notwendig. Postoperativ kam es zu einem erneuten Hämoglobinabfall mit notwendiger operativer Exploration und Nachweis einer Sickerblutung retroperitoneal. Es erfolgte ein Packing und ein passagerer Bauchdeckenverschluss. Während der Intubation kam es zu einer Aspiration, die zu Kreislaufinstabilität führte und die Einlage einer veno-arteriellen-ECMO sowie die Verlegung in ein Zentrumsspital erforderlich machte. Dort gelang eine Stabilisierung der kardiopulmonalen Situation nicht. Der Patient verstarb an einem Multiorganversagen mit ARDS, pulmonaler Blutung, Pneumonie, akuten Lebersversagen, Koagulopathie und anurischen Nierenversagen.

Resultate: Histologisch zeigt sich keine zugrundeliegende Ursache. Es präsentierte sich lediglich ein 4 mm großes papilläres Adenom, das die Kriterien eines Nierenzellkarzinoms nicht erfüllt.

Schlussfolgerungen: In diesem seltenen Fall eines Wunderlich-Syndroms konnte die Ätiologie histologisch nicht festgestellt werden. Bei hämodynamisch stabilen Patienten ist eine konservative Therapie möglich (29 % der Fälle). Bei Vorliegen eines hämorrhagischen Schocks oder bei Malignitätsverdacht ist die operative Chirurgie die bevorzugte Option (28 %). Die Mortalitätsrate variiert zwischen 2,3 % und 14 %, abhängig von Ursache und Therapiemanagement.





## P083

### Epithelioid angiomyolipoma of the kidney – a case report

B Bulling<sup>1</sup>; G Müllhaupt<sup>1</sup>; V Genitsch<sup>2</sup>; S Bähler<sup>1</sup>

1 Spital Thun STS AG; 2 Pathologie Länggasse

#### Introduction:

Renal epithelioid angiomyolipoma (EAML) is an uncommon mesenchymal tumor with malignant potential and is frequently associated with tuberous sclerosis (TSC). We present a case report of EAML of a 49-year-old female with TSC and an assessment of its risk for malignancy.

#### Case report:

A 49-year-old female was referred with TSC and sonographically indifferent, asymptomatic kidney lesions on both sides. Abdominal MRT indicated along with bilateral simple renal cysts a solid renal mass in the lower right pole. A robot-assisted laparoscopic right partial nephrectomy was then performed with a R0-resection of the 3.6 x 2.5 x 1.8 cm measuring tumor.

Histologically, the renal tumor was composed of predominantly epithelioid (> 80%) and partly spindle cell morphology without necrosis or epithelial lining. The nucleoli were partly roundish, multinucleated, but without atypical mitotic figures or signs of infiltrating growth. The immunohistochemical study was positive for smooth muscle markers (SMA), Caldesmon, Melanoma and Human Melanoma Black-45 (HMB-45). In the literature, the following histopathological characteristics in EAML are described: > 80% epithelioid cells, a carcinoma-like pattern, epithelioid and spindle cells with a diffuse growth pattern, positive immunohistochemical reactivity for HMB-45 and/or Melan-A, negative reactivity for epithelial markers, and focally positive SMA [1-3].

Previous reports in the literature suggest that EAML are potentially aggressive tumors. According to the literature, it seems to be difficult to diagnose potential malignancy because there are no reliable morphological criteria for malignancy [4-6]. Following factors are used to assess malignancy: > 70% atypical epithelioid cells, > 1 mitosis/mm<sup>2</sup>, atypical mitotic figures, association with TSC, tumor size > 70 mm, carcinoma-like pattern, invasion into perinephric fat and/or renal vein invasion or necrosis. This is then classified into low-risk (0-1 parameters), intermediate-risk (2-3), high-risk (> 4) [1, 7-9]. Based on the parameters, we estimate the risk of disease progression of our patient with 15 % as low.

#### Discussion:

EAML is a rare mesenchymal tumor of the kidney with an association with TSC and malignant potential. Histologically, the lesions most commonly show > 80% epithelioid cells and positive immunohistochemical melanocyte markers. To assess the potential malignancy, this case report demonstrates a method for assessing potential malignancy.



## P084

### Spontaneous Subcapsular Renal Hematoma in Metastatic Urothelial Carcinoma of the Urinary Bladder – a case report

A Scherz-Moussa Youma; K Westenfelder; G Müllhaupt; S Bähler

Department of Urology Hospital Thun, Switzerland

Introduction: Spontaneous subcapsular hematoma (SCH) of the kidney is rare [1]. The etiology often remains unclear. We report about a SCH we successfully treated conservatively.

Case Report: An 81-year-old male patient known for metastatic urothelial carcinoma - initially pT3 pN1 cM0 R0 after radical cystectomy with an ileum neobladder 15 years ago, palliative cisplatin-based chemotherapy in 2018 and palliative immunotherapy in 2021 - was hospitalized with urosepsis with urinary retention and already known hydronephrotic afunctional left kidney. He received antibiotics and a transurethral catheter. During inpatient course, an asymptomatic fall in hemoglobin by 50 points occurred, whereupon a large, subcapsular hematoma around the left kidney and lymphonodal disease progression in the retroperitoneum was found in a CT-scan. In the absence of active bleeding, conservative treatment with transfusion and monitoring was implemented. Pneumonia was subsequently detected in context of high inflammatory parameters, prompting a change to broader spectrum antibiotics. Due to persisting high inflammatory markers and thus suspected infected left hydronephrosis, a double J-stent placement was attempted, at which the left ureteroileal anastomosis could not be found cystoscopically. In regard of the good general condition of the patient and to not risk superinfection of the hematoma, we withdrew from a percutaneous nephrostomy. Finally, follow-up imaging showed a regression of the SCH while laboratory parameters stabilized. After catheter removal and suspension of antibiotics the patient left the hospital in good condition after two weeks.

Discussion: SCH can present with Lenk's triad: acute flank pain, palpable mass and hemorrhagic shock [1,2]. In our case the presentation was atypical. First, the infection and flank pain suggested pyelonephritis. Subsequently, the persisting inflammatory syndrome with multiple differential diagnostics - hematoma itself, superinfection, obstructive pyelonephritis, pneumonia - complicated the management. Luckily, the conservative treatment was successful, otherwise a nephrectomy [3] would have been inevitable.

Conclusion: Despite being a rare condition, SCH may be life-threatening and should be recognized promptly for patient adapted management – be it conservatively, minimally invasive with angiographic embolisation or nephrectomy as ultima ratio.



## P085

### Reninoma: A Case of a Small Renal Mass Removed with Robotic-Assisted Surgery

J Engesser

#### Introduction

Juxtaglomerular cell tumors, also known as reninomas, are rare kidney tumors that usually present at a young age with symptoms of secondary hyperaldosteronism. Reninomas secrete an excessive amount of renin, which causes secondary hyperaldosteronism and consequently hypertension. Due to its rarity, the time it takes to reach a confirmed diagnosis is often extended. So far open or laparoscopic surgical removal is the treatment of choice and is considered curative in the overwhelming majority of cases. We report the second case of robotic-assisted partial nephrectomy for a reninoma.

#### Case presentation

A 32-year-old woman was referred by her general practitioner to our urology department for the surgical removal of a small renal mass. Her medical history was remarkable for hypertension first diagnosed at 22 years of age, which was medically well controlled. Magnetic resonance imaging (MRI) revealed a small renal mass of 8x9 mm in size in her left kidney. The laboratory findings demonstrated adequate renal function and the potassium levels were normal.

Robotic-assisted resection of the tumor in the left kidney was performed using the da Vinci Xi Robotic Surgical System® by Intuitive Surgical®. The robot trocars are placed in a linear fashion on the lateral border of the musculus rectus abdominis (Fig 2). Due to the easy abdominal entry and exploration of the tumor, we decided to use of just 3 robot trocars. Iatrogenic ischemia of the kidney was not necessary. The total blood loss was minimal (90 ml) and the procedure was completed in 1 hour and 47 minutes. The patient's convalescence was without complications, blood pressure returned promptly to normotensive values.

#### Histological findings

X

Robotic-assisted partial nephrectomy was feasible and safe in this patient suspecting a juxtaglomerular cell tumor of the kidney. Open or laparoscopic resection are the current standard of care. Due to the procedure's advantages, a robotic-assisted approach may be considered as a favorable alternative in selected patients.



## P086

### **Nephrocolic Fistula Following Laparoscopic Robot-Assisted Partial Nephrectomy In A 73-Year-Old Female Patient: A Case Report**

A Rybarikova; A Nagy; C Padevit; B Förster; H John; Y Heiniger  
Kantonsspital Winterthur

Title:

Nephrocolic Fistula Following Laparoscopic Robot-Assisted Partial Nephrectomy In A 73-Year-Old Female Patient: A Case Report

Introduction:

Nephrocolic fistula is a rare condition characterized by an abnormal communication between the kidney and the colon. Herein, we present a case of nephrocolic fistula in a 73-year-old female patient along with its clinical presentation, diagnosis, and management.

Case report:

A 73-year-old female patient presented for her yearly follow-up, five years after undergoing laparoscopic robot-assisted partial nephrectomy on the left side due to renal cell carcinoma. She reported recent urinary tract infection and complained of pain in her left flank. A renal ultrasound initially indicated signs of kidney stones, prompting an abdominal CT scan. The CT scan revealed radiopaque calcifications in the left renal pelvis, interpreted as nephrolithiasis. It also revealed the presence of a nephrocolic fistula on the left side. Laboratory investigations showed a normal renal function and no signs of urinary infection in the urine analysis. A retrograde ureteropyelography confirmed the presence of a nephrocolic fistula. Subsequently, a double J ureteral catheter was inserted, and the patient was referred to our gastroenterologist. A colonoscopy was performed, and the fistula's distal opening was closed with a clip. During the secondary ureterorenoscopy, the proximal fistula's opening could not be visualized. Furthermore, a migrated calcified Hem-o-lok clip (Weck Hem-o-lok Large non-absorbable polymer ligating clip) instead of a renal stone was discovered in the renal pelvis. The clip could not be lasered or removed entirely. Postoperatively, the patient developed a perirenal hematoma that could be managed conservatively. For the extraction of the Hem-o-lok clip, a percutaneous extraction by PNL- shaft is planned.

Discussion:

Nephrocolic fistula is a rare condition, primarily associated with previous renal surgery, chronic/recurrent kidney infections, or inflammatory conditions. Diagnosis can be challenging and often requires a combination of imaging modalities. Referral to a gastroenterologist and the interdisciplinary discussion of the case are essential. Treatment options include conservative management with antibiotics or surgical intervention, depending on the severity of symptoms and the extent of the fistula. The surgical options range from endourological and gastroenterological procedure to abdominal interventions.



## P087

### Rare Metastases from a renal clear cell carcinoma (RCCC) in the gallbladder and Pancreas: a case report

BL Follah Feudjio; C Buchwald; A Müller

Uroviva Spital Limmattal

**Objective:** Staging examinations in suspected tumor constellations should always looking for the unexpected. We report a rare case of gallbladder and pancreatic metastasis of a RCCC.

**Methods:** An absolutely healthy 70 y old, never smoking woman presented the first time with painless gross haematuria in September 2022. The cystoscopy and cytology were negative. Due to a suspicious ultrasound the CT-Scan showed a central tumor (7 by 7 cm) on the right kidney. The radiological report stated no obvious hint for metastasis or suspicious lymph-nodes. After the radical nephrectomy the histological result revealed a RCCC pT2a, Grad 2, R0.

The initial CT-Scan also showed a 27 mm, in the native scan non-visible, contrast-media enhancing formation in the gallbladder and a 12 mm like a diverticulum looking formation in the pancreas. The MRI confirmed these observations reporting it as a tumor or suspected metastases. After presenting the case at our multidisciplinary tumor-conference the suggested cholecystectomy and the biopsy of the pancreatic lesion was performed.

**Results:** The histological result of the gallbladder confirmed metastases (18 and 37 mm) of the RCCC. The histology of a cystic hepatic lesion segment V was a benign cyst (9mm). An endo-echographic guided biopsy of the pancreatic lesion was inconclusive due to the poor quality of the sample. The CT-scan based 3 month follow up showed a progression of the pancreatic lesion and also a new second lesion (7mm) in the pancreas head. After radiation of these two lesions the CT-scan follow up displayed a regression. Unfortunately, 3 new pancreas metastases appeared. However, these new lesions remained constant during the current follow-up CT scans. With no therapeutics at the moment the patient enjoys currently a good quality of life while further scans are scheduled for follow up.

**Conclusion:**

Rare locations of metastases in the staging of renal carcinoma, as in ours case RCCC metastases to the gallbladder and pancreas need to be considered. A multidisciplinary view to the tumor constellation needs always be provided at the multidisciplinary tumor-conference.



## P088

### Fallbericht: Fulminante Sepsis bei Hufeisenniere, funktioneller Einnierigkeit, Doppelnieren und Ureter fissus

J Aebi<sup>1</sup>; L Wernli<sup>2</sup>; S Subotic<sup>2</sup>

1 Kantonsspital Baselland; 2 Kantonsspital Baselland

#### Hintergrund

Hufeisennieren sind die häufigsten kongenitalen Anomalien der Nieren (1,2) und haben eine Prävalenz von ca. 1:400 (2). Etwa ein Drittel der Betroffenen haben neben einer Hufeisenniere auch andere kongenitale Anomalien der Nieren und ableitenden Harnwege (1). Harnleiterduplikationen, zu denen auch der Ureter fissus zählt, sind mit einer Prävalenz von etwa 1:150 ebenfalls häufig (2). Die Kombination der beiden ist jedoch selten und nur wenige Fälle wurden in der Literatur beschrieben (1,3). In der Literaturrecherche konnte kein Fall mit dieser Konstellation und fulminantem septischen Infekt gefunden werden.

#### Fallpräsentation

Ein 58-jähriger Patient stellte sich 2023 mit Fieber und Oberbauchschmerzen rechts auf der Notfallstation des Kantonsspitals Baselland vor. Es wurde eine CT-Abdomen durchgeführt, wo initial eine 15 cm grosse kortikale Nierenzyste rechts mit kontrastmittelaufnehmender Wandverdickung, der V.a. eine linksseitige Einnierigkeit und ein Ureter fissus beschrieben wurde. Bei V.a. eine infizierte Nierenzyste wurde diese durch die Urologie in Lokalanästhesie punktiert und eine Nephrostomie zur Drainage eingelegt. Es entleerten sich mehrere Deziliter Pus und der Patient musste kreislaufinstabil auf die Intensivstation verlegt werden. Zur weiteren Abklärung der unklaren Anatomie und vor allem zur Unterscheidung zwischen einer Nierenzyste und einem dilatierten Nierenbeckenkelchsystem rechts erfolgte eine Zystoskopie mit retrograder Ureteropyelographie. Tatsächlich konnte ein sackartig verändertes Nierenbeckenkelchsystem rechts bestätigt werden. Somit handelte es sich um eine Hufeisenniere mit einem funktionslosen sackartig erweiterten Anteil rechts, einem einfachen Ureter rechts und einem gut funktionierenden linken Anteil mit Doppelnieren und Ureter fissus. Die initial als infizierte Nierenzyste gewertete Raumforderung war also das mit Pus gefüllte Pyelon rechts. Im weiteren Verlauf erfolgte die Entfernung des rechtsseitigen, funktionslosen Anteils der Hufeisenniere mittels einer Da Vinci-assistierten Nephrektomie.

#### Schlussfolgerung

In dieser Fallvorstellung zeigt sich eine aussergewöhnliche und seltene Konstellation von kongenitalen Anomalien der Nieren und ableitenden Harnwege. Zusammengefasst handelt es sich um eine Hufeisenniere mit funktioneller Einnierigkeit, einseitiger Doppelnierenanlage mit Ureter fissus und fulminanter Sepsis bei aufsteigender Pyelonephritis. Therapeutisch gelang eine erfolgreiche operative Therapie.



## P089

### Everolimus for the treatment of angiomyolipoma (AML) in a female patient with tuberous sclerosis complex (TSC) – a case report

D Franke; M Karrer; N Schmid; T Schachtner; C Poyet; F Schmid

USZ UniversitätsSpital Zürich

#### Background

AMLs are benign tumors of the kidney and common in patients with TSC. Serious complications of AMLs include renal dysfunction and acute hemorrhage. TSC is an autosomal dominant multisystem genetic disorder. It is characterized by the growth of benign tumors such as hamartomas in various organs. In TSC patients, inhibition of the mTOR complex is deactivated, leading to uncontrolled cell growth, proliferation and increased risk for malignancies. Everolimus as mTOR-inhibitor may reduce the size of AML and thus potentially reduce the risk of complications.

#### Materials & methods

A 35-year-old female patient with TSC and bilateral AMLs was referred to our hospital in 01/2023 after three episodes of renal bleeding. MRI showed bilateral AMLs (largest lesions 82x94x54mm, 53x32x51mm), a lesion suspicious of RCC (14x11mm), a Bosniak IV, IIF and bilateral I-II cysts. The interdisciplinary tumor board suggested:

- 1) growth observation of the suspicious RCC lesion
- 2) regular follow-up with renal MRI
- 3) embolization of largest AMLs in case of acute hemorrhage
- 4) trial of a medical therapy with Everolimus
- 5) omit surgery whenever possible to pursue a nephron-sparing strategy.

Following these recommendations, we started a trial of oral Everolimus to reduce the size of the AMLs and therefore the risk for complications.

#### Results

After 9 months of treatment with Everolimus, MRI showed a relevant volume reduction of the two largest AMLs by 49% (81x37x37mm) and 57% (48x24x32mm). The RCC lesion, the Bosniak IIF cyst and the multiple small bilateral AMLs remained stable. The previously classified Bosniak IV cyst was downgraded to a small AML. Patient-reported adverse events included amenorrhea and acne-like skin lesions. A dose reduction of Everolimus 7.5mg/d to 7mg/d was initiated to address these side effects.

#### Discussion & Conclusion

The results of this case report are consistent with those of the few published studies that have evaluated the efficacy and side effects of oral Everolimus in the treatment of large AMLs. Common side effects include stomatitis, upper respiratory tract infections, acne-like skin lesions, fatigue, gastrointestinal distress and amenorrhea. Dose reduction may ameliorate such side effects. Quality of life during therapy can be severely affected and may lead to discontinuation of therapy with the risk of AML regrowth. The choice of therapy should be carefully considered in a shared decision-making. Lifelong follow-up is required in TSC patients



## P090

### Case report: A ureter that is too narrow

M Parisi

EHC Hôpital de Morges

#### Introduction & Objectives

The human ureters normally present 3 narrow points along their path: the UPJ, the common iliac artery bifurcation, and the UVJ. In some patients, the passage of endoscopic instruments up the ureter can be difficult due to narrow ureteral lumen.

#### Materials & Methods / Case description

We report the case of a 78-year old woman, without relevant medical therapy, admitted to the Emergency department with severe LUTS and a single episode of macroscopic haematuria, associated lumbar pain, fever and systemic symptoms. Urological medical history was inconspicuous. The initial workup consisted of blood tests showing mild leucocytosis 11.1 G/L; normal serum creatinine 62 umol/L; CRP 8.8 mg/L; urine stix with Hb +++. The urine culture was negative. A CT of the abdomen found multiple right kidney stones and right ureteral stones. A right retrograde ureteropyelography (UPR) confirmed the lithiasic obstacle with associated peri-ureteral contrast extravasation at lumbar level (L3-L4). Multiple attempts failed to reach the pyelic cavity with a hydrophilic guidewire. A rigid ureteroscopy (URS) was then performed, and a perforation of the ureter at the mentioned level was found with no clear visualization of the ureteral lumen. The decision to interrupt the endoscopic procedure and perform renal drainage by placing a right nephrostomy was taken. Four weeks later, the patient was treated with a percutaneous mini-nephrolithotomy of the right kidney and a ureteral stent was placed with an antegrade approach. One month later, the patient was treated endoscopically. A UPR showed absence of contrast extravasation; a rigid and flexible URS showed integrity of the ureter and allowed to fragment and extract the ureteral stones. The patient was discharged from the hospital stone-free with a ureteral stent in place which was removed 4 weeks later. The follow-up in outpatient setting showed a clinical and echographical favorable evolution.

#### Conclusions

All endoscopic procedures on the urinary system, including routine ones like JJ-stent placing, can prove very challenging as anatomical strictures (natural and acquired) or foreign bodies can transform standard operations into real urological nightmares requiring advanced surgical skills and multiple operations. The surgical and clinical management of these patients remains challenging.





## P091

### Misleading CT-Urography and 99mTc-MAG3 renal scintigraphy findings in a patient with ventral ureteropelvic junctions: A case report

PL de Zwart; RT Strebel; K Ahmadi; J Birzele

Kantonsspital Graubünden

#### Background:

CT-Urography and 99mTc-MAG3 renal scintigraphy are often used to draw conclusions about the presence and clinical relevance of upper urinary tract obstruction. This case report illustrates a rare pitfall of these techniques, leading to a false diagnosis of urinary obstruction with substantial clinical consequences.

#### Case description:

A 51-year-old male without any urological or other relevant medical history was referred to a urologist because of an accidental finding of ectasia of both renal pelves in an ultrasound examination. The patient had no symptoms. His serum creatinine and urinalysis were normal. A CT Urogram revealed a lack of intra-ureteric contrast agent on both sides during the urographic phase, deemed as a subpelvic obstruction on both sides. Both extrarenal pelves showed a slight ectasia. The renal calyces were not dilated.

Consequently, a 99mTc-MAG3 renal scintigraphy was performed, showing delayed tracer decumulation in the right renal pelvis and continued tracer accumulation in the left renal pelvis for the full duration of the study. The left kidney function represented only 36% of the total. Thus, the scintigraphy generated the suspicion of an ureteropelvic junction obstruction on both sides, with clinical relevance on the left side. A ureteral stent was placed on the left side and renal scintigraphy was repeated 6 weeks after stent placement. Surprisingly, the scintigraphic findings did not change. After thoroughly reevaluating the CT, it was noted that the ureteropelvic junctions were very ventrally located, possibly leading to a slower expulsion of contrast agent and radiotracer into the ureter in a supine position. The scintigraphy was repeated in a sitting position. Now, no obstruction of urinary flow was observed on either side, even after removal of the ureteral stent. Two years later, the patient remained free of symptoms and with a normal creatinine.

#### Conclusion:

This case shows that a ventrally located ureteropelvic junction can lead to scintigraphic findings resembling an ureteropelvic junction obstruction, if it is performed in a supine position. To our knowledge, this is the first report of such misinterpretation in the literature.

This case report illustrates the importance of understanding limitations of CT-Urography and scintigraphy in the diagnosis of urinary obstruction. Not understanding these limitations can lead to unnecessary interventions, substantial patient risk and increased health care costs.



## P092

### Unexpected findings in percutaneous pyelolithotomy following robotic pyeloplasty. A case report

D Jonusaite; C Callauch; G Müllhaupt; L Nowak

Department of Urology, Spital Thun, Thun, Switzerland

#### Background and aim

Robotic-assisted pyeloplasty has become a treatment of choice for managing ureteropelvic junction obstruction, offering minimal invasiveness and favorable outcomes. With the growing preference for minimal access in urological operations, the use of Hem-o-Lok clips (HOLC) has also risen [1]. These non-absorbable clips are being widely used for vessel pedicles or suture stabilisation [2]. It is important to acknowledge, that in very rare cases these clips can start migrating into the collecting system and cause serious complications, necessitating further intervention. We aim to raise awareness among urologists about this rare but possible complication after robotic pyeloplasty, typically observed years after the initial surgery.

#### Case report

A 56-year-old female was admitted to our outpatient department after an incidental finding of a concrement of the renal pelvis (measuring 18 x 13 x 11 mm) on CT examination. Clinically, the patient did not present with any flank pain, fever or gross haematuria. Regarding the urological history, the patient underwent a DaVinci-assisted pyeloplasty of the right kidney nine years prior. Apart from a slight persistent microscopic haematuria, she was asymptomatic and the regular follow-up examinations revealed no renal functional disorders. A percutaneous nephrolithotomy (PNL) was performed to address the renal concrement, intraoperative findings were recorded.

During the surgery, unexpected findings revealed the presence of a concrement formed around a HOLC, serving as a nidus for its formation. This observation highlights the slow migration process of a foreign body into the renal pelvis following the robotic pyeloplasty, ultimately resulting in stone formation.

#### Conclusion

A HOLC migration into the renal collecting system, leading to a slow concrement formation is a very rare complication after DaVinci-assisted pyeloplasty with only two cases published so far [2,3]. Before performing this or other surgeries, where HOLCs are being used close to the collecting system, urologists should be aware of this rare but possible complication. We advise to use clips closely to the renal pelvis with caution.



## P093

### **Expect the unexpected: a case report of an asymptomatic complete renal artery thrombosis in grade IV renal trauma**

S Narimani; P Bohner; F Bacchetta; I Lucca

CHUV Lausanne University Hospital and University of Lausanne

#### Context

While the presence of active bleeding in renal trauma is a common finding, a thrombosis of the main renal artery in high grade renal trauma is rare. Patients often present little to no urinary symptoms and creatinine levels can be normal. This represents a diagnostic challenge with serious consequences if missed.

#### Patient

A 48 year old woman consulted the emergency department approximately one hour after an electric assisted bicycle accident at relatively high speed with a fall on her left body side and on the handlebar. She had multiple injuries including facial wounds, a left scapula fracture and multiple metacarpal fractures. As the liver tests were elevated, contrast enhanced head and thoraco-abdominal computed tomography was performed. A laceration of the left main renal artery was found with occlusion and nearly-complete devascularization of the left kidney, corresponding to a grade IV renal injury according to the AAST renal injury grading scale. No massive bleeding was found and no urinary symptoms were reported.

#### Results

In spite of a renal ischemia time of nearly five hours, an emergency revascularization was performed. Double stenting of the left main renal artery resulted in a successful recanalisation of the upper and middle poles of the kidney. No complications occurred in the short term follow-up.

#### Conclusion

In this polytrauma case, the identified renal trauma was at the same time rare and asymptomatic, resulting in a low clinical suspicion during the immediate care. As renal trauma is present in 5 % of all trauma cases and the consequences of unidentified high grade injury can be severe, kidney imaging should also be considered in asymptomatic patients to exclude vessel thrombosis.



## P094

### Case report: Sammelrohrkarzinom – eine seltene Form des Nierenzellkarzinoms

M Wengi; J Klein; TRW Herrmann

STGAG Kantonsspital Münsterlingen

Beim Sammelrohrkarzinom (ehemals Ductus-Bellini-Karzinom) handelt es sich um eine seltene und aggressive Form des Nierenzellkarzinoms. Es entsteht aus den Epithelzellen des distalen Tubulussystems der Niere und macht weniger als 3 % der Nierenzellkarzinome aus. Betroffen sind meist Männer in der 5. und 6. Lebensdekade. Bei Erstdiagnose liegt häufig ein lokal fortgeschrittenes oder metastasiertes Krankheitsstadium vor. Wir berichten über einen 71-jährigen Patienten mit lokal fortgeschrittenem und metastasiertem Nierentumor, bei welchem wir diese seltene Form des Nierenzellkarzinoms im Rahmen einer palliativen Tumornephrektomie histopathologisch feststellten. Bei vorwiegend sarkomatöser Komponente wurde eine palliative Immuntherapie mit den Checkpointinhibitoren Ipilimumab und Nivolumab etabliert. Nach 3 Zyklen zeigte sich im CT-Thorax/Abdomen ein gutes Therapieansprechen mit grössenregredienten Lungen- und Lebermetastasen.



## P095

### Reconstructive Robot-Assisted Upper Tract Surgery: A New Challenge in the Era of Advanced Endoscopic Interventions

F Vaccaro<sup>1</sup>; O Windisch<sup>2</sup>; D Benamran<sup>2</sup>; P Sèbe<sup>2</sup>; M Valerio<sup>2</sup>

1 Hôpitaux Universitaires de Genève (HUG); 2 HUG - Hôpitaux Universitaires de Genève

#### Objective

Robot-assisted reconstructive surgery is increasingly proposed to patients following upper tract injuries. Ureteral trauma can lead to fibrotic strictures that often require a different management than common benign conditions.

#### Methods

We present a case of a 31-year-old woman who suffered a grade 4 right kidney trauma resulting in leakage at the ureteropelvic junction. After ureteric stenting, the evolution was reassuring, and the stent was removed after 2 months. 15 months later, the patient developed a 2cm ureteropelvic junction stricture with a 4 mm kidney stone. Initial management involved laser incision and dilatation up to 18 French, followed by stone removal. Due to stricture recurrence, we opted for robot-assisted reconstructive surgery.

The patient is positioned in a left lateral decubitus. Robot trocars are placed according to the standard configuration along the right midclavicular line, with a 12 mm Airseal port at the umbilicus.

This technique comprises three stages: 1) The traditional transperitoneal approach to the right kidney is performed and the pyeloureteral junction is identified.

Simultaneously, precise identification of the distal limit of the stricture is achieved using a flexible ureteroscope. After FireFly assessment of perfusion, the stricture is anteriorly incised using cold scissors, allowing easy passage of the ureteroscope to the kidney.

2) Approximately 4x2 cm of buccal mucosa is harvested from the left cheek using standard techniques, 1 cm from the Stensen's duct, with initial dissection by injection. The buccal mucosa is de-fatted and introduced into the abdomen through a trocar.

3) The buccal mucosa is anteriorly sutured with two Vicryl 4.0 sutures, and a 7/26 JJ stent is placed under direct vision. A vascularized Gerota flap (confirmed with Firefly) is released and positioned to cover the buccal mucosa graft alongside the anastomosis.

#### Results

The total operative time was 222 minutes. No perioperative complications were recorded. The JJ stent was removed at 6 weeks after a retrograde opacification demonstrated patent reconstruction with residual dilatation. Renal scintigraphy after 3 months showed no significant obstruction.

#### Conclusion

It is crucial to raise awareness that these situations require reconstructive interventions tailored to individual patients. The video will encompass full imaging from the initial trauma to follow-up as well as complete videos of the laser incision and robot-assisted surgery.



## P096

### **Können die aktuellen ICS-Empfehlungen und Terminologie vorbehaltlos zur Durchführung von Video-Urodynamiken bei orthotopen Ersatzblasen angewendet werden? Eine Fallserie**

K Böhler<sup>1</sup>; P Kraft<sup>2</sup>; G Frölicher<sup>3</sup>; F Obrecht<sup>4</sup>; C Schregel<sup>2</sup>; B Förster<sup>4</sup>; H John<sup>2</sup>; J Tornic<sup>5</sup><sup>1</sup> Klinik für Urologie Kantonsspital Winterthur; <sup>2</sup> Kantonsspital Winterthur KSW; <sup>3</sup> Kantonsspital Winterthur; <sup>4</sup> Kantonsspital Winterthur; <sup>5</sup> Kantonsspital Winterthur  
Hintergrund und Ziele

Nach Anlage einer orthotopen Ersatzblase (oEB) zur Harnableitung, ist eine Veränderung der Wahrnehmung der Blasenfüllung zu erwarten. Die Entleerung kann somit nach individuellem Empfinden oder nach einem festen Zeitplan erfolgen. In der Regel weichen, die von den Patienten geschilderten Empfindungen von den definierten Standardempfindungsparametern der International Continence Society (ICS) ab. Das Auftreten eines uretero-renalen Reflux (URR) hängt – analog zur nativen Harnblase – von anatomischen sowie physikalischen Faktoren ab. Mit dieser Studie wollten wir die verschiedenen Wahrnehmungen der oEB sowie deren Zusammenhang mit dem Auftreten eines URR beleuchten.

#### Material und Methoden

In dieser Fallserie wurden insgesamt 18 Männer und 2 Frauen nach radikaler Zystektomie mit Anlage einer oEB zwischen 2015 und 2022 berücksichtigt. Die Studienteilnehmer führten ein Blasentagebuch. Eine Video-Urodynamik wurde nach ICS-Standard durchgeführt. Vor der Untersuchung wurden die Blasenentleerungsgewohnheiten sowie die individuelle Sensorik der oEB mittels Interview erfasst und mit Angaben im Blasentagebuch verglichen. Die ICS-Terminologie der Füllzystometrie wurde anhand der individuellen Empfindungsqualitäten modifiziert.

#### Resultate

Während des Interviews gaben 19/20 Patienten an, die Blasenentleerung aufgrund eines spezifischen und individuellen Gefühls einzuleiten. Alle Patienten berichteten von einem veränderten Blasengefühl während der Speicherphase seit der Operation. Die Blasenentleerung wurde nach folgenden Empfindungen eingeleitet: Drang 84 % (16/19), Druck im Unterbauch 73% (14/19), Spannung 10% (2/19), Schmerz 5% (1/19), undefinierbare abdominale sowie genitale Sensation in jeweils 16% (3/19) und Geschmacksveränderungen 5% (1/19).

Ein URR trat bei 75% (15/20) der Patienten auf, bei denen in 80% (12/15) eine spezifische Empfindung beim Auftreten des URR dokumentiert werden konnte.

#### Schlussfolgerung

Patienten mit orthotoper Ersatzblase nach Zystektomie orientieren sich häufig nach individuellen Empfindungen um den Zeitpunkt für die Blasenentleerung zu bestimmen. Daher sind die ICS-Definitionen der Sensorik während der Füllzystometrie nur unzureichend anwendbar.

Aus diesem Grunde ist die Erarbeitung standardisierter Empfehlungen zur Durchführung urodynamischer Untersuchungen bei orthotoper Ersatzblase inklusive Anpassung der Terminologie notwendig, um die Qualität von Forschung und Patientenversorgung zu verbessern.



## P097

### Case report : a rare case of cutaneous metastases from urothelial carcinoma of the bladder

Mahjoub

Cutaneous metastasis from solid tumors are a rare secondary site with an incidence ranging from 0.2% to 10.4%. Cutaneous metastases from genitourinary cancers are even rarer, occurring in 1.1% to 2.5% of cases, with renal tumors being the most common primary tumor. Cutaneous metastases from urothelial carcinoma of the bladder are a rare clinical entity with a poor prognosis.

#### Case Presentation:

Based on this observation, we report the case of a patient who developed cutaneous metastases one year after diagnosis of bladder urothelial carcinoma, in whom surgery was recommended but the patient refused.

We reported the case of a patient aged 65 years, a chronic smoker at 50 pack of cigarettes per year who was initially admitted to surgery department for anemia on clotting total hematuria. The patient received in October 2022 an incomplete transurethral resection objectifying a large tumor wide implantation base whose pathological study has concluded to be urothelial carcinoma infiltrating muscle classified as high grade pT2.

An extension assessment consisting of a thoraco-abdominopelvic CT was performed and showed no metastasis, it was proposed for a radical cysto prostatectomy but refused by the patient.

This patient was lost from sight before presenting himself 1 year later to the consultation of urology after the alteration of its general state and the appearance of multiple subcutaneous nodes at the thoracic and axillary level. The clinical examination noted multiple subcutaneous masses and nodules pigmented with finely squamous surfaces at the armpit and thorax.

#### Conclusion :

We reported a rare case of skin metastases that occurred one year after the initial diagnosis of urothelial carcinoma of the bladder. Therefore, in patients with a history of urothelial carcinoma, the diagnosis of cutaneous metastases should be considered in the presence of skin lesions. Therefore, every doctor, oncologist or urologist must be alert to this rare clinical manifestation and even inform the patient for early diagnosis and the best chance of treatment.



## P098

### Intravesikale Bildung von austamponierender Biomatrix bei transurethraler Dauerkatheterversorgung und rezidivierenden Harnwegsinfektionen – ein Fallbericht

CK Mayer<sup>1</sup>; L Peter<sup>1</sup>; K Rohrman<sup>1</sup>; J Klein<sup>2</sup>; TRW Herrmann<sup>2</sup>

1 Kantonsspital Frauenfeld; 2 Spital Thurgau AG

#### Hintergrund:

Katheterassoziierte Harnwegsinfekte sind die häufigsten nosokomialen Infektionen. Die erschwerte Therapierbarkeit aufgrund von Resistenzen und das hohe Rezidivrisiko ist unter anderem durch die Bildung von Biofilm an der Katheteroberfläche bedingt.

Die Bildung von soliden, mikrobiellen Formationen im Urogenitalbereich als seltene Komplikation bei Candidurie in immunsupprimierten Patienten im Sinne von Candida-Bezoaren ist bereits bekannt. Jedoch ist die Bildung einer soliden Biomatrix mit Austamponierung der Harnblase laut unserer Literaturrecherche bisher unbeschrieben.

#### Material/Methode:

In dieser Kasuistik stellen wir den Fall einer 81-jährigen Patientin, die nach mehrfachen cerebrovaskulären Insulten und Harnverhalten mit transurethralem Dauerkatheter versorgt war. Sie entwickelte im Verlauf rezidivierende hämorrhagische Zystitiden. Im Rahmen einer Hospitalisation zeigte die Patientin ausgeprägte suprapubische Schmerzen, prolongierte Makrohämaturie und eine Hydronephrose beidseits. In der Zystoskopie zeigte sich eine austamponierende, solide Matrix (ca. 100ml) in der Harnblase, welche transurethral evakuiert wurde. Im postoperativen Verlauf kam es zu einer raschen Beschwerderegredienz. Bis zum jetzigen Zeitpunkt (circa zwei Monate postinterventionell) wurde die Patientin nicht erneut hospitalisiert und eine zystoskopische Verlaufskontrolle ist zeitnah geplant.

#### Resultate:

Laut pathologischer Beurteilung handelte es sich bei dem aus der Harnblase evakuierten Material um Bakterien und Fibrin, am ehesten im Sinne eines Biofilms.

#### Schlussfolgerungen:

Wir berichten über die Bildung einer intravesikalen Biomatrix im Rahmen eines katheterassoziierten Harnwegsinfekts. Bei ausbleibender klinischer Besserung unter testgerechter Therapie und entsprechenden Risikofaktoren sollte eine frühzeitige, diagnostische Zystoskopie in TUR-Bereitschaft erfolgen, da eine operative Evakuierung des Materials die einzig effiziente Therapie ist. Eine mikrobiologische und histologische Untersuchung der Matrix ist indiziert, um Differentialdiagnosen (z.B. Candida-Bezoar oder die selbst- oder fremdinduzierte Instillation von Fremdmaterial über den Katheter) auszuschliessen und eine zielgerichtete Therapie zu einzuleiten.





## P099

### Case report of combined vesicovaginal and ureterovaginal fistulas

S Lautenschlager; Y Heiniger; H John

Kantonsspital Winterthur

**Introduction:** This report delineates the case of a 36-year-old female patient presenting with total urinary incontinence resulting from combined vesicovaginal and ureterovaginal fistulas after multiple abdominal surgeries.

**Background:** Vesicovaginal fistulas are abnormal communications between the bladder and vagina and are mainly associated with previous pelvic surgery and childbirth injury.

**Case report:** A 36-year-old female patient was referred to our tertiary referral centre after several unsuccessful attempts with transvaginal and transabdominal approaches to repair a vesicovaginal fistula after hysterectomy. The patient's medical history revealed multiple abdominal surgeries due to deeply infiltrating endometriosis. Vaginal inspection showed a fistula opening at the left vaginal fornix. Therefore, laparoscopic robot-assisted fistula repair with peritoneal flap interposition was performed. The vesicovaginal fistula remained closed. However, the urinary incontinence surprisingly persisted although at a much lower level.

Subsequent vaginal examination demonstrated another fistula opening at the right vaginal fornix, which upon retrograde contrast enhancement was identified as an ureterovaginal fistula showing the upper urinary tract on the right side. Complete continence was achieved following laparoscopic robot-assisted ureteral reimplantation in Lich-Gregoir technique.

**Conclusion:** This case study elucidates the complexity of diagnosing and treating urogenital fistulas and underscores the importance of meticulous diagnostics, particularly after initial therapeutic failure.



## P100

### **An accidental transvesical perforation by an ilio-iliac crossover bypass tunnelation in a male: a case report**

D Harfmann; B Roth; L Schneidewind

Inselspital - Universitätsspital Bern

Introduction: Iatrogenic injuries most commonly affect the bladder in the urogenital system. Most often in gynecological, obstetric or general surgeries. This case report shows a rare event of intravesical perforation due to a vascular graft surgery.

Case presentation: A 77-year-old male was undergoing an elective surgery in the department of vascular surgery for gluteal claudication stadium IIB due to right common iliac artery occlusion. An ilio-iliac PTFE crossover bypass from right to left side with iliac fenestration and thrombendarterectomy of the left iliac artery was performed, with no reported intraoperative complications. Postoperatively the graft showed adequate perfusion examined by Doppler sonography. The patient developed persistent gross hematuria, so an intraurethral irrigation catheter was inserted. After three days of bladder irrigation, we could not achieve a total clearance. Furthermore, the hemoglobin declined so a transfusion of packed red blood cells was necessary. Surprisingly the patient presented himself at any time without abdominal pain. Meanwhile the urine colour remained clear even days after the bladder irrigation was discontinued. An abdominal Angio-CT Scan was performed where the location of the vascular graft was interpreted as being potentially intravesical because of its caudal region. Ultimately on the ninth postoperative day a cystoscopy was performed in which we inspected the insertion and outlet point of the vascular graft perforation through the superior dome and anterior apex of the bladder. No active bleeding was reported. The patient went through a revision surgery whereas the ilio-iliac bypass was performed via bilateral lumbotomy and of a femoro-femoral bypass was implanted. He left the hospital with a transurethral catheter to be followed up after two weeks for a cystography. The follow-up consultation after cystography and in-office cystoscopy showed healed scar tissue in the affected area. Luckily, he had no signs of hematuria or pain. The patient recovered well and didn't have any difficulties with micturition after removing the urethral catheter.

Conclusion: This case report demonstrates due to the anatomical region of the urinary bladder, that it is the most common urogenital organ affected by iatrogenic injuries. In summary, gross hematuria after abdominal surgery should be taken with caution, since it is a warning symptom for possible bladder injury and early cystoscopy should be considered.



## P101

### Melanose der Harnblase

GL De Giorgi<sup>1</sup>; I Rektori<sup>2</sup>; M Bywater<sup>1</sup>; M Thomas<sup>1</sup>; M Kwiatkowski<sup>1</sup>; S Wyler<sup>1</sup>

1 KSA Aarau; 2 Urologiepraxis Lenzburg

**Hintergrund & Ziele:** Die Melanose der Harnblase stellt eine seltene Erkrankung dar, die durch Ablagerungen von Melanin im Blasen-Urothel und/oder Makrophagen in der Lamina propria gekennzeichnet ist. In der Literatur sind weniger als 25 Fälle beschrieben.

Blasenmelanose äussert sich durch verschiedene Symptome: Harndrang, Dysurie, Inkontinenz, Flanken- oder Leistenschmerzen; Hämaturie; Harnstauung und rezidivierendem HWI. Die Melaninablagerungen verleihen der Blasenschleimhaut ein dunkles, samtiges Erscheinungsbild. Die Pathogenese bleibt unklar. Die Diagnose der Harnblasenmelanose erfordert eine umfassende klinische Bewertung und verschiedene diagnostische Verfahren. Die Zystoskopie, als direkte Inspektion der Harnblase, stellt eine entscheidende Methode dar. Wesentlich ist ein Ausschluss eines malignen Geschehens. Daher erfolgte in allen Fällen eine Resektionsbiopsie mit histologischer Aufarbeitung.

**Material und Methoden:** Wir berichten über eine 62-jährige Patientin, die aufgrund störender Drangbeschwerden und Restharnbildung in einer externen urologischen Praxis sich vorgestellt hat. Die zystoskopische Untersuchung ergab eine ubiquitäre Pigmentierung der Harnblasenschleimhaut, was den Verdacht auf eine Harnblasenmelanose aufkommen liess. Die Patientin wurde in unsere Klinik überwiesen, um eine transurethrale Biopsie durchzuführen.

**Resultate:** Der histopathologische Befund zeigte neben entzündlich veränderte Harnblasenschleimhaut auch eine Schleimhautmelanose ohne Anzeichen von Malignität.

**Schlussfolgerungen:** Aufgrund der Seltenheit der Erkrankung existieren noch keine einheitlichen Leitlinien und weitere Studien zu dieser Entität sind erforderlich. Ausser einer symptomatischen Therapie sind regelmässige zystoskopische Kontrollen unumgänglich. Sollten sich Veränderungen der Melanose zeigen, ist eine erneute Biopsie indiziert, um ein malignes Geschehen, wie z.B. Melanom auszuschliessen.



## P102

### Successful Surgical Revision for a Rare Cause of Bilateral Hydronephrosis after Ileal Bladder Substitution: A Case Study

M Pal<sup>1</sup>; B Roth<sup>2</sup>; N Grilo<sup>1</sup>; I Lucca<sup>1</sup>; F Crettenand<sup>1</sup>

1 CHUV Centre Hospitalier Universitaire Vaudois (CHUV); 2 Department of Urology, Inselspital, University Hospital Bern, University of Bern, Bern, Switzerland

#### Background:

When surgically and oncologically appropriate, a continent orthotopic ileal neobladder is the urinary diversion of choice to preserve body image and avoid urostomy. Early and late onset complications are well known and documented thoroughly in the literature. Late complications such as stricture of the neobladder-urethral anastomosis, hydronephrosis or stone formation can be insidious and therefore rather difficult to address. Endoscopic management is often favored. However, in some cases, a novel open surgical revision is the only option for a long term complication-free follow-up.

Case presentation: We represent the case of a 63 year-old Caucasian patient who underwent a radical cysto-prostatectomy and ileal neobladder urinary diversion for a muscle invasive bladder cancer in 2007. He never presented voiding nor incontinence issues. Fourteen years after the intervention, he was admitted multiple times for repeated pyelonephritis associated with bilateral massive hydronephrosis and deterioration of renal function. The main finding was a severe stricture of the middle part of the tubular afferent segment of the neobladder, a very rare cause of bilateral hydronephrosis following ileal neobladder. The patient underwent endoscopic surgery including resection of a mucosal flap to optimize the voiding of the neobladder and minimal invasive dilatation of the stricture of the afferent ileal segment using the Uromax® balloon (Charrière 30). Early follow up showed promising results at 8 months with reduction of the kidney dilatation and without relapse of infection. Subsequently, he presented recurrent urinary tract infections (UTI), with a chronic contamination of the urinary tract and a worsening kidney dilatation. He underwent open surgical revision, one year after the initial endoscopic treatment. A resection of the stenotic afferent segment and bilateral uretero-ileal anastomosis by the Wallace I technique was performed. The ureters were shortened by approximately 10 cm each. No post-operative complication was documented. At 6-month follow-up, only one UTI occurred, which was treated on an outpatient basis. Additionally, kidney function remained stable.

#### Conclusion:

Stenosis of the ileal afferent segment is a very rare but potentially burdensome late complication following ileal orthotopic bladder substitution. When endoscopic management seems to be inefficient in the long term, open surgical management is feasible by an experienced team.



## P103

### Case report: Recurrence of Gastrointestinal Differentiated Urothelial Carcinoma in the Ileal Neobladder following Radical Cystectomy

Z Belényesi<sup>1</sup>; A Elyan<sup>1</sup>; CA Rentsch<sup>1</sup>; L Bubendorf<sup>2</sup>; K Bausch<sup>1</sup>

1 Universitätsspital Basel, Urologie; 2 Universitätsspital Basel, Pathologie

A 55-year-old patient underwent open cystectomy and neobladder construction for bladder urothelial cancer (UC) in Germany in 2017 (pT1 pN0 R0 and pTis). Five years postoperative, he developed gross hematuria. Positive urinary cytology and CT suggested UTUC in the left renal pelvis, confirmed by histology after an open nephroureterectomy in May 2022 (pT3 pN2 cM0 G3). Adjuvant treatment with Nivolumab was applied for 12 months.

During tumor surveillance, following an unremarkable cystoscopy, negative urinary cytology and CT imaging six months post-surgery, the patient presented in February 2024 with recurrent gross haematuria. Cystoscopy revealed multiple papillary tumors in the neobladder and urinary cytology tested positive for high-grade UC. A transurethral resection was performed along with diagnostic ureterorenoscopy, selective urinary cytology and biopsy of the right renal pelvis.

Histological analysis confirmed a rare entity, revealing a transformation of intestinal epithelial into a non-invasive papillary UC in the neobladder and a carcinoma in situ with an intestinal immunophenotype in the right renal pelvis.

The case was extensively discussed, and two approaches were suggested: I) maximal oncological therapy involving removal of the neobladder and right nephroureterectomy which would be followed by dialysis, or II) ureterocutaneostomy of the right ureter with removal of the neobladder, accompanied by BCG instillation therapy of the UTUC.

We performed an open nephroureterectomy and removal of the neobladder in April 2024. Final histopathological analysis showed: I) non-invasive UC of the neobladder with an adenocarcinoma and urothelial carcinoma in situ and II) invasive UTUC of the renal pelvis with carcinoma in situ (final report pending).

To the best of our knowledge, this is the first reported case of a transformation of tumor from the upper urothelial tract into gastrointestinal differentiation in the neobladder. There are limited reports concerning UC recurrence in bowel segments. We hypothesise that "seed and implantation" occurred, indicating that in the typical urinary tract, papillary tumors from the upper tract often recur in the bladder (15%-50%). Some evidence supports that urothelial tumor cells originating from the renal pelvis are the source of this "seed and implantation". In this specific case, UC recurred in the intestinal mucosa instead of the urothelium, which seems to support the "seed and implantation" theory.



## P104

### Case report Uretero-iliac artery fistula: endoscopic and endovascular approach

C Olivieri<sup>1</sup>; K Rohrmann<sup>1</sup>; J Klein<sup>2</sup>; TR Herrmann<sup>1</sup>

1 Spital Thurgau AG, Kantonsspital Frauenfeld; 2 Spital Thurgau AG, Kantonsspital Münsterlingen

#### Introduction

Uretero-iliac artery fistula is a recognised but uncommon life threatening condition with increasing incidence in the last years.

The presentation is usually massive gross hematuria with acute anemia unto to hemorrhagic shock.

A diagnostic delay is associated with high mortality, thus a high index of suspicion is warranted in patients with predisposing factors.

Angiography and computed tomography scan are gold standard for diagnosis.

Endovascular stenting procedure represents a successful treatment option.

#### Materials and Methods

We present the case of a 61 years old male with history of oncological surgery, pelvic radiotherapy and chronic ureteral stenting for rectum carcinoma. Emergency referral with massive gross hematuria and acute anemia. Significant drop in haemoglobin required four units of transfusions, reaching a hemodynamic control. Whilst transurethral evacuation of the bladder tamponade and change of ureteral stent, we noticed blood ejection from the right ostium, suggesting a bleeding in the upper urinary tract.

Contrast-enhanced computed tomography scan showed intraluminal clots in the right kidney and an uncommon close pathway of the common iliac artery to the right ureter.

During diagnostic ureterorenoscopy a pulse-synchronised protrusion into the ureteral lumen at the level of the iliac vascular junction was highly suspicious for a fistula.

Angiography confirmed the diagnosis, endovascular stenting and coiling of the internal iliac artery were performed.

Oral anticoagulation therapy was reestablished without recurrence of hematuria.

#### Results

We reported a case of a rare and potentially fatal clinical entity, in which early diagnosis and intervention prevented the development of hemorrhagic shock.

After the intervention the indwelling ureteral stent was not substituted by a nephrostomy, but we continued performing the periodic change every three months using a softer stent.

#### Conclusions

The site of fistular communication typically involves the iliac artery and the ureter. Chronic inflammatory changes, extensive fibrosis and eventual necrosis of the ureteric and artery lead to the development of a fistula.

Disease management was endoscopic and endovascular, avoiding overtreatment and delayed diagnosis with open surgery, as often reported in the literature.

Hematuria did not recur despite oral anticoagulation therapy and chronic indwelling ureteric stents requiring repeated exchange.



## P105

### Fallbericht: Ein ungewöhnliches Artefakt in der Video-Urodynamik

K Böhler; D Frauenfelder; H John; J Tornic

Kantonsspital Winterthur KSW

#### Hintergrund und Ziele

Eine 74-jährige Patientin mit Dranginkontinenz wurde mittels Video-Urodynamik auf Harnblasenfunktionsstörungen untersucht. Im Rahmen der Vorabklärungen wurde eine Harnstrahl-, Restharnmessung und eine Blasen Spiegelung durchgeführt, welche allesamt keine Besonderheiten aufwiesen.

#### Material und Methoden

Die Video-Urodynamik wurde nach den Standards der International Continence Society (ICS) durchgeführt. Dabei erfolgte die Messung in sitzender Position mittels Wasser-Perfusionssystem.

#### Resultate

Im Rahmen der ersten Füllzystometrie (Füllgeschwindigkeit 25 mL/min) konnte eine kleinkapazitive und überaktive Harnblase (260 mL) bei normaler Compliance (100 mL/cmH<sub>2</sub>O) mit einer Detrusor-Überaktivitäts-Inkontinenz nachgewiesen werden. Nach kompletter Blasenentleerung liessen sich zu Beginn der zweiten Messung regelmässige repetitive Druckanstiege in der Blasendruck Ableitung (pVes) darstellen. Trotz mehrmaligem Spülen des transurethralen Messkatheters war das Artefakt weiterhin nachweisbar.

Unter der Annahme, dass der Messkatheter korrekt positioniert war und das Artefakt auf einer Detrusorüberaktivität beruhte, wurde die zweite Messung mit einer Füllgeschwindigkeit von 12mL/min begonnen. Der vesikale Druck blieb dabei bis 20mL Füllung konstant und das Artefakt blieb bestehen. Bei weiteren 10mL Füllung, stieg der vesikale Druck abrupt um 70cmH<sub>2</sub>O an. Zeitgleich gab die Patientin plötzlich auftretende Schmerzen in der rechten Flanke an.

Als Sofortmassnahme wurde die Füllung pausiert und eine Durchleuchtung durchgeführt. Dabei zeigte sich eine isolierte Kontrastierung des rechten oberen Harntrakts ohne Darstellung der Harnblase. Die Entleerung des Systems brachte sofortige Linderung der Beschwerden.

Nachdem der Messkatheter vorsichtig um 10cm zurückgezogen wurde, war das Artefakt nicht mehr nachweisbar. Die zweite Füllzystometrie konnte daraufhin ohne Zwischenfälle durchgeführt werden.

#### Schlussfolgerung

Repetitiv auftretende Druckanstiege bei entleerter Harnblase, können – wenn auch als seltenes Phänomen - auf eine Dislokation des Messkatheters in ein Ureterostium hinweisen.

Ungewöhnliche Signale in den Messableitungen der Urodynamik sollen immer hinterfragt werden, da insbesondere bei Patientinnen und Patienten mit vermindertem Empfinden forcierte retrograde Füllungen potenziell zu Folgeschäden am oberen Harntrakt führen können.



## P106

### Case Report: Infected Urachal Cyst in a Patient with Recurring UTIs and Chronic Abdominal Pain

P Oechslin<sup>1</sup>; DM Schmid<sup>2</sup>; F Schmid<sup>2</sup>; R Villani<sup>2</sup>; D Lavrek<sup>2</sup>

1 Universitätsspital Zürich; 2 Universitätsspital Zürich, Klinik für Urologie

#### Case presentation

A 38-year-old female was referred to our hospital due to recurrent urinary tract infections (UTIs), which occurred 2-4 times a year since about 9 years. The patient's medical history included a bladder perforation during a Caesarean section 9 years ago. The symptomatology during the UTI episodes included pollakisuria, dysuria, and midabdominal pain. Gynaecologic and infectiologic work-ups as well as flexible urethrocystoscopy and urine cytology were unremarkable. An initial CT urography excluded kidney stone disease, abscess and malignancy.

Urine cultures repeatedly showed growth of ESBL-producing *E. coli* which were treated in the majority of cases with Nitrofurantoin. Conservative measures (postcoital voiding, D-Mannose, Uro-Vaxom) did not reduce the frequency of UTIs. The patient presented again at our emergency unit 6 months later after initial presentation with symptoms of another UTI, inflammatory markers were elevated. Another CT scan of the abdomen now showed an infected urachal cyst. After treating this latest UTI, the patient was scheduled for robotic assisted laparoscopic excision of the urachal cyst. There were no perioperative complications. At first follow-up five weeks postoperatively, the patient presented again with dysuria und abdominal cramps, which lead to another antibiotic therapy with Nitrofurantoin for suspected UTI. Further follow-up visits at 7, 8 and 11 weeks postoperatively were unremarkable.

#### Conclusion

Urachal anomalies are rare, urachal cysts being the most common entity. The majority of urachal cysts remain asymptomatic until they become infected. A variety of symptoms can be caused by the infected urachal cysts including fever, dysuria, voiding problems, abdominal pain, and umbilical discharge. In adults, the therapy usually is complete surgical resection which can be done in a one-stage or two-stage approach. Robotic assisted laparoscopic excision is a safe and effective method to treat an infected urachal cyst.





## P107

### Verschlussazoospermie bei unilateraler zystischer Alteration der Samenblase und kontralateraler Samenblasenagenesie – Ein Fallbericht

C Wittler; D Engeler; J Rührup

Kantonsspital Sankt Gallen

#### Material und Methoden/ Kasuistik

Der Fallbericht beschreibt die Kasuistik eines Patienten aus der Kinderwunschsprechstunde, der sich zur weiteren Abklärung bei seit 2 Jahren bestehendem unerfülltem Kinderwunsch vorstellte. In der weiterführenden Abklärung zeigt sich ein zystisch dilatiertes Vas deferens links mit ektatischer Samenblase links, sowie eine Samenblasenagenesie rechts.

#### Resultate

Bei dem 29-jährigen gesunden Patienten mit unerfülltem Kinderwunsch zeigte sich in wiederholten Spermioqrammanalysen eine Azoospermie, sowie ein azidotischer pH-Wert von 6.3. Das Volumen des Ejakulates war normwertig. Die Hormonanalyse war unauffällig. Anamnestisch sowie in der mikrobiologischen Untersuchung von Ejakulat und Urin ergab sich kein Hinweis für einen Infekt. Klinisch zeigte sich ein unauffälliger sonographischer Befund der Hoden, die Samenstränge konnten jedoch nicht sicher getastet werden. Im Rahmen der weiterführenden Diagnostik mittels MRT Becken zeigte sich ein zystisch distendiertes Vas deferens links dorsal der Blase sowie eine zystisch dilatierte linke Samenblase. Rechtsseitig war das Vas deferens nicht darstellbar. Die ergänzende radiologische Diagnostik ergab keinen Hinweis auf das Vorliegen eines Zinner-Syndroms.

Eine Testikuläre Spermienextraktion (TESE) wurde durchgeführt, hier konnten reichlich Spermien für eine intrazytoplasmatische Spermieninjektion (ICSI) isoliert werden. Es ergab sich ein Johnson Score von 9. Den azidotischen pH-Wert des Spermas von 6.3 werteten wir im Rahmen der Obstruktion durch die Samenblasenagenesie und den Samenblasenhydrops. Zum Zeitpunkt des Abstracts steht eine weiterführende genetische Analyse inklusive CFTR-Testung noch aus, um mögliche genetische Ursachen für die vorliegende Pathologie zu untersuchen.

#### Schlussfolgerungen

Dieser Fall verdeutlicht die Komplexität männlicher Infertilität und die Notwendigkeit einer umfassenden Diagnostik und Therapieplanung bei Patienten mit anatomischen Anomalien.



## P108

### Fallbericht: Eine diagnostische Herausforderung - Der braune Tumor

N Maier<sup>1</sup>; M Egger<sup>1</sup>; J Blarer<sup>1</sup>; D Abt<sup>1</sup>; R Seiler<sup>2</sup>

1 Spitalzentrum Biel / Centre Hospitalier Bienne, Biel / Bienne, Switzerland; 2  
Departement for BioMedical Research, University of Bern, 1 Spitalzentrum Biel /  
Centre Hospitalier Bienne, Biel / Bienne, Switzerland

Hintergrund und Ziele: Der braune Tumor, auch bekannt als osteitis fibrosa cystica, ist eine seltene Knochenkrankung, charakterisiert durch zystische, osteolytische Knochenläsionen. Ziel der Fallvorstellung ist es, auf die seltene Diagnose aufmerksam zu machen, um Fehldiagnosen zu vermeiden.

Fallbericht: Ein 53-jähriger Patient stellte sich zur Nachsorge sechs Monate nach erfolgter Tumornephrektomie bei zwei Nierenzellkarzinomen (pT1b (m) G3 Intermediate Risk nach Leibovich) vor. Vorbekannt war ein Status nach Morbus Hodgkin, welcher sich nach mehrfacher Chemotherapie und Stammzelltransplantation seit drei Dekaden in kompletter Remission befand. Im durchgeführten CT zeigte sich eine neu aufgetretene, 5 x 2 mm messende, osteolytische Raumforderung des Os Ilium links, mit Kortikalisdestruktion. Bei einer Grössenprogredienz auf 18 x 4 mm im Verlaufs-CT nach drei Monaten wurde die Läsion biopsiert. Die histologische Untersuchung zeigte eine monomorphe und ungerichtete Spindelzellproliferation mit zahlreichen osteoklastischen Riesenzellen. Aufgrund dieses Befundes, bei Verdacht auf einen braunen Tumor bei Hyperparathyreoidismus, wurde von Seiten der Pathologie eine Laborkontrolle empfohlen. Es zeigte sich eine Erhöhung des Parathormons (187 pg/ml, norm: 15 - 68,3) bei normwertigem Calcium. Somit konnte die Diagnose bestätigt werden. Eine endokrinologische Abklärung zeigte sonographisch den Verdacht auf ein Nebenschilddrüsenadenom.

Diskussion: Der braune Tumor tritt bei einer erhöhten Osteoklastenaktivität auf, häufig im Rahmen eines nicht therapierten Hyperparathyreoidismus [1]. Die Behandlung des Hyperparathyreoidismus führt üblicherweise zur vollständigen Rückbildung des Tumors [2]. Differentialdiagnostisch ähnelt der braune Tumor sowohl computertomographisch, als auch histologisch dem semimalignen Riesenzelltumor des Knochens, sodass es häufig zu Fehldiagnosen kommt [3]. Beim semimalignen Riesenzelltumor jedoch ist die Therapie der Wahl die Resektion [4]. Um eine solche zu vermeiden und die richtige Diagnose zu stellen ist ein multidisziplinärer Ansatz mit enger Kommunikation der Fachabteilungen wichtig [5].

Schlussfolgerungen: Insgesamt ist die Diagnose brauner Tumor selten, oft durch einen Hyperparathyreoidismus bedingt und differentialdiagnostisch herausfordernd. Das Wissen um den braunen Tumor ist aus diesem Grund für Urologen wichtig.



## P109

### Robot-assisted Laparoscopic Ureterolysis and Ureteroureterostomy in a Young Patient with Retrocaval Ureter: A Case Report

D Frauenfelder; H John; B Förster

Kantonsspital Winterthur

#### Introduction

Retrocaval ureter, also known as preureteric vena cava, is a rare congenital anomaly where the ureter runs posterior and medial to the vena cava. Typical symptoms include flank or abdominal pain, nephrolithiasis, recurrent pyelonephritis and renal insufficiency. To confirm the diagnosis, CT/MRI-Urography is usually performed. Ureterolysis and pyeloplasty anterior to the vena cava is indicated in symptomatic patients, with or without complications.

#### Case Description

We describe the case of a 30-year-old female patient who underwent open pyeloplasty at the age of eight for ureteropelvic junction obstruction with recurrent pyelonephritis. At 26 years of age, she was referred to our emergency department with acute flank pain. The CT demonstrated a suspected relapsing ureteropelvic junction obstruction. MAG3-szintigraphy showed a normal bilateral renal function. Due to intermittent symptoms, a conservative approach with regular follow-up was chosen, but the patient did not show up. Several months later, she returned with more frequent flank pain episodes. MAG3-szintigraphy showed slight deterioration of renal function with position-dependent relevant ureteropelvic junction obstruction. Retrograde ureteropyelography revealed an S-shaped proximal ureter curved towards the spine with jet-phenomenon at the ureteropelvic junction. A double-J stent was inserted. CT-Urography confirmed the retrocaval position of the ureter. Robot-assisted laparoscopic ureterolysis and pyeloplasty was performed. The double-J stent was removed 2 weeks postoperatively, after which the patient reported resolution of the previous symptoms.

#### Conclusion

This case demonstrates that ureteropelvic junction obstruction can be caused and masked by a retrocaval ureter. Available CT or MRI scans should be reviewed for said condition. Definite therapy combines ureterolysis and pyeloplasty with anastomosis anterior to the vena cava.



## P110

### **CASE REPORT: Ureteral Strictures in Patients Post-Infection with Schistosomiasis: Diagnostic Findings and a Potential Solution Illustrated by a Patient Case.**

D Willi; B Kiss; B Roth

Inselspital - Universitätsspital Bern

#### Background:

Schistosomiasis is a prevalent tropical disease known for its genitourinary complications and is more prevalent in regions where this parasitic infection is endemic, such as parts of Africa, South America, and Asia. In Switzerland, cases are mostly related to travel history or immigration. While bladder involvement is common, ureteral strictures secondary to chronic schistosomiasis are less reported but can be challenging to treat.

#### Aim:

The aim of this poster presentation is to provide insight into ureteral strictures as a complication of chronic schistosomiasis infections and to present important diagnostic imaging, as well as an operational solution based on a recent case of a patient at the Department of Urology at the University Hospital in Bern.

#### Case Description:

A 50-year-old male patient was diagnosed with intermittent urinary outflow disorder of the upper urinary tract on both sides, initially of unknown origin, after experiencing intermittent flank pain since 1996. Urogenital schistosomiasis was found in 2016, followed by treatment with praziquantel. The patient developed clinically significant bilateral long-distance distal ureteral strictures as well as a hypocompliant bladder.

#### Diagnostic Assessment:

Diagnostic ureterorenoscopy and ureteral catheter insertion were performed unilaterally, later changed to percutaneous nephrostomy. Multiple searches for schistosomiasis in the urine were conducted, along with the Whitaker test, CT and MRI diagnostics, as well as urodynamic testing prior to the operation.

#### Interventions and Outcome:

Bladder augmentation with an afferent tubular segment and ureter reimplantation into the proximal afferent tubular segment on both sides were performed with a good result. Chronic kidney disease remains an ongoing problem, with currently no signs of postrenal origin.

#### Conclusion:

While schistosomiasis primarily manifests with genitourinary complications such as bladder involvement, our case underscores the potential for ureteral strictures as a complication of chronic schistosomiasis infection. Our case highlights the importance of considering ureteral strictures in patients from endemic regions presenting with obstructive uropathy. Appropriate management, including diagnostic and surgical interventions, including reconstructive techniques, is paramount for achieving favorable outcomes in these patients.



## P111

### **Reconstruction of the dermal part of the penile shaft with scrotal skin in a lichen sclerosus case affecting more than the penile foreskin and a case of residual lichen sclerosus after circumcision with both patients having pronounced pain during erection**

F Heining<sup>1</sup>; M Hunziker<sup>1</sup>; D Eberli<sup>1</sup>; PJ Daverio<sup>2</sup>; M Wolfensperger<sup>3</sup>; DC Högger<sup>1</sup>  
1 USZ UniversitätsSpital Zürich; 2 Zuger Kantonsspital; 3 Stadtsptal Waid und Triemli

#### Introduction

Lichen sclerosus genitalis is a chronic inflammatory skin disorder that primarily affects the genital and perianal areas. Typical symptoms are pruritus, white chngement of the skin and in severe cases pain with difficulties during sexual intercourse, urination and defecation. The first treatments are often topical and immunosuppressive creams. If this type of therapy is not sufficient, surgical treatment - like a circumcision - can be carried out, as lichen sclerosus is also considered a precancerous condition. But what surgical options remain if there is more than just the penile foreskin affected?

#### Methods

In 2023, there were two cases in our clinic of pronounced lichen sclerosus of the penile skin with painful erections as the main focus in patient 1 (63 y.o.) and patient 2 (70 y.o.). Topical therapy and light therapy did not produce satisfactory results in the case of patient 1, while in the case of patient 2, circumcision had already been done and the penis was retracted.

Both patients underwent reconstruction of the penile shaft by Dr. Daverio, a renowned plastic surgeon, and our team with using scrotal skin. The procedure was performed with excision of all penile lichen sclerosus with initial degloving of the penile shaft and subsequent penile shaft coverage by tunneling under the scrotal skin. This was followed by adaptation of the symphyseal scrotal skin and the wound edges of the scrotal skin on the penile shaft and closure of the scrotal wound.

#### Results

Both operations were performed without surgical complications. The scrotal skin attached nicely to the penis. Patient 1 had an open wound at the base of his penis, which healed per secundam. Plastic revision of the wound was required, because the visual and functional outcome was not entirely satisfactory. Patient 1 and 2 need another operation to improve the dermal expansion of the penis during erection and to improve the form of the scrotum to prevent the testicles from moving over the base of the penis.

#### Conclusion

Lichen sclerosus genitalis can lead to a high level of suffering in affected patients due to progressive scarring of the penile skin. This results in cosmetic and functional limitations. We consider the reconstruction of penile skin by scrotal skin coverage to be a promising surgical option in the event of a lichen sclerosus genitalis that affects more than just the penile foreskin or in patients with painful residual lichen sclerosus after circumcision.



## P112

### Case Report – Uretero-Sciatic Hernia with symptomatic Upper Urinary Tract Obstruction

J Horak<sup>1</sup>; S Bauer<sup>2</sup>; M Schiesser<sup>3</sup>; T Hermanns<sup>2</sup>

1 Klinik Hirslanden Zürich; 2 Zentrum für Urologie Zürich - Klinik Hirslanden; 3 Chirurgisches Zentrum Zürich - Klinik Hirslanden

#### Case presentation

A 68-year-old female patient who suffered from right sided chronic flank pain since almost 6 years was referred to our outpatient clinic for further evaluation. Renal function was not deteriorated.

The initial evaluation with ultrasound showed right-sided hydronephrosis. Computed tomography (CT) imaging suggested an elongated and dilatated right ureter with herniation into the right sciatic foramen. No other pathologies such as enlarged lymph nodes or tumor-suspicious lesions in the upper urinary tract were detectable. Dynamic renal scintigraphy revealed right to left split renal function of 42.5% to 57.5%.

The patient underwent retrograde uretero-pyelography and insertion of a double-J ureteral stent resulting in straightening of the distal ureter. For definitive treatment, robotic ureterolysis of the distal ureter as well as mesh repair of the sciatic foraminal hernia was performed and the double J stent was removed.

Postoperatively the symptoms of upper urinary tract obstruction resolved quickly. Three weeks after the operation, the ultrasound of the right kidney appeared to be normal without hydronephrosis.

#### Conclusion

Ureteral herniation into the sciatic foramen is very rare. Its correction with laparoscopic, robotic ureterolysis and hernia repair is an effective, minimally invasive procedure to resolve the associated upper urinary tract obstruction.



## P113

### Investigating prostate cancer cellular heterogeneity and treatment response at single-cell level

R Parmentier<sup>1</sup>; J Roux<sup>2</sup>; R Dolgos<sup>1</sup>; R Servant<sup>1</sup>; K Mertz<sup>3</sup>; S Svetozar<sup>3</sup>; L Bubendorf<sup>1</sup>; H Seifert<sup>1</sup>; CA Rentsch<sup>1</sup>; C Le Magnen<sup>1</sup>

1 University Hospital Basel; 2 University of Basel; 3 Kanton Baselland Liestal Hospital

Androgen deprivation therapy (ADT) is the mainstay for treatment of advanced castration-sensitive prostate cancer (CSPC); yet most patients eventually relapse and progress to lethal castration-resistant prostate cancer (CRPC). Here we aimed at generating single-cell transcriptomic profiles from advanced CSPC samples and ADT-treated patient-derived organoids (PDOs) to dissect cellular dynamics underlying response to androgen deprivation at single-cell resolution.

Nine radical prostatectomy or metastasis resection specimens obtained from treatment-naïve high-grade CSPC patients were collected and processed into single-cell suspensions. Single-cell RNA sequencing (scRNA-seq) was carried out on six specimens meeting necessary quality criteria. In parallel, four PDO lines were established, characterized using whole exome sequencing, IHC and immunofluorescence, and cultured in androgen-deficient conditions to mimic ADT. Viability assay confirmed treatment efficacy before scRNA-seq was performed with a lipid-based multiplexing strategy (MULTI-seq).

We generated an atlas encompassing the transcriptomic profiles of more than 20 000 cells originating from rare tissue material. While highlighting patient-specific tumor features and integrating cells from the microenvironment, our single-cell atlas also revealed various epithelial subtypes. This included a subset of intermediate cells, referred to as club/hillock cells, which were previously proposed to play a role in tumor progression. Interestingly, these cells were maintained in PDOs derived from non-metastatic tissues, whereas PDOs derived from metastatic ones were exclusively composed of tumor-like cells. Treated organoids demonstrated a significant decrease in viability, thus indicating their sensitivity to ADT and supporting their use as clinically relevant *in vitro* models. Concurrently, scRNA-seq unveiled transcriptional shifts within specific subpopulations of treated PDOs, with notable alterations in pathways such as the Androgen Response Signature. Ongoing analyses aim to determine whether these populations pre-exist in the tumor or if this state is gradually acquired during treatment.

PDOs effectively mirror original prostate tumor characteristics and represent functional castration-sensitive models. By leveraging the generated scRNA-seq atlases and transcriptomic shift analyses, we anticipate identifying castration-tolerant cell populations potentially contributing to tumor heterogeneity and relapse.