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M01
Beyond detrusor pressure: Improving Overactive Bladder Diagnosis with Localized Volume-Based measurements

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Background and aims
In patients reporting overactive bladder (OAB) symptoms, detrusor overactivity (DO) is commonly diagnosed through urodynamic testing, where involuntary, non-voiding bladder contractions (NVBCs) are identified by observing pressure increases during the filling phase. However, up to 30% of these NVBCs remain undetected using standard urodynamic tests [1]. Pressure-volume (PV) catheters, commonly used in cardiovascular research have been proposed as a more sensitive tool for assessing bladder function [2]. This study aims to determine, through computational modelling, whether localized NVBCs can be identified by monitoring localized volume changes using PV-catheters.

Materials and methods
The computational model represented the bladder as a simplified spherical structure with hyper-elastic properties for the wall and the contained urine was modelled as water [3]. NVBCs were simulated by applying a 3 mm displacement to six distinct points on the bladder wall, directing them toward a common center to mimic localized contraction.

Results
The induced NVBCs resulted in localized volume shifts (0.7–1.1 mL) which could be detected using a PV-catheter. This suggests that localized volume measurements may offer a viable method for detecting NVBCs.

Conclusion
To the best or our knowledge, we developed the first fluid-structure interaction (FSI) model of the bladder exhibiting NVBCs. Our FSI simulation suggests that PV-catheters, by capturing localized changes in bladder volume, could be used to i) provide information about the NVBC's location, which could support more targeted treatment strategies for DO (such as localized Botox injections), and ii) detect NVBCs that are missed by standard urodynamic tests.

M02

Current training landscape for novice robotic surgeons (2025 Update): An international investigative survey by the Junior-ERUS/Young Academic Urologists (YAU) Robotics in Urology Working Group

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Introduction

Robotic surgical training is essential for preparing skilled surgeons, but the landscape of available training programs remains unclear. Many institutions offer structured curricula, yet transparency about training modalities, caseloads, and eligibility criteria for novice surgeons is limited. To address this gap, a structured survey was designed to assess robotic education offerings globally.

Patients and methods

A web-based survey was distributed to different robotic societies, institutions and dedicated robotic surgery experts, based on the Junior European Association of Urology Robotic Section (J-ERUS) network and the Young Academic Urologists (YAU) Robotic Section. Furthermore, a peer-esteem snowballing approach allowed the survey to expand its reach through expert referrals. The survey captured information on training modalities, infrastructure, caseload, and case mix. Respondents were required to provide contact details for further follow-up, while their identities and institutions remained confidential.

Results

The survey achieved a 16.5% response rate, with 80 respondents from 49 institutions offering robotic training opportunities. Training platforms included Da Vinci multi-port systems (71%), HUGO-RAS (15%), and Versius (8%). Training methods featured simulators (89%), dual-console training (65%), dry-labs (39%), and wet-labs (16%). Variability in training structures was observed, with 32% of institutions offering

dedicated fellowships and 68% combining training with clinical duties. Institutions varied in case volumes (100-500 cases per year), and 41% indicated performing over 500 robotic procedures annually. Respondents predominantly answered that robotic surgery novices may access about 20% of these cases.

Conclusion

This study highlights the heterogeneity of robotic surgical education and the need for standardized, globally accessible training frameworks. Establishing an international consortium to map training programs and content could enhance transparency and support novice surgeons in selecting institutions that align with their career goals. Emerging robotic platforms and evolving methodologies must also be integrated into curricula to ensure comprehensive and effective training.

M03
Nationwide trends, in-hospital outcomes and mortality of radical cystectomy: an 11-year cohort study

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Background: Radical cystectomy (RC) with urinary diversion remains the standard treatment for muscle-invasive bladder cancer but is associated with significant morbidity and mortality. Over the last two decades, robot-assisted radical cystectomy has gained popularity, becoming increasingly established and widely adopted compared to open cystectomy. However, data on their nationwide implementation and associated outcomes in Switzerland is still lacking. This study aims to evaluate trends and changes in surgical approaches while providing a comprehensive overview of clinical outcomes associated with RC.

Methods: In this nationwide cohort study using Swiss hospital claims data from January 2012 to December 2022, patients with bladder cancer undergoing RC were identified and stratified in open radical cystectomy (ORC) or minimally invasive radical cystectomy (MIRC), including robot assisted surgery. Monthly numbers of interventions were calculated. Outcomes included in-hospital, 6-month and 1-year mortality, intensive care unit (ICU) admission, 30-day readmission, length of hospital stay (LOS), and complications within 3 months. Trends over time were visualized using locally estimated scatterplot smoothing and analyzed with the Jonckheere-Terpstra test for continuous, and the Cochran-Armitage test for binary outcomes.

Results: Among 4,677 patients, the proportion of MIRC increased from 9.5% in 2012 to 35.7% in 2022 (p trend < 0.001), while ORC remained predominant. In-hospital mortality declined overall (2.9%, p trend = 0.004), driven by a decrease in the MIRC group (p trend = 0.005), with no change in ORC. Complications within 3 months were common (65.1%) and increased slightly overall (p trend = 0.02), with similar rates in both ORC (64.7%) and MIRC (66.5%). LOS decreased across all groups (mean 10.8 days, p trend < 0.001). 6-month (6.8%), 1-year mortality (15.7%) as well as 30-day readmission (17.5%) remained stable across groups.

Conclusion: Over the past 11 years, the use of minimally invasive radical cystectomy steadily increased in Switzerland, although open surgery remained the predominant approach. Hospital length of stay declined, while complications increased slightly, likely reflecting greater patient complexity and improved reporting. Morbidity and mortality remained high but stable across techniques. These findings underscore the need for ongoing surgical evaluation and careful patient selection to optimize outcomes in bladder cancer care.

M04

Association Between Treatment Timing and Oncological Outcomes in Muscle-Invasive Bladder Cancer Patients Receiving Neoadjuvant Chemotherapy and Radical Cystectomy

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Introduction: The recommended treatment pathway for muscle-invasive bladder cancer (MIBC) involves transurethral resection of bladder tumor (TURBT), neoadjuvant chemotherapy (NAC), and radical cystectomy (RC). This study investigated time between TURBT, NAC and RC and the association with oncological outcomes.

Materials and Methods: We retrospectively analyzed 613 MIBC patients treated with NAC and RC across 24 centers (2000-2021). We assessed the association between time from TURBT to NAC (TURBT-NAC) and from NAC completion to RC (NAC-RC) on disease-free survival (DFS), overall survival (OS), and cancer-specific survival (CSS) using multivariate Cox regression analyses.

Results: Median patient age was 67 years (IQR 60-74), with 28% females. Median times were: TURBT-NAC 31 days; NAC duration 62 days; NAC-RC 31 days; and TURBT to RC, 137 days. Patients with TURBT-NAC > 8 weeks had shorter 5-years DFS (71% vs. 88%, p = 0.005), OS (60% vs. 68%, p = 0.035), and CSS (68% vs. 85%, p = 0.0084) compared to patients with TURBT-NAC < 8 weeks. Additionally, multivariate Cox analysis showed that NAC-RC > 6 weeks was associated with shorter DFS (HR: 2.52, 95% CI [1.42, 4.47], p = 0.002), OS (HR: 1.62, 95% CI [1.08, 2.43], p = 0.019), and CSS (HR: 1.74, 95% CI [1.02, 2.99], p = 0.042).

Conclusion: Treatment delay between TURBT, NAC and RC sequence significantly impair oncological outcomes and therefore health care systems should prioritize timely diagnostics and treatment initiation in MIBC patients.

M05
Robotic ileal ureter replacement versus kidney autotransplantation for long ureteral strictures

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Objective:
To compare functional and surgical outcomes of robot-assisted ileal ureter replacement (RAIUR) versus robot-assisted kidney autotransplantation (RAKAT).

Patients and Methods:
This was a retrospective analysis of patients who underwent RAIUR or RAKAT for long ureteral strictures at eight European tertiary centers (2017–2024). Primary endpoints were maintenance of estimated glomerular filtration rate (eGFR) and postoperative complications within 30 days from surgery, described using the Clavien-Dindo classification (CDC). Secondary outcomes included infections, need for lifelong drainage, stricture persistence, and reintervention for the stricture during follow-up.

Results:
A total of 15 and 39 patients underwent RAIUR and RAKAT, respectively. RAIUR patients were older (61 vs 45 years, p = 0.03), with more comorbidities (Charlson Comorbidity Index ≥ 3: 67% vs 28%, p = 0.03) and lower baseline eGFR (60 vs 87 ml/min/1.73m², p = 0.007). Median stricture length was 9.6 for RAIUR vs 7 cm for RAKAT. RAIUR had shorter surgical time (290 vs 355 min, p = 0.008), whereas RAKAT had shorter hospitalization (5 vs 8 days, p = 0.001). Overall complications were higher after RAIUR (73% vs 31%, p = 0.01), but CDC≥3 complications were similar (13% vs 10%). During follow-up, both groups showed slightly improved renal function, low infection rates (13% for RAIUR vs 10% for RAKAT), low stricture persistence (13% for RAIUR vs 7.7% for RAKAT), and minimal need for drainage or reintervention. The main limitation is the modest sample size.

Conclusion:
In the first comparative analysis of RAIUR and RAKAT, we provide evidence that both techniques provide similar improvements in renal function and similar rates of postoperative high-grade complications. Both approaches represent definitive solutions for ureteral strictures in most patients. The choice of the technique should be based on patients' factors, patients' expectations and surgeon's experience.

M06
Open versus minimally invasive nephroureterectomy for clinically locally advanced upper tract urothelial carcinoma

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Introduction & objectives: Open radical nephroureterectomy (oRNU) with bladder cuff excision is currently recommended in patients with locally advanced (cT3-4 or cN1-2) upper tract urothelial carcinoma (laUTUC). We tested the hypothesis that bladder recurrence-free survival (BRFS), metastasis-free survival (MFS), cancer-specific survival (CSS) and overall survival (OS) are not impacted by the surgical approach in patients with laUTUC using a large multicenter series.

Material & methods: This was a multicenter retrospective cohort study including 361 patients with preoperative clinical stage cT3-4 cM0 or cN1-2 cM0 laUTUC treated with open or minimally invasive RNU from 1999 to 2019 at 21 academic centers in Europe, Asia, and the United States. Missing values of relevant baseline characteristics were estimated through multiple imputation of chained equations. Baseline patients' heterogeneity was balanced using a 1:1 propensity score matching (PSM) estimated using logistic regression. Uni- and multivariable Cox regression analyses for bladder recurrence, metastasis, cancer-specific death and overall death were performed according to clinical and pathological characteristics. Kaplan Meier (KM) estimates and log-rank test compared BRFS, MFS, CSS and OS.

Results: Median follow-up was 28 (IQR 13 - 49) months. After PSM, two cohorts of 115 laUTUC patients each with similar baseline and preoperative tumor characteristics were identified. On final pathology, > pT3 stage was found in 84 (73%) and 67 (58%) patients in the oRNU and miRNU groups, respectively. Positive lymph nodes were detected in 27 (23%) and 32 (28%) patients in the oRNU and miRNU groups, respectively. In the multivariable regression analysis, pT ≥ 3 and positive lymph nodes were associated with an increased risk of metastasis (HR 3.22, 95% CI 1.26 - 8.23, and HR 4.03, 95% CI 2.05 - 7.89, respectively). However, the surgical approach (oRNU vs mi RNU) did not influence oncological outcomes irrespective of pT stage or nodal status.

Conclusions: The oncological outcomes of laUTUC for cT3-4 cM0 or cN1-2 cM0 disease are comparable whether RNU is performed via an open or minimally invasive approach. Therefore, the decision to opt for oRNU or miRNU should be guided by the surgeon's expertise and the patient's comorbidities, rather than concerns over long-term oncological outcomes associated with either surgical technique.

M07

Robot-assisted versus open kidney transplantation in patients who previously underwent an open kidney transplant: a propensity score matching analysis

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Introduction & objectives: The safety of robot-assisted kidney transplantation (RAKT) in patients with end-stage renal disease (ESRD) who previously underwent open kidney transplantation (OKT) is unknown. We assessed the hypothesis that intraoperative and postoperative complication rates are similar between RAKT and OKT in patients undergoing their second kidney transplantation (KT).

Material & methods: This was a multicenter retrospective cohort study involving patients with ESRD who received RAKT or OKT from 2015 to 2023 in 7 European academic centers. All patients received OKT in the past. Missing values of relevant baseline characteristics were estimated through multiple imputation of chained equations. Baseline patients' heterogeneity for age, sex, Charlson comorbidity index (CCI), type of dialysis, and type of donor was balanced using a 1:1 nearest neighbor propensity score matching, estimated using logistic regression. Complications were graded per the Clavien-Dindo classification. Kaplan Meier (KM) estimates and log-rank test were used to compare dialysis-free survival (DFS) and reintervention-free survival (RFS) according to the surgical approach.

Results: From an overall cohort of 163 patients, two groups of 31 patients each with similar baseline characteristics were obtained after propensity score matching. The site of transplantation was the left iliac fossa in 25 (80.6%) and 19 (61%) of patients undergoing RAKT and OKT, respectively (p = 0.001). Total time for the vascular anastomosis was lower in patients undergoing RAKT (39 vs 33 minutes, p = 0.01), while estimated blood loss, rewarming time and intraoperative complications were similar in both groups. Early (< 30 days) and late (31 - 90 days) postoperative complications were similar in both groups (35 vs 25%, p = 0.5, and 13% vs 13%, p = 1). Over a median follow-up of 28 months (IQR = 11 - 60), DFS was similar between RAKT and OKT, whereas RFS was better in the RAKT group (100% vs 84%, p = 0.02).

Conclusions: This preliminary study shows that in selected patients who previously received OKT, the performance of a second KT with the robot-assisted approach leads to similar intra- and postoperative surgical outcomes compared to the open approach. Thus, it supports the feasibility and safety of the robotic approach in this surgical setting. Main limitations are represented by patient selection and the low sample size.

M08
Flexible ureteroscopy with flexible and navigable suction ureteral access sheath versus mini-PCNL for large kidney stones

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Introduction
Flexible and navigable suction ureteral access sheath (FANS) has emerged as a breakthrough innovation in endourology, enhancing outcomes in flexible ureteroscopy (FURS). This study compares FURS using FANS to mini-PCNL in the management of large kidney stones.

Material and methods
We retrospectively included patients undergoing FURS with FANS or mini-PCNL for renal calculi between 16–30 mm at our institution from February 2024 to March 2025. Primary outcome was stone-free rate (SFR), defined as no significant residual fragments on intraoperative endoscopic/fluoroscopic assessment or postop CT-scan (>2 mm). Complication rate was a secondary outcome. Patient, stone characteristics, and operative parameters were recorded. FURS was performed with a 10/12Fr or 12/14Fr FANS and a 7.5Fr single-use flexible ureteroscope. Mini-PCNL was performed using the ECIRS technique with a 16Fr suction sheath and a 11Fr nephroscope. Stones were fragmented using Thulium laser.

Results
24 patients had FURS with FANS (Group A) and 9 had mini-PCNL (Group B). Age, BMI and ASA score were not significantly different between groups. Median maximal stone diameter was similar: 20 mm (IQR 17-22) for Group A and 25 mm (IQR 20-26) for Group B (p = 0.067). Median stone density was 1290 HU (IQR 608-1400) for Group A and 1400 HU (IQR 940-1500) for Group B (p=0.265). Multiple stones were present in 38% of Group A and in 56% of Group B (p=0.350). 67% of Group A patients were pre-stented vs. 33% in Group B (p = 0.084). Median operative time was 116 minutes (IQR 99-132) for Group A and 115 minutes (IQR 83-152) for Group B (p=0.731). Less basket use in Group A (4% vs. 33% in Group B; p = 0.022). Both groups had comparable SFR (79% in Group A and 78% in Group B; p=0.931). Among 9 Group A patients with 21-30 mm stones, SFR was 67%. 18 procedures (75%) in Group A were outpatient. Median length of stay in Group B was 1 day (IQR 1-1), with 89% discharged on day 1. 1 patient in each group had a Clavien grade 2 complication (4% in Group A vs. 11% in Group B; p=0.457), consisting of post-op fever treated by antibiotics. No grade 3 or higher complications occurred in either group.

Conclusion
FURS with FANS seems to be a safe and effective technique, achieving comparable SFR to mini-PCNL for 16–30 mm renal stones with limited minor complications. FURS with FANS may offer a valid, minimally invasive alternative for selected patients who are either unfit for or unwilling to undergo mini-PCNL.

M09
Evaluation of men's perceptions and attitudes towards prostate cancer, opportunistic testing and organized screening in Switzerland

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Background and goals
In Switzerland, discussions about a structured early detection program (screening) for prostate cancer (PCa) are ongoing. At the moment, opportunistic testing for PCa prevails. Therefore, a better understanding of the barriers and facilitators that influence men in their decision for or against opportunistic testing is needed. Further insight is also required into men's attitudes towards a potential screening program, including their views on the program itself and their preferences for how invitations should take place. It should also be explored which screening methods men would find acceptable and, if a screening program was in place, how they would most likely participate if invited. This study aims to address these demands and provide a better understanding of men's perspectives on both current and future early detection practices for PCa in Switzerland.

Methods
The study follows a cross-sectional, non-experimental mixed methods approach with a descriptive-exploratory design. Using both a quantitative survey and qualitative semi-structured interviews, we will collect data on general health, thoughts on personal men’s health, awareness of PCa and opportunistic testing/screening, related attitudes, behaviors and future expectations within the Swiss healthcare system. The qualitative part is informed by a health communication perspective, aiming to improve or develop strategies to better educate and inform men and the broader Swiss population about PCa, testing, and screening. Included are men aged 50 to 60, living in Central Switzerland and familiar with and insured under the Swiss healthcare system. Both those with and without prior testing experience can participate. Excluded are those with a diagnosed or treated PCa. Recruitment pools include i.a. flyers, social media, the authors' institutional channels, and public places.

Results
Data collection will commence in early summer 2025, with initial results expected by mid-summer 2025.

Conclusion
By identifying factors influencing men's decisions for or against early detection and understanding their attitudes towards a screening program, we aim to meaningfully contribute to the field of early detection of PCa and the national cancer strategy. This study also serves as a foundation for follow-up projects to evaluate a potential PCa screening program in Switzerland.

M10
The Role of the Stockholm 3 Test Before Confirmatory Biopsies for Prostate Cancer Patients Enrolled in Active Surveillance: Results from the STHLM3 AS

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Background:
Active surveillance (AS) is the preferred approach for low-risk prostate cancer (PCa) to avoid side effects of radical treatments. Recent efforts have explored multiparametric magnetic resonance imaging (mpMRI), and blood biomarkers to reduce
surveillance biopsy frequency. This study assessed the Stockholm3 blood test for predicting
PCa upgrading during surveillance biopsies.

Materials and Methods:
The STHLM3-AS NorDCaP study included 199 men with ISUP GG 1 PCa under AS in Sweden, Denmark, and Norway (2019–2022). All men had ISUP GG 1 PCa and received a Stockholm3 blood test before surveillance biopsies. The primary outcome was ISUP upgrading, defined as a diagnosis of ISUP GG 2 or higher.

Results:
At surveillance biopsy, 72 out of 199 (36%) men were upgraded. Median Stockholm3 scores were higher in upgraded cases (35 vs. 23, p < 0.01). Sensitivity and NPV for Stockholm3 ≥15 were 0.93 (95% CI: 0.85–0.98) and 0.87 (95% CI: 0.72–0.96), respectively, sparing 19% of biopsies while missing 5 cases (2.5% of upgrades), none of which were ISUP ≥3. PSA density ≥0.15 had sensitivity and NPV of 0.60 (95% CI: 0.48–0.72) and 0.75 (95% CI: 0.66–0.83), sparing 62% of biopsies but missing 15% of upgrades, including 2.5% ISUP ≥3. PIRADS ≥3 showed sensitivity and NPV of 0.92 (95% CI: 0.83–0.97) and 0.84 (95% CI: 0.66–0.95), sparing 44% of biopsies while missing 6.7% of upgrades, including 1% ISUP ≥3.

Conclusions:
The Stockholm3 test reduces unnecessary biopsies in AS while maintaining high sensitivity for cancer upgrading, demonstrating its potential to improve current surveillance practices.

M11
Validation of Stockholm3 and MRI for Prostate Cancer Detection in a Swiss Non-Referral Cohort: Balancing Biopsy Reduction and Diagnostic Performance

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Introduction
Stockholm3 is a multivariable blood test that improves risk stratification for clinically significant prostate cancer (csPCa), defined as ISUP grade group ≥ 2. Its integration with MRI may optimize screening by reducing unnecessary biopsies. This study aimed to validate the performance of Stockholm3 and MRI in a Swiss, non-referral center, and to explore whether biopsy can be safely omitted in patients with negative or equivocal MRI findings.

Materials and Methods
We retrospectively reviewed men who underwent Stockholm3 testing, multiparametric MRI, and both systematic and targeted prostate biopsies between November 2023 and June 2024. PSA levels, Stockholm3 scores, and MRI PI-RADS classification were recorded and correlated with biopsy results. Diagnostic performance was assessed using descriptive statistics.

Results
A total of 183 patients were enrolled with a median age of 65 years (IQR 61-70), a median PSA of 5.0ng/ml (IQR: 4.0–6.7) and a median Stockholm3 score of 17.0 (IQR: 13–24). Two patients had a Stockholm3 score of < 11 (1%), both biopsy-negative. Among patients with Stockholm3 ≥ 11, 28/181 (15%) had ISUP 1, 65/181 (36%) had ISUP ≥ 2, and 88/181 (49%) showed no tumor at biopsy. Using a Stockholm3 score cut-off of ≥ 15, 16/114 patients (14%) had ISUP 1, 51/114 (45%) ISUP ≥ 2, and 47/114 (41%) were tumor-free. Among the 69 patients with a Stockholm3 score < 15, 14 (20%) still had csPCa. Regarding MRI findings, 4/31 (13%) of cases with negative MRI (PI-RADS ≤ 2) had csPCA at biopsy. In the case of equivocal MRI (PI-RADS 3), 9/53 (17%) demonstrated csPCA. PSA ≥ 3 ng/mL alone showed 66% sensitivity for detecting csPCa in this cohort. Using a Stockholm3 threshold of ≥ 11 maximized sensitivity for csPCa (100%) but resulted in minimal biopsy reduction (1%). In contrast, raising the cut-off to ≥ 15 lowered biopsy rates by 40% while still detecting 79% of csPCa cases, outperforming PSA ≥ 3 ng/ml (AUC: 0.70 vs. 0.52).

Conclusion
In this Swiss real-world cohort, Stockholm3 improved detection of clinically significant prostate cancer and reduced unnecessary biopsies compared to PSA. Despite negative or equivocal MRI findings, a notable proportion of patients still had significant cancer, underscoring the importance of maintaining a biopsy strategy in selected cases within these subgroups. These findings support the integration of Stockholm3 for risk-adapted biopsy decisions in primary diagnostics.

M12
Establishment of a Propofol sedation program exclusively conducted by the urology outpatient unit as the new standard of care for prostate biopsies - experience and results after 169 cases

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Background
Propofol sedation (PS) is an established sedation-method used worldwide for decades and is safe for patients provided that well-defined safety measures are observed. In urology, this procedure is not yet established clinic-autonomously, although it could be very helpful especially in prostate biopsy procedures. Currently, in here either local anesthesia or general anesthesia are used, however, both with specific drawbacks: local anesthesia has the disadvantage that many patients experience the procedure as painful impeding precise intervention consequently. General anesthesia is associated with high personal costs and resources. Hence, PS for prostate biopsy performed in urological outpatient units could overcome both problems.

Methods
Establishment of an urologically performed and supervised PS in the context of prostate biopsies. The procedure, the creation of standard operating procedures and staff training were developed and performed in close accordance with the corresponding guidelines of the Swiss society of gastro-enterology and anesthesiology. In addition, description of the consecutively established, prospective cohort of prostate biopsy patients, both with trans-rectal and trans-perineal approach. Post-biopsy complications and patient reported outcome measures (PROMS) assessing pain, anxiety, prior biopsy experience, preferences in case of future biopsies as well as complications during follow up were collected from all patients.

Results
From November 2022 to March 2025, 169 consecutive patients underwent prostate fusion- and systematic biopsy under urologically administered and monitored PS. Average age was 63 years (median 64) and PSA 8.6ng/ml (median 7). There have been no propofol-associated complications. Complications during follow-up were very rare and limited to isolated instances of urinary retention (< 1%) and febrile urinary tract infection (< 1%). PROMS (feedback-rate 82%) revealed excellent results in terms of tolerability and comfort of this sedation method. Almost 100% of all patients stated that they would choose this type of biopsy setting in case of re-biopsy again or recommend it to friends or acquaintances.

Conclusion
Exclusively urologically managed PS has shown to be safe when correct selection strategies are stringently applied. This method is now well-established standard procedure for prostate biopsies in our clinic. Results of PROMS show excellent outcomes concerning tolerability and comfort for patients.

M13
Predictors of Positive Surgical Margins in a Modern Robot-Assisted Radical Prostatectomy Cohort

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Background and Objective
One of the main challenges in radical prostatectomy is the risk of positive surgical margins (PSM), which may be associated with an increased need for adjuvant treatment. This study aims to analyze the rate of PSM in a modern series of radical prostatectomy cases and identify the predictors.

Method
This is a monocentric retrospective study of consecutive patients who underwent robot-assisted radical prostatectomy between 2006 and 2025 with prior MRI. Data were collected from an institutional database linked to an international certification. Statistical tests, including T-test, chi-squared, and multivariate logistic regression, were used. Surgical margins were categorized as extensive (≥ 4mm) or focal (< 4mm). The analysis periods were divided into two 10-year periods: early (2006-2015) and late (2016-2025).

Results
Of the 1177 patients, 1100 (93%) had a prior MRI and were included in the study. A total of 202 patients (18%) had a PSM, with 141 (13%) focal and 61 (5%) extensive, with the most frequent location being the apex (N=107, 53%). The annual PSM rate varied significantly over the study period (11% to 36%), with a higher rate in the early period compared to the late period (25% vs 14%, $p < 0.01$). The margin rate was dependent on the pT stage and the inclusion period, with a total PSM rate of 12%, 27%, and 41% ($p < 0.01$) for pT2, pT3a, and pT3b stages, respectively, and comparing the late vs early period showed rates of 7.3% vs 17.1% ($p < 0.01$), 20.6% vs 36.9% ($p < 0.01$), and 36.9% vs 47.6% ($p < 0.01$).
Regarding operative parameters associated with PSM, unfavorable variables were cT stage (OR cT2 = 1.3, cT3 = 2.0, $p < 0.05$), PSA (OR = 1.03, $p < 0.01$), early period (OR = 1.77, $p < 0.01$), and obesity (OR = 1.6, $p = 0.02$). Protective factors included prostate volume (OR = 0.99, $p = 0.018$) and nerve-sparing surgery (unilateral OR = 0.51, bilateral OR = 0.50, $p = 0.01$).

Conclusion
The rate of positive surgical margins is primarily dependent on the T stage. Nerve-sparing surgery does not increase the risk of PSM. The recent decrease in PSM rates is likely linked to improved regional cancer characterization and the progression of the center's expertise in the surgical technique. MRI data, currently being collected, will be integrated into the presentation.

M14
Reliability of confocal microscopy in the analysis of surgical margins during minimally-invasive radical prostatectomy

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Introduction & Objectives
Nerve-sparing radical prostatectomy (RP) can be considered in selected patients with clinically significant prostate cancer (PCa). While this approach may reduce the burden of surgery on functional outcomes, it carries the risk of increased positive surgical margins (PSM). Nevertheless, intraoperative pathological assessment techniques have been introduced to such risk. This study aimed to prospectively validate the accuracy of confocal microscopy (CM) in assessing surgical margins during minimally invasive RP.

Materials & Methods
We report the results of our prospective case-control study conducted in Fundació Puigvert from January 2022 to February 2023. The VivaScope® 2500M-G4 microscope (Mavig GmbH, Munich, Germany; Caliber I.D., Rochester NY, USA) is a laser scanning microscope designed for rapid acquisition of high-resolution digital images from fresh tissue samples, producing results comparable to standard hematoxylin-eosin staining. Following surgery, two specimens were taken from the posterolateral margins of the prostate, analyzed using CM, and reviewed by two expert uropathologists who were blinded to the patient information. We evaluated the diagnostic accuracy of CM by comparing its findings with the final pathology, which served as the reference standard. Additionally, we assessed the interrater agreement between the two uropathologists using the kappa Cohen coefficient.

Results
One hundred patients (200 surgical margins) were enrolled. At final pathology, 32 (32%) patients had locally advanced disease. CM was successfully performed in all patients, and a total of 33 (33%) patients had positive surgical margins (PSM). On a per-margin analysis sensitivity (SE), specificity (SP), positive predictive value (PPV), and negative predictive value (NPV) of CM were 57%, 92%, 64%, and 90%, respectively. A sub-analysis of ISUP 4-5 at preoperative biopsy showed a per-margin SE, SP, PPV and NPV of 82%, 60%, 91% and 75%, respectively. The interrater agreement was 0.64 and 0.61 for per-patient and per-margin analysis, respectively.

Conclusions
Ex-vivo confocal microscopy provides a reliable intraoperative analysis of prostatic surgical margins during RP and can be easily interpreted by pathologists. Its use might potentially decrease the rate of PSM at final pathology, especially in patient with aggressive disease at preoperative pathology.

M15
Keeping the PROMise: Long Term Results of Patient-Centered vs. Traditional Outcome Measures in LUTS/BPH Management

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Aim:
As of late, numerous novel treatment options for men with lower urinary tract symptoms (LUTS) due to benign prostatic hyperplasia (BPH) have emerged. Outcome assessment traditionally relies on physician-directed measures such as peak urinary flow rate (Qmax), post-void residual urine (PVR), and the International Prostate Symptom Score (IPSS). The rise of patient-reported outcome measures (PROMs), including self-assessed goal achievement (SAGA) and treatment satisfaction, has prompted a re-evaluation of these endpoints. This study compares traditional outcome measures with PROMs across different treatment modalities for LUTS/BPH, including long-term follow-up.

Patients and Methods:
Patients undergoing surgical/interventional treatment for LUTS/BPH were prospectively enrolled. Prior to treatment, participants defined individual therapeutic goals with follow-up at 6–12 weeks and again at 1–2 years post-procedure. Data collection included Qmax, PVR, IPSS, SAGA goal achievement, and satisfaction. Statistical analysis assessed changes over time and correlations between traditional and patient-reported outcomes.

Results:
Data from 475 patients were available for SAGA. For paired analysis at 6–12 weeks and 1–2 years, 105 patients had complete data. Overall, 46 % reported improved goal achievement, 39 % stable, 15 % worsening ($p = 0.00007$), with highly significant improvement after HoLEP/Aquablation ($p = 0.0001$), significant after TURP/laser vaporization ($p = 0.020$), but not after PAE/Rezum ($p = 0.280$). Satisfaction improved similarly ($n = 107$, $p = 0.002$). Improvements were significant after HoLEP/Aquablation ($p = 0.005$) and TURP/laser vaporization ($p = 0.036$), but not after PAE/Rezum ($p = 0.572$) with no significant group differences reported initially. At 1–2 years, SAGA scores were higher after HoLEP/Aquablation than PAE/Rezum, and partly TURP/laser vaporization. At 1-2 years, SAGA correlated significantly with IPSS, IPSS-QoL and Qmax, but not with PVR. Changes in SAGA correlated with changes in IPSS (rho = –0.44, $p < 0.001$) and IPSS-QoL (rho = –0.31, $p = 0.006$), but not with Qmax (rho = 0.21, $p = 0.12$) or PVR (rho = 0.04, $p = 0.75$).

Conclusions:
Goal achievement and satisfaction improve significantly over time, especially after HoLEP and Aquablation. PROMs show stronger alignment with patient experience than Qmax or PVR. Incorporating tools like SAGA enhances patient-centered evaluation of LUTS/BPH treatments.

M16
Erkenntnisse aus unseren ersten Erfahrungen mit MiLEP: Eine retrospektive Analyse der Effizienz und Sicherheit mit Slim- und Ultra-Slim-Instrumenten

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Einleitung
Diese Studie untersucht die Wirksamkeit und Sicherheit der miniaturisierten Holmium-Laser-Enukleation der Prostata (MiLEP) mit Slim- (22 Fr) und Ultra-Slim-Schäften (18,5 Fr).

Methoden
Retrospektiv wurden die Daten von 84 Patienten analysiert, die zwischen Februar 2022 und Oktober 2023 von einem Chirurgen (PR) operiert wurden. 13 Patienten erhielten eine Ultra-Slim Holmium-Laser Enukleation der Prostata (HoLEP), 71 Patienten eine Slim HoLEP. Die Ergebnisse wurden intraoperativ sowie 2, 6 und 12 Wochen postoperativ ausgewertet.

Ergebnisse
Das mittlere Alter der Patienten lag bei 62 [Median: 53-80] bzw. 72 [54-86] Jahren, das Prostatavolumen bei 45,0 ml [25,0-75,0] bzw. 65,0 ml [20,0-150] und das Enukleationsgewicht bei 36,0 g [8,0-63,0] bzw. 35,0 g [4,0-129,0] in der Ultra-Slim- bzw. Slim HoLEP-Gruppe. Bei der perioperativen Effizienz in Form der Operationsdauer (65 min [45-92] vs. 72.5 min [20-180]), Enukleationszeit (36 min [26-48] vs. 40 min [12-65]) und des Laserenergieverbrauchs 132 kJ [87,9-152] vs. 121 kJ [37-232]), zeigten sich keine statistisch signifikanten Unterschiede zwischen den Gruppen. In dieser Studie wurden nach drei Monaten keine Fälle von Harnröhrenstrikturen beobachtet. Vollständige Kontinenz nach 12 Wochen erreichten jeweils 100 % bzw. 95,6 % der Patienten nach Ultra-Slim HoLEP und Slim HoLEP.

Schlussfolgerung
Erstmalig wurden in der Schweiz erhobene Daten zur Ultra-Slim HoLEP ausgewertet. HoLEP mit Ultra-Slim-Instrumenten bietet eine effiziente und sichere Alternative zur Slim HoLEP für die Behandlung der Benignen Prostatahyperplasie.

M17

Early oncological outcomes of very high-risk prostate cancer patients according to the STAMPEDE trial definition in the PSMA-PET era: Implication for the selection of the optimal surgical candidate

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Background & Objectives:
In the STAMPEDE trial, men with very high-risk non-metastatic prostate cancer (PCa) treated with radiotherapy (RT), androgen deprivation therapy (ADT), and androgen receptor signaling inhibi-tors achieved excellent survival. However, a surgical arm, including radical prostatectomy (RP) and extended pelvic lymph node dissection (ePLND), was not included, and all patients were staged with conventional imaging. This study aims to evaluate early oncological outcomes of very high-risk PCa patients in the PSMA-PET era.

Patients and Methods:
Two cohorts of PCa patients treated with RP and ePLND were analyzed. The first included 4,780 men staged with conventional imaging at a single center between 2010 and 2020. The second cohort included 2,367 patients staged with PSMA-PET from 2016 to 2024. Patients with very high-risk PCa, defined according to STAMPEDE criteria (i.e., node-positive or, if node-negative, ≥ 2 of the following: cT3–T4, ISUP Grade Group 4–5, PSA ≥ 40 ng/mL), were identified (n = 505). The endpoint was early biochemical recurrence (eBCR), defined as PSA persistence or two consecu-tive PSA increases within one year. Kaplan–Meier curves illustrated eBCR-free survival rates (FSR), with right censoring at 12 months. A multivariable

Cox regression model evaluated the impact of imaging modality on eBCR, adjusting for preoperative characteristics and ADT.

Results:
Of the 505 men, 237 (47 %) were staged with conventional imaging and 268 (53 %) with PSMA-PET. Median age was 66 years. In total, 106 (21 %), 218 (43 %), 390 (77 %), and 286 (57 %) had PSA > 40 ng/mL, cT3–T4, ISUP GG 4–5, and node-positive disease, respectively. Patients staged with conventional imaging had more adverse features. The pN1 rate was higher in the PSMA-PET cohort (p = 0.02). Adjuvant hormonal therapy was administered to 135 (57 %) patients in the con-ventional and 108 (40 %) in the PSMA-PET cohort. Median follow-up was 72 vs. 13 months. After censoring at 12 months, eBCR occurred in 69 (29 %) and 41 (15 %) patients, respectively. PSMA-PET staging was associated with lower eBCR risk (HR: 0.59, 95 % CI: 0.36–0.97, p = 0.04).

Conclusion:
In men with very high-risk PCa, PSMA-PET staging was associated with improved early oncologi-cal outcomes compared to conventional imaging. PSMA-PET may better identify surgical candi-dates among very high-risk PCa patients.

V01
Savaging testicular torsion: The testicular fasciotomy and tunica vaginalis coverage technique.

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Introduction
Testicular torsion is a critical condition that affects 1 in 4000 males before the age of 25. Despite timely surgical intervention, up to 40% of testes are unable to be salvaged. Testicular compartment syndrome is a contributing factor to testicular necrosis. Testicular fasciotomy, in combination with defect coverage using a tunica vaginalis flap or graft, may offer a potential solution for preserving testicular tissue after prolonged ischemia.

Methods
This video-based presentation provides a step-by-step demonstration of the tunica vaginalis flap/graft testicular salvage technique, accompanied by data from two cases. The study includes a descriptive analysis of patient characteristics, an evaluation of intraoperative and postoperative complications, and both short- and long-term follow-up data.

Results
The median age of the patients was 46.5 years, and the median time from symptom onset to surgery was 36 hours. Preoperative ultrasound examination revealed heterogeneous testicular parenchyma without vascularization; the median testicular volume was 19.5 ml. Intraoperative findings in both cases showed torqued, ischemic testicles. Following fasciotomy active arterial bleeding was observed and the testicular coloration improved. A tunica vaginalis flap and graft were performed in one case each. Median operation time was 96.5 minutes. No intraoperative complications were encountered. Active perfusion was noted in both testes immediately following the procedure. At the time of abstract submission, long-term follow-up data was available for one case, with the second set of data to be presented at the congress. The testicular volume 90 days post-procedure was 12 ml, with sonography confirming active perfusion in the remaining testicular tissue. No postoperative complications were observed.

Conclusion
The tunica vaginalis flap/graft technique appears to be a promising approach for the salvage of testicular tissue beyond the traditionally assumed 6-hour ischemia threshold. While the preliminary data are encouraging, further studies are required to validate its long-term efficacy and broader applicability.

V02
Robot-assisted rectovesical fistula repair with a peritoneal flap

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Background
Vesicorectal fistulas are rare but challenging complications often arising after pelvic surgery. Surgical repair is technically demanding due to the proximity to critical structures and previous tissue damage. This report details a robot-assisted laparoscopic approach to repairing a complex vesicorectal fistula caused by a retained Hem-o-lok clip after prior prostatectomy.

Methods
A 66-year-old male with a history of laparoscopic radical prostatectomy (02/2022, pT3 Gleason 4+4) at an outside hospital developed rectal perforation requiring terminal colostomy. In 01/2023, he underwent a York-Mason repair for a vesicorectal fistula, but persistent symptoms led to referral in 11/2023 for anal urinary leakage. MRI revealed a suspicious vesicorectal fistula, and cystoscopy confirmed a tract near the right ureteral meatus. In 06/2024, robot-assisted laparoscopic repair was performed after bilateral single-J stent placement. The fistula, found to be caused by a Hem-o-lok clip, was excised. The peritoneum above the resected tract was mobilized and flipped to cover the defect.

Results
There were no intra- or postoperative complications. Drainage was removed on day 4, and the patient was discharged home on day 5. Ureteral stents and catheter were removed on day 20. At 3-month follow-up, the patient reported no rectal leakage and had preserved urinary function.

Conclusions
Robot-assisted laparoscopic repair of vesicorectal fistulas is a safe and effective minimally invasive option, even in previously operated fields. The use of local tissue (flipped peritoneum) for reinforcement and careful dissection around ureteral landmarks allowed for a successful anatomical and functional outcome in this complex case.

V03
Robot-Assisted Repair of Urethro-Rectal Fistula after Radical Prostatectomy: Technique and Outcomes

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Introduction & objectives
This video presents a robotic approach for the repair of a urethro-rectal fistula identified four months post robot-assisted radical prostatectomy in a 67-year-old male patient. The patient was referred to our department after experiencing rectal urine leakage during micturition. The fistula's location was detected at the level of the vesicourethral anastomosis in cystoscopy. Rectoscopy showed the location of the fistula 3 centimetres proximal to the dentate line.

Material & Methods
First, a guidewire was placed through the fistula using cystoscopy and rectoscopy, with the ends exiting via the urethra and the rectum, respectively. Using a standard robotic prostatectomy 4-arm port placement the fistula and the anterior rectal wall were accessed via the bladder neck. With re-opening of the vesico-urethral anastomosis, the urethral opening of the fistula was detected, marked by the fistula guidewire. In addition, both ureters were stented with double-J- stents. Fully releasing the bladder from the urethra enabled access to the anterior rectal wall and the rectal part of the fistula. The rectal wall was liberated to expose the fistula. The rectal part of the fistula, as well as its urethral part, were excised. The rectum closure was performed using 5-0 monofilament absorbable sutures. The suture line was tested by insufflating air into the rectum. A perivesical fat pad flap was interposed and sewn into place by 2 separate 5-0 monofilament absorbable sutures. For the vesicourethral anastomosis, a running barbed monofilament suture was used. The fat pad flap also covered the dorsal part of the vesicourethral anastomosis.

Results
The postoperative course was uneventful, and the patient was discharged 4 days postoperatively. The indwelling catheter was removed after cystography three weeks postoperatively, and there were no signs of recurrence during a follow-up period of 6 months

Conclusion
Urethro-rectal fistula is a rare complication following radical prostatectomy. This case demonstrates that robot-assisted fistula repair not only provides excellent intraoperative visibility of the site, but also accurate excision, closure, and interposition of a tension-free flap.

V04
Reconstructive Robot-Assisted Upper Tract Surgery: A New Challenge in the Era of Advanced Endoscopic Interventions

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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.

V05
Towards Molecular-Guided Nerve-Sparing ? : PSMA-Guided RARP with Intraoperative Ex-Vivo Specimen PET/CT – A case report

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Background:
Robot-Assisted Radical Prostatectomy (RARP) remains the gold standard for intermediate and high-risk Prostate cancer, yet positive surgical margins (PSMs) occur frequently. NeuroSAFE reduces PSMs but ultimately adds ≃ 42 minutes of operative time, demands extensive logistics which limit its widespread adoption. In our center, we are currently evaluating the feasibility of intraoperative ex-vivo PSMA-PET/CT using the AURA-10 PET/CT imager (Xeos Medical) for a real-time margin assessment during RARP. This video presents the steps and tips to use this technology.

Methods:
A 64-year-old man with intermediate-risk prostate cancer (cT2b, Gleason 3+4 (30%), PSA 7.2. ng/mL) underwent RARP and extended pelvic lymph node dissections with right interfascial and left intrafascial nerve-sparing. mpMRI revealed a 23mm posterolateral right lesion suspicious of extraprostatic extension. Preoperative 68Ga-PSMA-PET/CT confirmed organ-confined avid disease (PRIMARY-score 5). Compared to standard positioning of the patient, the right arm was put on an armrest, allowing access for radiotracer injection with visual control. An Alexis® port size S was placed on the midline cranially to the umbilicus for intraoperative specimen extraction. 68Ga-PSMA-11 (1 MBq/kg) was injected intravenously. The procedure was carried out using the standard technique, although the specimen was extracted through the Alexis port as soon as the dissection was completed. The excised prostate and lymph nodes were scanned with AURA-10 127 minutes after injection; while a 1.8mL blood sample provided an internal reference (SUVblood). PSMA lesions were segmented using a 30%-threshold (V30%) and score per-adapted PROMISE v2 criteria. PET-based PSMs rated on a Likert Scale.

Findings:
Ex-vivo PET/CT acquisitions required 12 minutes. The lesion exhibited focal extracapsular extension at the right posterolateral margin (SUVmax 25, TBRmax 22, miT3a). No PET-based PSM were detected, Likert 1. No pelvic lymph nodes showed any significant suspicious activity. Whole-mount histology confirmed pT3a N0 R0 and matched PET-findings.

Conclusion:
This video shows the application on intraoperative ex-vivo PSMA-PET/CT which has the potential to democratize complete margin assessment during RARP. A robust assessment is warranted to evaluate the diagnostic accuracy. Our video provides key steps and tricks for performing this procedure which we feel might be of interest for the wide Swiss Urological community.

V06
Robot-assisted right radical nephrectomy with vena cava thrombectomy

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Background
Renal cell carcinoma (RCC) with tumor thrombus extension into the inferior vena cava (IVC) presents a complex surgical challenge. Robot-assisted laparoscopic techniques have emerged as viable options for radical nephrectomy and thrombectomy in carefully selected patients. This case report describes a minimally invasive approach in a patient with a level 2 IVC thrombus.

Methods
A 65-year-old woman presented in April 2024 with right lumbar pain. A CT scan revealed a 12x12x7 cm heterogeneous mass in the right kidney associated with a level 2 venous thrombus, classified as T3bN0M0. In June 2024, she underwent robot-assisted laparoscopic right radical nephrectomy with right adrenalectomy, cavotomy, and thrombectomy. The surgical approach involved full vascular control of the IVC, cavotomy, and en bloc thrombus extraction under robotic assistance. Key intraoperative metrics and surgical steps were demonstrated in the procedural video.

Results
Estimated blood loss was 300 ml. There were no intraoperative or postoperative complications. The patient was discharged home on postoperative day 4. Final histology confirmed a 9 cm clear cell renal cell carcinoma, staged as pT3a, with negative surgical margins (R0 resection).

Conclusions
This case demonstrates the feasibility and safety of robot-assisted laparoscopic nephrectomy with thrombectomy for RCC with IVC thrombus. The successful execution of this complex procedure with minimal blood loss, no complications, and early discharge highlights the effectiveness of minimally invasive approaches in advanced RCC cases when performed in high-volume centers with appropriate expertise.

V07
Komplexe Steinsanierung bei stark inkrustierten DJ-Kathetern – Zwei Fallberichte

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Hintergrund & Ziele:
Verlängerte Verweildauer von DJ-Kathetern kann zu ausgeprägter Inkrustation und konsekutiver Steinentwicklung führen. Ziel unseres Videos ist es, zwei eindrückliche Fallbeispiele zu präsentieren, bei denen inkrustierte DJ-Katheter mit teils massiver Steinbildung mittels kombinierter endourologischer Verfahren erfolgreich entfernt werden konnten.

Material und Methoden:
Im Video zeigen wir zwei Fallberichte:
Fall 1: Ein Patient mit bilateralen Ausgusskonkrementen erhielte durch einen niedergelassenen Urologen beidseits DJ-Katheter als Vorbereitung zur URS. Aufgrund ausgeprägter Inkrustationen war eine Entfernung der Katheter nicht möglich. Auch ESWL blieb erfolglos. Nach Zuweisung an unser Zentrum, haben wir einen kombinierten Eingriff – PNL und URS zunächst rechts (gezeigt im Video) durchgeführt. Der ausgeprägte Ausgussstein wurde perkutan zertrümmert. Anschliessend konnten die beiden Katheter vollständig entfernt werden – einer über das PNL-Access-Sheet, der andere mit dem Zystoskop.
Fall 2: Eine Patientin hatte 2 Jahre zuvor im Ausland einen DJ-Katheter bekommen, der aufgrund wiederholter Wohnortwechsel nie entfernt wurde. Sie stellte sich mit Makrohämaturie und Blasenschmerzen beim niedergelassenen Urologen vor. Das Leerbild zeigte eine vollständige Ausgusskonkrementbildung der linken Niere, ausgedehnte Ureterolithiasis entlang des gesamten DJ-Katheters sowie eine grosse Zystolithiasis. Zunächst erfolgte die Sectio alta zur Entfernung des Blasensteins mit Abtrennung des distalen DJ-Kringels. In einem zweiten Schritt wurde die PNL links mit vollständiger Entfernung des Nierensteins durchgeführt. Beim Versuch den DJ-Katheter zu entfernen, riss der Ureterkatheter und der mittlere Teil samt Verkrustungen blieb in situ. Aus Zeitgründen musste der Eingriff beendet werden. Die Entfernung des verbliebenen Katheters gelang schliesslich in einer dritten Sitzung durch kombinierte antegrade und retrograde Zugänge unter sukzessiver Lithotripsie.

Resultate:
Die Kombination von PNL und URS, teils in mehreren Sitzungen, ermöglichte eine vollständige Entfernung auch stark inkrustierter Fremdmaterialien. Es traten keine relevanten Komplikationen auf.

Schlussfolgerungen:
Langer DJ-Verweildauer birgt hohes Risiko für Inkrustationen und Konkrementbildung. Eine individuell angepasste, häufig mehrzeitige endourologische Strategie erlaubt eine sichere und effektive Entfernung – auch in komplexen Fällen.

V08
Minimally invasive, en-bloc pulse-modulated Holmium Laser Enucleation of the Prostate (MiLEP): A step-by-step video tutorial

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Background: The en bloc technique for HoLEP with early apical release offers advantages over traditional multi-lobe approaches, including a clearer enucleation plane, improved intraoperative visibility and reduced operation time. The introduction of a Charr. 22 instrument (RZ Medizintechnik™), as used in MiLEP (Minimally invasive Laser Enucleation of the Prostate), further enhances these benefits by increasing maneuverability, reducing urethral trauma, and potentially improving sphincter preservation. In parallel, the novel Quanta Magneto™ high power holmium laser enables advanced pulse modulation modes (e.g., Virtual Basket™, Bubble Blast™, Magneto™), optimizing cutting precision and hemostasis. However, the smaller sheath diameter presents new challenges, particularly in terms of visualization during morcellation.

Materials and Methods: A consistent step-by-step approach was applied and demonstrated in a detailed video tutorial, maintaining procedural clarity while integrating the specifics of MiLEP:

1. Identification of the urethral sphincter
2. Early apical mucosal incision—direct or stepwise depending on anatomy
3. Definition of the enucleation plane near the verumontanum
4. Circumferential en bloc enucleation of the adenoma
5. Descending incision of the bladder neck
6. Mobilization of the adenoma into the bladder and resolution of dorsal attachments
7. Hemostasis and Morcellation under limited visibility conditions

Laser pulse modulation modes of the Quanta Magneto system are highlighted for their role in enhancing efficiency and safety throughout the procedure.

Results: MiLEP, when performed with adherence to the outlined steps, allows for precise, controlled enucleation with minimized instrument footprint. Improved maneuverability aids in challenging anatomies, while the reduced diameter promotes a more atraumatic and controlled enucleation. The Quanta Magneto laser's pulse modulation significantly contributes to improved hemostasis and cutting quality. Limited visualization during morcellation represents a relevant, but manageable challenge.

Conclusion: MiLEP represents a promising evolution of the HoLEP technique. When combined with a standardized en bloc approach and modern laser technology, it offers potential advantages in terms of tissue preservation, teaching value, and patient outcomes—especially in a minimally invasive context.

V09
Overcoming Challenges During the Learning Curve of En-bloc HoLEP with Early Apical Release: A Video Tutorial

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Background and Aims:
HoLEP is a widely used technique for treating BPH but has a steep learning curve. The en-bloc HoLEP approach with early apical release may improve efficiency and sphincter preservation but adds complexity. To better understand the primary difficulties encountered during training, we conducted a survey among surgeons with HoLEP experience. Using these insights, we created a video tutorial with essential tips to address common challenges.

Materials and Methods:
A survey was conducted among en-bloc HoLEP surgeons to identify the most critical procedural steps that pose difficulties during training. Based on the results, we compiled a structured set of key steps and created a video showcasing technical solutions and best practices to facilitate en-bloc HoLEP with early apical release.

Results:
The survey identified key steps in the en-bloc HoLEP technique, and the video tutorial presents practical solutions for these challenges, including:

- Initial identification of the enucleation plane:
  Starting next to the verumontanum with application of slight mechanical preparation and observation of the tissue response and the appearance of the enucleation plane.
- Ideal exposure of the preparation plane:
  Optimized instrument handling, circumferential preparation, and consistent orientation in the direction of the laser fiber contribute to improved visualization and maintenance of the correct plane.
- Apical release and connection at the 12 o'clock position:
  Precise following of the enucleation plane, often facilitated by a stepwise early mucosal incision, enables controlled and safe release of the apex.
- Preparation under the middle lobe:
  Lasing towards the adenoma directly helps to prevent capsular perforation. Avoiding mechanical traction and approaching the median lobe from the lateral lobes—possibly with a strategic split of the adenoma at the 6 o'clock position—can support safer dissection.
- Release of the last tissue connections and mobilization of the prostate into the bladder:
  Rolling the prostate towards the bladder beginning from the verumontanum and starting with one lobe allows for effective mobilization. Splitting the adenoma may be helpful in cases of resistance during this maneuver.

Conclusions:
HoLEP has a steep learning curve, and en-bloc HoLEP with early apical release is emerging as the standard. Structured proctoring supports training, and this tutorial provides strategies to accelerate learning and skill aquisition.

V10
ROBOT-ASSISTED PYELOLITHOTOMY AND PYELOPLASTY FOR AN ECTOPIC PELVIC KIDNEY WITH MULTIPLE STONES: A CASE REPORT

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Context and Objectives
Ectopic pelvic kidney is a congenital abnormality often associated with urinary stones. Management of urolithiasis in these cases may be challenging due to the kidney's position and rotation. We aim to describe the surgical technique and outcomes of robot-assisted pyelolithotomy with pyeloplasty in a patient with a right ectopic pelvic kidney associated with uretero-pelvic junction (UPJ) stenosis and multiple renal stones.

Materials and methods
We report the case of transperitoneal robot-assisted pyelolithotomy and pyeloplasty for right pelvic kidney with multiple lithiasis. A 65-year-old male presented with abdominal pain in February 2024. Blood tests showed normal renal function (eGFR: 85 ml/min/1.73 m²). Contrast-enhanced CT confirmed the ectopic kidney, multiple stones, and UPJ stenosis, with preserved cortico-medullary differentiation. Surgery was scheduled in March 2024 using the Da Vinci Xi robotic system. The patient was positioned in 35º Trendelenburg. Four 8 mm robotic trocars were placed in a semilunar suprapubic configuration, with two assistant ports (12 and 5 mm). The kidney was identified in the right iliac fossa. The ureter and UPJ were incised and resected for histological evaluation. A longitudinal pyelolithotomy was performed, renal calyces were explored, and stones extracted using an endobag. The ureter was spatulated. Pyeloplasty was performed with two continuous 4-0 PDS sutures over a 5 Ch x 12 cm ureteral stent. No drain was placed.

Results
Operative time was 140 minutes; estimated blood loss was 50 ml. Seventeen stones (diameter range 10–30 mm) were removed. No intra- nor post-operative complications were reported. Bladder catheter was removed on postoperative day 3. Ultrasound confirmed correct stent position and absence of post-void residual. Length of stay was 4 days. Stones composition analysis revealed: 100% calcium oxalate. Final pathology of the UPJ was negative for neoplasia. Ureteral stent was removed 60 days after surgery through flexible cystoscopy. At one-year follow-up, the patient continued outpatient monitoring with stable eGFR and no signs of symptomatic recurrence.

Conclusion
In this report we presented the surgical technique of robot-assisted pyelolithotomy and pyeloplasty for the treatment of an ectopic pelvic kidney with multiple stones. The procedure resulted in favorable intra-operative and peri-operative outcomes, as well as satisfactory clinical and functional results at 1-yr follow-up.

V11
Robot-assisted transvesical resection of a leiomyoma of the bladder neck – case report

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Introduction and objective
This video presents the technique of robot-assisted transvesical resection of a 25 mm leiomyoma of the bladder neck in a 64-year-old female. The patient presented with frequency, urgency, straining to void and a sensation of incomplete emptying, unresponsive to anticholinergics. The only relevant medical history was a previous hysterectomy. MRI revealed a well-defined homogenous 25 mm nodule of the proximal urethra/bladder neck, consistent with a leiomyoma. Cystoscopy showed an anterior bladder neck nodule with normal mucosa. Transurethral resection was attempted and deemed unfeasible due to the anterior aspect of the lesion. A robot-assisted resection was then planned.

Methods
Port placement was carried out similarly to robot-assisted radical prostatectomy followed by a brief adhesiolysis. The bladder was incised vertically and opened with both sides of the incision lifted to the abdominal wall using 2-0 Prolene suture. The protruding intravesical lesion was identified and incised on its anterior side, semi-circumferentially. Urethral sparing was performed. After complete excision, the lesion was placed in an endobag. Reconstruction with 3-0 Stratafix running suture was then done and the bladder and peritoneum was closed with another 3-0 Stratafix suture.

Results
Cystography was performed on the 5th postoperative day showing no urinary leak. The patient presented fever with vomiting on the same day. A CT scan showed signs of sigmoiditis and an inferior mesenteric vein thrombosis. IV Ceftriaxone and oral Metronidazole were administered for 10 days, and anticoagulation was started for three months. The days following catheter ablation, the patient noticed an improved urinary flow without straining. She was completely continent but still presented mild urgency. Post void residue was 30 ml. The patient was discharged 3 weeks post-operatively.

Conclusions
This rare presentation of leiomyoma of the bladder neck presenting as mixed urinary symptoms in a female was both diagnostically and therapeutically challenging but was achievable with the assistance of the Da Vinci robot in a similar way to a transvesical prostatic adenectomy. Despite the favorable clinical results, the case underlines the risk of infectious and thrombotic complication even in robot assisted surgery.

V12
Roboterassistierte Ileum-Blasenaugmentation bei neurogener Blasenfunktionsstörung – ein Videoabstract

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Hintergrund:
Bei Patienten mit langjähriger neurogener und hypokapazitiver Blasenfunktionsstörung kann trotz optimaler konservativer Therapie eine therapierefraktäre Dranginkontinenz persistieren. In solchen Fällen stellt die chirurgische Blasenaugmentation eine etablierte Option zur Steigerung der Blasenkapazität und Verbesserung der Lebensqualität dar. Ziel dieses Videos ist die Darstellung der Technik der roboterassistierten Blasenaugmentation bei einer Patientin mit therapierefraktärer neurogener Blase.

Methodik:
72-jährige Patientin mit neurogener Blasenfunktionsstörung, die seit vielen Jahren intermittierenden Selbstkatheterismus durchführt. Trotz mehrfacher intravesikaler Botulinumtoxin-Injektionen, wiederholter Anpassungen der sakralen Neuromodulation sowie maximierter medikamentöser Therapie zeigte sich keine klinische Besserung. Die urodynamische Untersuchung ergab eine hypokapazitive, hypersensitive Blase mit Detrusor-Sphinkter-Dyssynergie.
In modifizierter Rückenlagerung erfolgte die Portplatzierung analog zur roboterassistierten radikalen Zystektomie, einschliesslich eines 12-mm-Assistenztrokars zur Einführung des Staplers. Nach sorgfältiger Adhäsiolyse wurde ein 20 cm langes Ileumsegment 20 cm proximal des ileozökalen Übergangs isoliert und mit zwei 60-mm-Goldstaplerreihen abgesetzt. Die Darmkontinuität wurde mittels Seit-zu-Seit-Anastomose wiederhergestellt. Das Ileumsegment wurde antimesenterial eröffnet, U-förmig konfiguriert und durch fortlaufende seromuskuläre Nähte der medialen Ränder mittels 3-0-V-Loc zu einer Augmentationsplatte geformt. Nach Füllung der Blase mit 200 ml NaCl-Lösung erfolgte eine transversale Inzision dorsal des Blasendoms. Das Augmentationspatch wurde daraufhin mittels 3-0-V-Loc-Naht spannungsfrei an die Blase anastomosiert. Der intraoperative Dichtigkeitstest verlief unauffällig.

Resultate:
Die Konsolenzeit betrug 127 Minuten, der geschätzte Blutverlust 20 ml. Es traten weder intra- noch frühpostoperative Komplikationen auf. Die Patientin konnte am dritten postoperativen Tag in gutem Allgemeinzustand entlassen werden. Die Zystographie am zehnten postoperativen Tag zeigte eine dichte Anastomose ohne Leckage.

Schlussfolgerung:
Die roboterassistierte Ileum-Blasenaugmentation konnte komplikationslos und mit kurzer Hospitalisationsdauer durchgeführt werden und stellt somit eine vielversprechende minimalinvasive Option für ausgewählte Patienten mit therapierefraktärer neurogener Blasenfunktionsstörung dar.

P001
Nurse-led preoperative patient screening reduces infectious complications in elective endourology

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Background & Objectives
Despite their minimally invasive nature, endourological procedures carry a relevant risk of postoperative urinary tract infections (UTI), leading to morbidity, prolonged or repeated hospitalizations and healthcare costs. The current EAU guidelines recommend obtaining a preoperative urine culture (UC) and initiating targeted antibiotic treatment in asymptomatic bacteriuria (ABU). Implementation is often hindered by decentralized care, limited standardization, and time constraints. To address these challenges, our clinic has implemented a nurse-led preoperative pathway specifically designed to screen all patients scheduled for elective endourological surgery two weeks prior to the procedure. This study evaluated its impact on infectious complications and preoperative preparation.

Materials & Methods
We retrospectively analyzed patients undergoing elective endourological procedures at a tertiary center (12/2019-12/2023). The nurse-led preoperative pathway was introduced in 05/2022 and included ensuring preoperative UC are available, reviewed and ABU are treated for 48h before surgery. Surgery was postponed in patients with untreated ABU or symptomatic UTI. The primary endpoint was postoperative infections and 30-day readmissions. Secondary endpoints included UC availability, antibiotic use, and infection risk factors.

Results
Of 824 patients, 447 (54%) were treated before and 377 (46%) after pathway implementation. Groups were comparable in age, ASA, CCI, diabetes, recurrent UTI, urinary tract catheter status, and immunosuppression. Procedures in the pathway and non-pathway groups included URS (25 vs 17%), TURP (30 vs 38%), TURBT (42% in both), and TURP+TURBT (3% in both). The availability of preoperative urine cultures increased from 53% to 97% after pathway implementation ($p < 0.001$). The pathway resulted in more patients treated with antibiotic therapy because of ABU (18 vs 34%, $p < 0.001$). The primary outcome of postoperative infections decreased from 11 to 6% after pathway implementation ($p = 0.016$), with fewer readmissions for infectious complications (9 versus 4%, $p = 0.004$) and the mean inpatient stay decreased from 3 to 2 days ($p < 0.001$).

Conclusions
After the implementation of a nurse-led preoperative assessment, we observed increased availability of urine cultures, more antibiotics to treat ABU and nearly a halving of infectious complications and readmissions as well as shorter hospital stays.

P002
A Step Towards Automated and Standardized Bladder Irrigation: A First Evaluation of the filaxONE Monitoring System

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Introduction
Postoperative bladder irrigation is a routine practice in urology, particularly following transurethral resection or enucleation. Manual irrigation systems require continuous supervision, leading to variability in care and increased workload for nursing staff. To date, no automated system exists to support standardized supervision and monitoring of bladder irrigation. This study contributes to the development of filaxONE — a novel system designed to automate and standardize postoperative bladder irrigation, enhance patient safety, and reduce staff burden across shifts.

Objectives and Methods
The aims of this study were to clinically evaluate the functionality and reliability of the FilaxONE system during routine bladder irrigation, assess its impact on nursing workload and explore its potential to support standardized and safe bladder irrigation practices in a real-world clinical setting. FilaxONE was implemented in the Department of Urology at Hospital Center Biel, Switzerland, over four weeks in spring 2025. Three devices (UB01–UB03) were used in 16 patients receiving postoperative bladder irrigation following HoLEP, TURBT, or treatment of macrohematuria. The system automatically recorded irrigation data, including start/stop times and bag changes. Interruptions were categorized by time of day (day vs. night) and analyzed per 24-hour cycle. Qualitative feedback from nursing staff was collected via structured questionnaires.

Results
Sixteen patients underwent bladder irrigation monitored by filaxONE, totaling 784 hours over the study period. Irrigation durations ranged from approximately 21 to 163 hours. Interruptions per 24 hours served as a key performance indicator. Daytime interruptions were more frequent (65%). In week one, the average interruption rate was 2.1 per 24 hours; this rose to 2.8 in week two (possibly due to system familiarization or patient-specific factors), but declined to 1.5 in week three and 0.5 in week four, indicating improved system stability and user adaptation.

Conclusion
filaxONE demonstrated functional reliability and increasing ease of use over time, supporting its potential for integration into routine postoperative bladder irrigation. The system reduced manual workload and interruptions, positively impacting nursing workflow across shifts.
While filaxONE supports standardization and safety, further technical refinement and broader usability testing are needed before widespread clinical adoption.

P003
Ex-vivo digital pathological imaging with the Vivascope confofocal microscopy for intraoperative diagnostics during ureterorenoscopy for upper tract urothelial cancer

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Purpose:
The use of intraoperative diagnostic during ureterorenoscopy (URS) for upper tract urothelial cancer (UTUC) may assist in deciding between kidney-sparing or radical surgical approaches. We assessed the diagnostic performance of confocal microscopy (CM) using the Vivascope CM system compared to conventional histopathology.

Methods:
This prospective single-center study included patients undergoing URS for suspected UTUC or during UTUC follow-up between May and August 2022. Each biopsy was analyzed first with the Vivascope CM, followed by conventional histopathology. The primary outcome was the UTUC detection rate; the secondary outcome was diagnostic performance, measured in terms of sensitivity, positive predictive value (PPV), and diagnostic accuracy.

Results:
Ten patients underwent URS, with a total of fourteen biopsy samples. Suspicion of UTUC emerged in four (28.6%) cases because of hematuria and in four (28.6%) cases by CT-scan, while the remaining six cases (42.9%) underwent URS during the follow-up for UTUC. Cancer detection using Vivascope CM was 70%. Sensitivity, PPV, and accuracy were 0.77, 0.87, and 70%, respectively. Five out of six high-grade cases detected by Vivascope CM were downgraded by conventional analysis. Per-patient detection rate was 77.8%, with one high-grade case downgraded. Vivascope CM produced artifacts that prevented histological analysis in two cases. The main limitation of current study is the low sample size.

Conclusions:
The Vivascope CM shows potential as a tool for intraoperative UTUC diagnostics and grading, potentially guiding kidney-sparing or radical treatment decisions during URS. Larger studies are required to validate these findings.

P004
Immediate bladder tumour pathology during transurethral resection of bladder tumour (TURBT) using ex vivo fluorescence confocal microscopy (FCM)

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Introduction:
Fluorescence confocal microscopy (FCM) is a promising imaging technique which produces immediate, high-resolution images of tissue samples. Although there is increasing evaluation of FCM in other cancers, such as prostate cancer, it has not yet been validated for bladder cancer. Intraoperative detection of detrusor muscle in primary transurethral resection of bladder tumour (TURBT) using FCM could help avoid re-resection and decrease healthcare costs due to absence of muscle in the tissue samples, improving patient quality of life. We aimed to produce a histological atlas of FCM images compared to paired traditional histopathological fixation.

Materials and Methods:
Serial specimens from TURBTs, performed while developing the standard operating procedures for the internal pilot phase of the prospective ex vivo IB1-LASERComplete trial (ISRCTN16114765), were used to acquire FCM images using the Histolog® Scanner (SamanTree Medical SA, Switzerland). A stain, Acridine Orange, is applied to the specimen and a single-face, high-resolution image is produced immediately (< 60 seconds). Formalin-fixed and FCM images were then compared by a urological histo-pathologist, to develop the histological atlas.

Results:
9 patients' specimens were used to develop the atlas. The median age was 71 years (IQR 18.5) and 4 of the cases were primary TURBTs (44%). Acquisition of digital FCM images was feasible for all patients and delayed comparison was possible. The use of the Acridine Orange was safe for the specimens, and did not influence the technical ability to perform and report the final formalin-fixed pathology report (gold standard). We present various paired images acquired during the development of the histological atlas.

Conclusions:
The use of FCM to detect detrusor muscle during TURBTs is promising and future clinical applications in bladder cancer are numerous. The ongoing pilot phase of the IB1-LASERComplete trial will assess the feasibility of using FCM in real-time for detrusor muscle status during primary TURBT.

P005
Bladder washing cytology for detection of urothelial carcinoma using catheter or flexible cystoscope: definitive results of a prospective randomized study. (The Bwash Study)

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Background and objectives
Bladder cancer (BC) ranks as the sixth most common cancer among men globally and its prevalence has been increasing. Urinary cytology places a key role in detecting BC, with a high specificity (73%- 100%) but a low sensitivity ranging from 40% to 85% depending on tumor grade. The performance of this test relies closely on the quality of the collected sample done after bladder washing. Two methods of collecting urinary cytology are considered: bladder catheterization after cystoscope removal and bladder lavage through the working channel of the flexible cystoscope itself. To our knowledge, no study has yet determined the optimal method that should be established as the gold standard. The aim of this study is to demonstrate that the use of a flexible cystoscope yields comparable results in terms of urine collection quality and is less painful for patients compared to intermittent catheterization.

Material and method
This non-inferiority randomized controlled prospective trial is conducted in the Urology department at the CHUV in Lausanne. Patients are randomized into either group A (intermittent catheterization) or B (flexible cystoscope) at each visit. The primary outcome is to compare the quality of urinary cytology based on the Paris System for Reporting Urinary Cytopathology, categorizing Category I as poor quality and on the cell count. The secondary outcome is to assess patient discomfort using the 0 to 10 visual analogue scale. Continuous variables were compared by Mann-Whitney U or Kruskal-Wallis as appropriate and categorical variables by χ^2 test.

Results
A total number of 411 patients were included in the study with 207 patients in group A and 204 patients in group B. Poor quality of urinary cytology was observed in 3.9% and 5.4 % of the patients in group A and B respectively ($p = 0.49$). Although there were significant differences in cell counts between cytological result categories, there was no evidence that the sampling method (catheter vs. cystoscope) influenced the number of cells. A mean VAS score of 2.02 was noted in group A while group B observed a score of 1.41 ($p = 0.003$).

Conclusion
This study demonstrates that the use of cystoscope assisted urine cytology is not inferior to sampling through catheterization. Moreover, the use of cystoscope seems in induce lower level of pain. These findings support the use of cystoscope-guided urine collection as the preferred method in clinical practice.

P006
Diagnostic accuracy of a Urine-based DNA Methylation Marker Test in Patients with Lesions in the Upper Urinary Tract: First Results of a European Validation Study

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Introduction:
Following previous results indicating a high diagnostic accuracy in detecting bladder and upper tract urothelial carcinoma (UTUC), 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 December 2023 and April 2025, urine samples from patients with suspected UTUC were collected prior to diagnostic ureterorenoscopy (URS) or (nephro)ureterectomy. Samples were analyzed with Bladder CARE™, which measures the methylation levels of 3 cancer biomarkers (TRNA-Cys, SIM2, and NKX1-1) and 2 internal controls. Results were categorized as high positive (> 10), low positive (2.5-10), or negative (< 2.5). The Youden Index was calculated to determine an optimal cut-off value.

Results:
The study included 30 patients with a median age of 74 (IQR 66-80), presenting with visible hematuria (n=14), non-visible hematuria (n=17) or incidental findings (n=16) of which 23 underwent a diagnostic URS. 10 were negative, while 13 had an URS suggesting cancer. 14 patients underwent a radical nephroureterectomy, 2 a partial ureterectomy and 2 a nephrectomy. 11 patients received no definitive treatment either because no tumor was suspected in the URS or in patients not willing to undergo further treatment. Sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) for urine cytology was 12%, 100%, 100%, 50% and for the Bladder Care Index (> 2.5) 94%, 71%, 79%, 91%. Youden Index was 0.88 with an AUC of 0.96 suggesting a cut off value of 6.25. With this cut off, sensitivity, specificity, PPV and NPV were 88%, 100%, 100%, 88%.

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 UTUC, aiding in the choice between nephrectomy and nephroureterectomy. Moreover, the test's high specificity and PPV could potentially eliminate the need for diagnostic URS in patients with a Bladder CARE Index > 6.25, reducing the risk of URS related seeding and expediting definite treatment.

P007
Hyperthermic intravesical chemotherapy (HIVEC) using Epirubicin shows excellent oncologic long-term results when given in a first line setting or due to BCG failure

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Background and Objectives:
Intravesical instillation of Bacillus Calmette-Guérin (BCG) is the standard therapy for patients with high-risk non-muscle-invasive bladder cancer. In case of BCG therapy failure, device-assisted hyperthermic intravesical chemotherapy (HIVEC) using Epirubicin can be offered to patients who are unfit for or refuse to undergo radical cystectomy. Furthermore, HIVEC represents a therapeutic alternative as first-line intravesical instillation therapy in cases of BCG shortage or contraindications to BCG. The aim of our study was to investigate long-term oncologic outcomes of patients treated with HIVEC in a first- or second-line treatment setting.

Material and Methods:
We retrospectively analyzed a prospectively maintained database of patients who underwent device-assisted HIVEC with Epirubicin between April 2017 and December 2024 at two Swiss University Centers. Recurrence-free survival (RFS) and progression-free survival (PFS) were assessed using Kaplan-Meier curves. Univariable and multivariable Cox regression models were used to identify risk factors for recurrence and progression.

Results:
We included 88 patients, of whom 23 (26.1 %) received HIVEC in a first-line setting and 65 (73.9 %) were treated with HIVEC due to BCG failure. Mean follow-up was 38 (IQR 22-54) months. While 53 (60.2 %) patients did not recur, 35 (39.8 %) patients recurred with a median time to recurrence of nine (IQR 5-21) months. Intravesical and extravesical recurrence was observed in 25 (28.4 %) and 21 (23.9 %) patients, respectively. Eleven (12.5 %) patients experienced both intra- and extravesical recurrence. Median overall RFS was 26 (IQR 8-44) months. In the group of patients receiving HIVEC due to BCG failure, 33/65 (50.7 %) experienced recurrence while only 2/21 (9.5 %) patients who received HIVEC in a first-line setting recurred. Thirteen (14.8%) patients had to undergo radical cystectomy, due to recurrence in 11 (12.5 %) cases. Twenty-one patients (23.9 %) progressed to metastatic disease, with seven (33.3 %) of these having previously developed extravesical disease.

Conclusion:
Device-assisted HIVEC using Epirubicin achieves excellent long-term RFS survival rates in patients with NMIBC, especially when given in a first-line setting. Nevertheless, intravesical and extravesical recurrence occur frequently and are associated with progression, metastatic disease and consequently poor outcomes.

P008
Gender Disparities in Perioperative Outcomes After Radical Cystectomy for Localized Muscle-Invasive Bladder Cancer

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Background & Objectives:
Radical cystectomy (RC) is the gold standard treatment for localized muscle-invasive bladder cancer (MIBC), despite its notable morbidity. Gender disparities in MIBC have been reported, with women often presenting with more advanced disease and worse survival. However, data on gender differences in RC perioperative outcomes are scarce. This study aims to assess gender disparities among patients undergoing RC for localized MIBC.

Materials & Methods:
In a monocentric retrospective study (2019–2024), consecutive patients undergoing RC with urinary diversion (UD) for localized MIBC at our institution were included. Pre-, peri-, and postoperative data were extracted from prospectively documented records.

Results:
Among 117 included patients, 84 (72%) were men and 33 (28%) women. Median age was 72 (IQR 65-78) years, median Charlson Comorbidity Index (CCI) was 4 (3-6). A smoking history was more frequently reported in men than women (81% vs 52%; p = 0.001). Open RC was the favored approach (89; 76%), and UD was mostly ileal conduit (89; 76%) or orthotopic neobladder (IONB) (24; 20%). Men were more likely to receive IONB than women (24% vs 12%; p = 0.022). Median intraoperative blood loss (BL) (600 (300-1000) mL), operative time (353 (294-461) minutes) and surgical margins (R0: 102; 87%) did not significantly differ between sexes. Women presented with more advanced disease (pT2-4; 70% vs 44%; p = 0.042). The overall postoperative complication (CPL) rate was significantly higher in men than women (85% vs 67%, p = 0.031), particularly within the first 30 days after surgery (80% vs 61%, p = 0.033). Among all patients, 24 (21%) experienced a serious CPL (Clavien-Dindo ≥ 3b) within 90 days. These were more common in men than women (26% vs 6%, p = 0.030), as were revision surgeries (17% vs 3%, p = 0.047). In multivariate analysis adjusted for age, CCI, smoking history, BL, pTstage, UD type, male sex remained an independent predictive factor of postoperative CPL (OR 3.3; 95% CI 1.05–11.1; p = 0.038). After a median follow-up of 16 (8-35) months, oncological outcomes were similar between sexes.

Conclusion:
Despite having more advanced disease, women experienced fewer postoperative CPL following RC for localized MIBC. Male sex was an independent predictor of perioperative morbidity, highlighting the need for targeted surgical prehabilitation strategies in men to reduce gender-related disparities in RC outcomes.

P009

Impact of prior non-muscle invasive bladder cancer on the effectiveness of neoadjuvant chemotherapy in patients undergoing radical cystectomy for localized muscle-invasive bladder cancer: a real-world analysis of the BLADRAC cohort

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Introduction & Objectives:
The use of neoadjuvant chemotherapy (NAC) is currently considered as the standard of care in patients undergoing radical cystectomy (RC) for localized muscle-invasive bladder cancer (MIBC). However, no corresponding randomized controlled trial specified if included patients had primary or secondary MIBC. The aim of our real-world study was to evaluate the impact of prior non-MIBC (NMIBC) on the effectiveness of NAC in patients undergoing RC for localized MIBC

Materials & Methods:
Within the BLADRAC cohort, we retrospectively identified 2,220 MIBC patients with or without prior NMIBC who underwent RC with or without NAC between 2001 and 2023 at 15 French centers. Multivariable logistic and Cox regression models were used to assess the impact of prior NMIBC and NAC on pathological objective (pOR ≤ ypT1N0) and complete (pCR = ypT0N0) response or recurrence-free (RFS), cancer-specific (CSS) and overall (OS) survival. Interaction tests between prior NMIBC and the use of NAC were conducted in each of these models to evaluate the impact of prior NMIBC on NAC effectiveness

Results:
Overall, 496 (22%) and 1,724 (78%) patients had prior and no prior NMIBC, respectively. In addition, 846 (38%) and 1,374 (62%) patients received and did not receive NAC, respectively. Prior NMIBC had no significant impact on pOR (OR=0.94; 95%CI=[0.74- 1.20]; p = 0.630) or pCR (OR=0.79; 95%CI=[0.58-1.06]; p = 0.109), while the use of NAC was associated with better pOR (OR=4.96; 95%CI=[4.01-6.14]; p < 0.001) and pCR (OR=5.95; 95%CI=[4.58-7.72]; p < 0.001). There was no significant interaction between prior NMIBC and the use of NAC for pOR (p = 0.233) and pCR (p = 0.444).
After a median follow-up of 37 [14-79] months, prior NMIBC had no significant impact on RFS (HR=1.02; 95%CI=[0.88-1.18]; p = 0.790), CSS (HR=1.09; 95%CI=[0.90-1.32]; p = 0.365) and OS (HR=0.97; 95%CI=[0.82-1.15]; p= 0.742), while the use of NAC was associated with prolonged RFS (HR=0.63; 95%CI=[0.55-0.73]; p < 0.001), CSS (HR=0.58; 95%CI=[0.48-0.70]; p < 0.001) and OS (HR=0.62; 95%CI=[0.52-0.74]; p < 0.001). There was no significant interaction between prior NMIBC and the use of NAC for RFS (p = 0.769), CSS (p = 0.577), or OS (p = 0.776)

Conclusions:
Our real-world analysis shows that prior NMIBC is neither a prognostic factor nor a predictor of NAC effectiveness in patients undergoing RC for localized MIBC. Therefore, NAC should be used before RC to treat primary as well as secondary MIBC

P010

Comparative effectiveness of neoadjuvant chemotherapy using >4 vs. 4 cycles of dd-MVAC in patients undergoing radical cystectomy for localized muscle-invasive bladder cancer: a real-world analysis of the BLADRAC cohort

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Introduction & Objectives:
Although an ancillary analysis of the VESPER trial showed the survival benefit of delivering neoadjuvant chemotherapy (NAC) using 4 vs. < 4 cycles of dd-MVAC in patients undergoing radical cystectomy (RC) for localized muscle-invasive bladder cancer (MIBC), the interest of extending this treatment beyond 4 cycles remains unclear. Thus, the objective of our real-world study was to compare the effectiveness of NAC using > 4 vs. 4 cycles of dd-MVAC in patients undergoing RC for localized MIBC.

Materials & Methods:
Within the BLADRAC cohort, we retrospectively identified 401 patients who underwent NAC using at least 4 cycles of dd-MVAC followed by RC for localized MIBC between 2001 and 2023 at 15 French centers. Multivariable logistic regression models were used to assess the impact of the number of dd-MVAC cycles received (> 4 vs. 4) on pathological objective (pOR ≤ ypT1N0) and complete response (pCR = ypT0N0). Recurrence-free survival (RFS), cancer-specific survival (CSS) and overall survival (OS) were analyzed using the Kaplan-Meier method with log-rank test and multivariable Cox models.

Results:
Overall, 121 (30%) and 280 (70%) received >4 or 4 cycles of dd-MVAC before RC, respectively. The median number of dd-MVAC cycles received in the >4 cycles group was 6 [5-6]. The use of >4 vs. 4 cycles of dd-MVAC was associated with better pCR (OR = 1.92; 95% CI = [1.20-3.09]; p = 0.007) without any significant impact on pOR (OR = 1.53; 95% CI = [0.94-2.51]; p = 0.09). The median follow-up was 38 [19-68] months. The 5-year RFS, CSS, and OS rates were 71% vs. 63% (p = 0.21), 83% vs. 79% (p = 0.23), and 79% vs. 75% (p = 0.27) in the > 4 vs. 4 cycles groups, respectively. The use of > 4 vs. 4 cycles of dd-MVAC did not significantly impact RFS (HR = 0.72; 95% CI = [0.47-1.09]; p = 0.123), CSS (HR = 0.65; 95% CI = [0.34-1.21]; p = 0.174) and OS (HR = 0.73; 95% CI = [0.43-1.25]; p = 0.253).

Conclusions:
Our real-world analysis of the BLADRAC cohort shows that extending NAC beyond 4 cycles of dd-MVAC in patients undergoing RC for localized MIBC partially improves local disease control without any survival benefit. These findings suggest that only 4 cycles of dd-MVAC should be delivered for NAC in RC patients, especially given its cumulative toxicity.

P011
Efficacy and safety of naloxegol - a peripherally acting μ-opioid receptor antagonist - for prevention of postoperative ileus in patients undergoing radical cystectomy, a retrospective analysis

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Background:
Postoperative ileus is a frequent complication following radical cystectomy, affecting up to 40% of patients and contributing substantially to postoperative morbidity. Alvimopan, a peripherally acting μ-opioid receptor antagonist, has been shown to enhance gastrointestinal recovery and reduce the incidence of postoperative ileus and is now recom-mended by the AUA guidelines. However, Alvimopan is not available in Europe, raising the question of whether alternative peripheral μ-opioid receptor antagonists available in Europe, such as naloxegol or methylnaltrexone, may offer similar benefits. This study aims to assess the safety and effectiveness of off-label naloxegol in patients undergoing radical cystectomy.

Methods:
We conducted a retrospective analysis of patients who underwent radical cystec-tomy at a tertiary referral center. In March 2024, a change to the perioperative pathway was implemented, introducing naloxegol 25 mg starting on the day of surgery. Naloxegol was continued daily for up to 7 days, or until gastrointestinal recovery or the development of postoperative ileus. We compared the safety and incidence of postoperative ileus in patients treated with naloxegol before and after March 2024.

Results:
Eighteen patients who received perioperative naloxegol were compared to 61 pa-tients without naloxegol. Baseline characteristics, including age, gender, body mass index, ASA score, type of urinary diversion, and operative time, were well balanced between groups. Naloxegol was administered for a median of 5 days (IQR 3–7), and no adverse events related to its use were observed. The incidence of postoperative ileus was lower in the nalox-egol group compared to the historic control without naloxegol (22% vs. 38%), although this difference did not reach statistical significance (odds ratio 0.47; 95% CI: 0.14–1.57; p = 0.22). The median length of hospital stay was significantly shorter in the naloxegol group (7 days [IQR 6–9]) compared to the control group (12 days [IQR 8–16]; p < 0.01).

Conclusion:
Perioperative use of naloxegol in patients undergoing radical cystectomy was safe and may offer a lower risk of postoperative ileus and a shorter hospital stay. These find-ings suggest that naloxegol may be a promising alternative to alvimopan in enhancing post-operative recovery, particularly in settings where alvimopan is not available.

P012
Oncological and Functional Follow up after Cystectomy or Trimodal Therapy for Bladder Cancer– A multicenter, prospective cohort study (INFORMATORY Trial)

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Introduction: Follow up after radical cystectomy or trimodal therapy (TMT) for bladder cancer is essential for early detection of recurrence and prevention of functional complications. However, current follow-up protocols are largely based on expert opinion and lack robust clinical evidence. In May 2024, a national Swiss consensus conference defined new risk-adapted, personalized follow-up schedules. The INFORMATORY trial aims to prospectively evaluate these protocols with regards to both oncological and functional outcomes.

Methods: INFORMATORY is a national, multicenter, prospective cohort study including patientswith bladder cancer treated with radical cystectomy or TMT. Patients will be followed for 24 months using personalized follow-up protocols developed during the Swiss consensus conference. Data will be collected through the Swiss Urological Society registry (ADJUMED) and include laboratory values, imaging, novel biomarkers (circulating tumor DNA, urine methylation markers), and patient-reported outcome measures (PROMs). The primary endpoint is the rate, timing, and anatomical localization of tumor recurrence. Secondary endpoints include sensitivity/specificity of biomarkers, complication rates, quality of life (via PROMs), and cost-effectiveness.

Results: The study is planned to include approximately 400 patients between 2025 and 2027. During the consensus conference, 19 certified cystectomy centers have committed to participation. The ADJUMED registry is currently being adapted to incorporate the new follow-up variables, including novel PROMs. Implementation of the study protocol has begun, with first data expected in Q1/2026. Data will be compared to historical registry controls and analyzed using Kaplan-Meier survival curves, Cox regression, and cost-effectiveness modeling.

Discussion: The INFORMATORY study will be the first prospective evaluation of a risk-adapted follow-up in bladder cancer care. It integrates oncological surveillance with functional monitoring in a real-world setting. The use of PROMs, biomarkers, and personalized schedules is expected to enhance quality of care and optimize resource allocation. The study results will inform national guidelines and potentially establish a new standard for follow-up care after radical cystectomy or TMT in Switzerland.

P013
Application of the Stockholm3 biomarker test in Switzerland – Real-world data from a tertiary care center

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Introduction and Aim
The Stockholm3 (S3) blood test, which integrates clinical data, protein levels, and genetic markers, helps estimate clinically significant prostate cancer (csPCa, ISUP grade ≥ 2) risk and guide clinical decisions. As shown in previous reports, the test can effectively decrease overdetection of PCa while retaining the ability to detect csPCa. This study presents real-world data on S3 use in Switzerland.

Methods
The study included men who were selected for S3 testing, either as part of PCa screening or because of elevated PSA levels, at a tertiary care center in 2023. Participants with a PSA < 1.50 ng/ml or under active surveillance were excluded. Data was collected prospectively and followed up for 1 year after sample collection. S3 cutoff values 11% and 15% were evaluated against PSA ≥ 3.00 ng/ml regarding the prediction of csPCa.

Results
A total of 223 men fulfilled inclusion criteria, with a median age of 63 years (IQR 58–69), PSA level of 3.91 ng/ml (IQR 2.54–6.08) and S3 score of 11 (IQR 7–17). One-hundred-fifteen participants (51.6%) had a S3 score ≥ 11 and 146 (65.5%) had a PSA ≥ 3 ng/ml.
Among those with a S3 score ≥ 11 and no preceding prostate imaging (n = 79), 46 participants (58.2%) underwent multiparametric MRI, identifying 32 with PI-RADS ≥3 lesions (40.5%). In this cohort, 21 men (26.6%) underwent prostate biopsy, diagnosing 9 cases (11.4%) of csPCa and 5 cases (6.3%) of ISUP grade 1 PCa. Compared to PSA ≥ 3 ng/ml, using a S3 threshold of ≥ 11 as an indication for further workup would reduce the number of potential MRIs by 23.3% (79 vs. 103), expedite the diagnosis of 1 case of csPCa (9 vs. 8) and maintain the number of ISUP grade 1 PCa diagnoses (5 vs. 5). An alternative S3 threshold of ≥ 15 would lead to a reduction of MRIs by 52.4% (49 vs. 103), delaying the diagnosis of 1 case of csPCa (7 vs. 8), yet avoiding detection of 1 additional ISUP grade 1 PCa (4 vs. 5).
Forty-one participants underwent S3 testing within 1 year after MRI, of which 29 had a S3 score ≥ 11. A combination of S3 ≥ 11 and PI-RADS ≥ 3 (n = 23) led to a biopsy and csPCa detection rate of 43.5% and 8.7%, respectively.

Conclusion
Compared to a PSA-based diagnostic strategy, S3 could noticeably reduce unnecessary MRIs in men presenting for PCa screening. A S3 threshold of ≥ 15 halved the number of potential MRIs and reduced ISUP 1 PCa diagnoses, whilst retaining a good detection rate for csPCa. Based on prior reports, we suggest the use of a 15% cutoff.

P014

Diagnostic Limitations of Lesion Size, PSA Density, and Reader Expertise in Identifying Men with PIRADS 4/5 Lesions Who Could Safely Avoid Prostate Biopsy: A retrospective analysis.

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Background:
Multiparametric MRI with PIRADS scoring has become a standard tool in prostate cancer diagnostics. Despite high sensitivity, PIRADS 4 and 5 lesions still frequently yield non-significant cancer (ISUP grade group 1) or benign findings on biopsy, raising the question in which men with PIRADS 4/5 lesions, we might safely omit invasive biopsies.

Methods:
We conducted a retrospective analysis of patients who underwent targeted prostate biopsies between November 2023 and March 2025. We developed logistic regression models incorporating lesion size (mm), PSA density, and reader expertise (expert vs. non-expert) to predict the presence of clinically significant prostate cancer (defined as ISUP grade group ≥ 2). The models were evaluated with ROC analysis, sensitivity, specificity, positive predictive value, and negative predictive value.

Results:
Among 285 consecutive patients with PIRADS 4 or 5 lesions (180 PIRADS 4, 105 PIRADS 5), 58% harboured non-significant disease (ISUP grade group 1 or benign). Our predictive model demonstrated modest discriminatory ability with an optimal threshold achieving 77% sensitivity for detecting significant cancer, but specificity was only 69%, with a negative predictive value of 80%. The model correctly classified 72% of cases. Neither lesion size (optimal cutoff 12.5mm), PSA density (optimal cutoff 0.19), reader expertise (OR 1.92, 95% CI: 1.02-3.62), nor their combination achieved sufficient negative predictive value to safely recommend omitting biopsy.

Conclusions:
Despite the hope that clinical and radiological parameters might potentially spare some men from unnecessary biopsies, our findings suggest that no combination of PIRADS lesion size, PSA density, and reader expertise can reliably identify men with PIRADS 4 or 5 lesions who can safely forego biopsy. The limited accuracy of these parameters in identifying men without significant cancer (20% of patients would be misclassified and not undergo biopsy) supports the current recommendation that all men with PIRADS 4 and 5 lesions should undergo prostate biopsy.

P015
Classification of high-risk prostate cancer based on T3 on MRI: are we overestimating the risk?

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Introduction:
MRI-based detection of extraprostatic extension has been widely equated with clinical T3. Whether MRI T3 correlates with the same poor oncological outcomes as cT3 remains unclear.

Patients and methods:
Data on a consecutive series of 487 men undergoing prostatectomy between 2017-2022 were retrospectively analyzed. Based on preoperative PSA, ISUP GG and T3 status on mpMRI patients were classified as STAMPEDE high-risk cN0 (at least 2 parameters: ISUP GG 4-5, T3-4, PSA >40ng/ml) and high-risk according to EAU guidelines (cN0). PSA persistence, biochemical recurrence-free survival (BCRFS), and the frequency of postoperative adjuvant treatments were assessed.

Results:
459 men were included in the analysis, with a median age of 71 years and a median PSA value of 7.49 ng/mL. pT3 disease were observed in 167 (36.4%) cases. The distribution of ISUP 2, 3 and 4-5 on final pathology was 166 (36.2%),176 (38.3%), and 110 (24%). Median follow-up was 50.8 months.
T3 on MRI was reported in 125 (27.2%) men; among this group, pathological T3 was confirmed in 84 cases (67.2%). The sensitivity, specificity, PPV, and NPV of MRI for detecting pathological T3 disease were 50%, 86%, 67%, 75%, respectively.
A total of 52 men (12%) were classified as STAMPEDE high-risk and 200 (46.1%) as EAU high-risk. In the STAMPEDE group, 15 men (28.9%) showed PSA persistence. The estimated 5-year BCRFS rate was 63.1% and adjuvant therapy was performed in 23 men (44.2%) during the follow-up period.
In the EAU high-risk group, PSA persistence was observed in 37 men (18.5%). The estimated 5-year BCRFS rate was 61.5%. Adjuvant therapy was performed in 68 men (34%)

Conclusion:
In this selected group of men classified as high-risk preoperatively more than half showed a favorable oncological outcome without the need of subsequent therapies after surgery.

P016
Critical Importance of Expert Genitourinary Radiologist Interpretation in Prostate MRI: Impact on Clinically Significant Cancer Detection

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Background:
Multiparametric MRI has revolutionized prostate cancer diagnosis, but interpretation variability may significantly impact clinical decision-making. The influence of reader expertise on diagnostic accuracy, particularly for PI-RADS 4/5 lesions, remains incompletely characterized in routine clinical practice. Our aim was to evaluate the impact of expert genitourinary (GU) radiologist interpretation on the accurate detection of clinically significant prostate cancer (csPCa) in men with PI-RADS 4/5 lesions.

Methods:
We conducted a retrospective analysis of 270 consecutive patients with PI-RADS 4 and 5 lesions (177 PI-RADS 4, 93 PI-RADS 5) with a PSA < 50 who underwent targeted prostate biopsies between November 2023 and March 2025. Readers were categorized as GU imaging experts (n=72) or non-experts (n=196). We developed a multivariate logistic regression model incorporating reader expertise, lesion size, and PSA density (categorized as < 0.1, 0.1-0.20 and > 0.20) to predict the presence of csPCa (defined as ISUP grade group ≥ 2).

Results:
In an univariate analysis, expert GU radiologists demonstrated significantly higher accuracy in identifying csPCa than non-experts (OR 1.92, 95% CI: 1.111-3.333, p=0.01) and remained an independent predictor of csPCa detection in a multivariate analysis (OR 2.00, 95% CI: 1.063-3.796, p=0.032) including lesion size (OR 1.10, 95% CI: 1.058 – 1.159, p= < 0.01) and PSA density > 0.2 (OR 4.42, 95% CI:1.77 – 11-02, p=0.001).
Expert readers achieved higher specificity (72% vs 58%) and positive predictive value (68% vs 52%) for detecting csPCa compared to non-experts, potentially reducing unnecessary biopsies by 14%.

Conclusions:
Our findings demonstrate the critical importance of expert GU radiologist interpretation in pre-biopsy MRI assessment of the prostate. The significant influence of reader expertise on diagnostic accuracy underscores the urgent need for specialized training and experience in prostate MRI interpretation. Healthcare systems should prioritize access to expert GU radiologists for prostate MRI interpretation to optimize clinical decision-making and patient outcomes.

P017
Increasing interdisciplinary demand for Androgen Receptor Pathway Inhibitors (ARPI): first and last results of a urology led advanced prostate cancer clinic

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Background
Metastatic hormone-sensitive prostate cancer (mHSPC) remains incurable, but recent novel treatment intensifications have improved survival while maintaining quality of life. Managing these patients requires a team approach to optimize treatment, manage potential side effects, and provide the best personalized care. We report our experience of a urology-led medical oncology clinic.

Materials and Methods
All patients were reviewed by a multidisciplinary tumor board. A structured baseline assessment was performed that included cardiovascular evaluation (SCORE2-OP and ECG), geriatric screening (G8), urological examination, and fracture risk assessment. Patients were monitored at increasing intervals (every 4–6 weeks) through physical examinations, structured questionnaires, laboratory testing, and cardiology assessments. An early dentist visit was encouraged. Adverse events and treatment-related side effects were recorded using a standardized documentation protocol.

Results
Since August 2024, eight patients were followed in our clinic. Treatment indications included locally advanced prostate cancer (n=1), mHSPC (n=6), and biochemical recurrence with a PSA doubling time ≤ 9 months (n=1). Androgen deprivation therapy was administered orally (n=2) or subcutaneously (n=6). Six patients received ARPIs: abiraterone (n=3), enzalutamide, apalutamide, and darolutamide (1 each). All received bone protection (bisphosphonates, calcium, vitamin D); three visited a dentist. Six men required additional specialist consultations: 1 with endocrinology for diabetes management, and 5 with cardiology for cardiovascular optimization, of which 1 resulted in a relative contraindication for abiraterone. Pharmacological review revealed significant drug interactions in 2 of 3 assessed patients, prompting ARPI choice changes in one. Adverse events occurred in two patients: one experienced severe fatigue leading to treatment discontinuation, and another suffered a bone fracture despite osteoporosis prophylaxis.

Conclusion
In our view, the management of locally advanced or mHSPC has become interdisciplinary teamwork that requires structured baseline assessments and follow-up. Given the likely treatment intensifications already in the mHSPC setting and more personalized management needs, in the future we will improve the care of our patients by setting up a joint prostate cancer clinic where patients are seen and discussed by oncologists and urologists during the same visit

P018
Immersive virtual reality for patient's anxiety management during transperineal prostate biopsies under local anesthesia: A prospective randomized controlled trial

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Objectives:
Transperineal prostate biopsies (TP-PB) can be safely performed in an outpatient office setting under local anaesthesia. However, managing procedural anxiety remains challenging. Anxiety can lead to increased pain, longer procedure time, and decreased satisfaction. 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 February 2024 and November 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 trough validated standardized questionnaires, namely State-Trait Anxiety Inventory (STAI) as well as blood pressure and heartrate 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:
60 patients have currently been included with similar demographics, preoperative oncological data and complications. VR currently fail to show significant improvement on anxiety scores (STAI VR: 26/80, Control 28/80). However, VR patients reported high subjective satisfaction, with 91% (30/33) agreeing it improved their experience, and 94% (31/33) indicating they would request VR for future PB. Both groups showed good tolerability of TP-BP with high satisfaction levels (EVA VR: 9,1/10, Control 9,1/10) and acceptable pain levels (EVA VR: 4.2/10, Control 4.8/10).

Conclusion:
Although no objective reduction in anxiety scores was currently observed yet, the device was well-received and may hold value in facilitating TP-PB. The low anxiety scores observed in both groups can be attributed to the high-quality patient management provided by a certified prostate nurse. Final conclusions are pending completion of the study and the inclusion of the remaining participants.

P019
Assessment of the Influence of Socioeconomic Position in the Use of Active Surveillance in low-risk Prostate Cancer

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Objectives
Active Surveillance (AS) is the recommended primary management option in low-risk prostate cancer (PCa) as it successfully reduces overtreatment. Recent data demonstrated only weak uptake of AS in the canton of Zurich. The present study aimed to investigate the use of AS in Switzerland and assess the influence of the socioeconomic positions of patients (SEP).

Materials and methods
This study assessed all PCa ISUP Grade Group 1 diagnosed between 2020 and 2021 from the dataset of the National Agency for Cancer Registration (NACR). Extracted variables included age group, PSA value, the patient's residence, and the treatment CHOP-Codes (Swiss Classification of Surgical Interventions). Based on the CHOP-Codes, treatment decisions were categorized as Observation, Active Treatment, or unknown. SEP deciles of the patients' municipality were matched to each patient. A multivariable regression analysis was performed to assess risk differences for receiving an observational treatment.

Results
A total of 4296 men were included: 2876 men (65.4%) received Observation, 792 (18.8%) underwent Active Treatment, and in 728 (16.6%), management was unknown. Compared to the lowest SEP group, middle and high SEP had increased odds of observational treatment (Odds Ratios [ORs] of 1.14 (95% confidence interval [CI]: 0.95–1.38) and 1.34 (95% CI: 1.09–1.65). Men aged 60–70 years and > 70 years had an OR of 1.53 (95% CI: 1.24–1.89) and 2.10 (95% CI: 1.68–2.62) for receiving observational management compared to men aged < 60 years. PSA levels of 5–10 ng/ml (OR: 0.67, 95% CI: 0.55–0.82) and > 10 ng/ml (OR: 0.60, 95% CI: 0.46–0.78) led to lower odds of observational management compared to men with a PSA < 5 ng/ml.

Conclusion
Most men diagnosed with localized low-risk PCa in Switzerland between 2020 and 2021 underwent observational management as the primary strategy, although still approximately 20% of men received Active Treatment for low-risk PCa. Lower SEP, younger age, and higher PSA values were risk factors for Active Treatment within low-risk PCa.

P020
Survey of 23 Urology Institutions on Treatment Strategies for Large Volume Prostate Adenomas >80mL in BPH Management, A Study on behalf of the ERUS Reconstructive Scientific Working Group

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Background
Benign prostatic hyperplasia (BPH) with large-volume prostate adenomas presents a significant therapeutic challenge. Laparoscopic and robotic simple prostatectomy (SP) as well as anatomic endoscopic enucleation of the prostate (AAEP) have emerged as valuable procedures offering minimally invasive alternatives to open surgery.

Methods
A structured survey was distributed to robotic urology institutions to determine current clinical practice for adenoma > 80 mL. Choice of procedure, surgical techniques, energy sources and annual case numbers were analyzed.

Results
23 urology robotic institutions in Europe and the USA participated the survey. For large-volume prostate adenomas >80mL, the treatment options were robot-assisted SP (RASP) in 20/23 centers (87%), AEEP in 19/23 centers (82%), open SP in 7/23 centers (30%), conventional resection (TURP) in 3/23 centers (13%), prostate artery embolization in 3/21 centers (13%), laparoscopic SP in 2/23 center (9%) and aqua-ablation in 2/23 center (9%). The main energy source for AEEP was HoLEP in 11/19 (57%) centers, ThuLEP in 4/19 (21%) centers, MiLEP in 3/19 (16%) centers, and ThuFLEP or bipolar 1/19 (5%) centers each. Regarding prostate size, RASP was offered in 16/20 (80%) centers with no size restriction, while AEEP was offered in 15/19 (79%) centers with a size restriction below 300g. Annual case numbers were 0-25 (IQR 0-25, 25–50) for RASP and 125–150 (IQR 50-75, >150) for AAEP.

Conclusion

The survey highlights that RASP and AEEP are the leading techniques for the treatment of large prostate adenomas. While RASP appears to be a size-unlimited procedure, the number of AEEP procedures far exceeds that of RASP. Further studies are warranted to compare the surgical outcomes of these two different minimally invasive approaches.

P021
Outcome of Extraperitoneal Extravesical Robot-Assisted Simple Prostatectomy (EE-RASP) with Intraprostatic Urethral Reconstruction: A Case Series

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Background:
The treatment of large-volume prostate adenomas presents a significant therapeutic challenge in benign prostatic hyperplasia (BPH) management. The aim of this study was to elucidate the perioperative and functional outcomes of extraperitoneal extravesical robot-assisted simple prostatectomy (EE-RASP) with complete intraprostatic urethral reconstruction. Early improved functional outcome is hypothesized by closing the prostatic fossa.

Methods:
Patients treated with EE-RASP between August 2019 and July 2024 at our center were retrospectively analyzed. Functional outcomes, including uroflowmetry rates, post-void residual volume (PVR), International Prostate Symptom Score (IPSS) and Quality of Life- Scores (QoL), were assessed at 6 weeks and 1 year. Postoperative complication rates were evaluated at 30 and 90 days.

Results:
130 patients underwent EE-RASP with intraprostatic urethral reconstruction. The median prostate volume was 110mL (IQR 100-140). The median operative time was 192 min (IQR 168-239) with median blood loss of 250 mL (IQR 150-400). At 6 weeks, the median difference in peak urinary flow rate was 7.3mL/s, increasing to 15 mL/s (IQR 10.3-22.6). PVR was reduced by a median of 113mL to 17 mL (IQR 0-30). Furthermore, the median IPSS decreased from 18 points (IQR 12-24) to 4 points (IQR 2-7) and median QoL improved from 4 points (IQR 3-5) to 1 point (IQR 0-1). Clavien Dindo complications ≥ III occurred in 9/130 cases (7%) and in 1/130 case (1%) at 30 and 90 days, respectively. Postoperative hematuria was uncommon and was observed in 3 cases (2.3%). Outcomes remained consistent at the 12-month follow-up.

Conclusion:
The EE-RASP technique with urethral reconstruction demonstrates a significant improvement in quality of life by reducing lower urinary tract symptoms at both short and long term follow-up.

P022
Implementation of Holmium Laser Enucleation of the Prostate (HoLEP) in a Swiss University Hospital: The HUG Experience

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Introduction
Holmium Laser Enucleation of the Prostate (HoLEP) is an established technique for the management of benign prostatic hyperplasia (BPH), offering an alternative to conventional endoscopic methods and open adenomectomy. However, its learning curve is steep and typically requires supervision by an expert surgeon. The aim of this study is to report the implementation of this technique at Geneva University Hospitals (HUG) as part of a structured proctoring program.

Material and Methods
We conducted a retrospective study including the first 30 HoLEP procedures performed at HUG between October 2023 and February 2025. Surgeries were performed by two surgeons with extensive experience in BPH surgery, both in the early learning phase of HoLEP. Initial cases were supervised by an expert surgeon, followed by a gradual transition to autonomous practice. The en-bloc technique with early apical release was used. Holmium laser settings were 2 J of energy and 50 Hz frequency, using a 550-µm fiber. Patient characteristics, perioperative parameters, and complication rates were analyzed.

Results
Median age of the 30 patients was 68 years (IQR 64–75), with a median prostate volume of 75 cc (IQR 53–100), assessed by ultrasound (53%) or MRI (47%). Median preoperative PSA was 3.34 ng/ml (IQR 2.18–6.5). A median lobe was present in 53% of cases. Median preoperative Qmax and post-void residual volume were 8 ml/s (IQR 6–10) and 70 ml (IQR 28–150), respectively. Preoperative catheterization was required in 37% of patients. Fourteen procedures (47%) were performed under the supervision of an expert surgeon. No conversion to transurethral resection or open surgery was necessary. Median enucleated prostate tissue weight was 51 g (IQR 30–77), with a median operative time of 134 minutes (IQR 97–175). Median postoperative catheterization and hospital stay durations were both 2 days (IQR 2–2). Five Clavien grade 2 complications (17%) were observed: four cases of macroscopic hematuria and one case of acute epididymo-orchitis. No Clavien complications grade 3 or higher. One patient developed bladder neck sclerosis at 6 months, managed successfully with bladder neck incision.

Conclusion
The integration of HoLEP into a university hospital setting through a structured and supervised training program appears to be safe and effective, even during the initial learning phase. Further evaluation of medium- and long-term functional outcomes is warranted to further validate this approach.

P023
Vergleich der Operationszeiten bei REZUM, Aquabeam und HoLEP – eine retrospektive Datenauswertung zur institutionellen Lernkurve

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Hintergrund & Ziele
Mit der Einführung neuer Operationsverfahren zur Therapie der benignen Prostatahyperplasie (BPH) stellt sich die Frage nach der Effizienz und Implementierbarkeit dieser Techniken im klinischen Alltag. Die Operationszeit und der damit verbundene Lernaufwand spielen eine zentrale Rolle für die Ressourcenplanung und Schulung. Ziel dieser Arbeit war es, anhand von Daten des internen BPH-Registers die Operationszeiten und potenzielle Lerneffekte dreier am Kantonsspital St. Gallen neu eingeführter Verfahren (REZUM, Aquabeam und HoLEP) zu analysieren und zu vergleichen.

Material und Methoden
Die retrospektive Auswertung basiert auf dem BPH-Register des Kantonsspitals St. Gallen. Erfasst wurden 1118 Patienten, welche zwischen dem 05.09.2017 und dem 27.01.2025 aufgrund von BPH operiert wurden. Für die Analyse wurden ausschliesslich Patienten eingeschlossen, bei denen eine Behandlung mittels REZUM, Aquabeam oder HoLEP durchgeführt wurde und für welche vollständige Datensätze bezüglich der Operationszeit vorlagen. Eingeschlossen wurden 260 Patienten mit HoLEP, 103 Patienten mit Aquabeam und 42 Patienten mit REZUM. Die Operationszeit wurde definiert als Zeitraum von der Einführung bis zur Entfernung des Resektoskops bzw. Applikators aus der Harnröhre.

Resultate
Die mittleren und medianen Operationszeiten betrugen für HoLEP 141.2 bzw. 127.5 Minuten, für Aquabeam 102.8 bzw. 96 Minuten und für REZUM 12.8 bzw. 9 Minuten. Bei REZUM zeigte sich eine bereits zu Beginn niedrige und über den Erhebungszeitraum hinweg weitgehend stabile Operationszeit, was auf eine rasche Etablierung und eine geringe lernzeitabhängige Variabilität in Bezug auf die Operationsdauer hindeutet. Es ist zu beachten, dass die Eingriffe von Operateuren und Operateurinnen mit unterschiedlichem Erfahrungsstand durchgeführt wurden, was einen potenziellen Einfluss auf die Ergebnisse darstellt.

Schlussfolgerungen
REZUM zeigte sich als Verfahren mit kurzen und konstanten Operationszeiten und lässt sich innerhalb kurzer Zeit klinisch etablieren. Für HoLEP deuten die bisher vorliegenden Daten auf eine weniger steile Lernkurve hin, wobei sich das Verfahren dennoch innerhalb des Beobachtungszeitraums gut implementieren liess. Eine weiterführende, operateur-spezifische Analyse unter Berücksichtigung individueller Lernkurven ist geplant. Diese Erkenntnisse sind relevant für die operative Planung, Schulung neuer Operateure und die strategische Auswahl von BPH-Verfahren an urologischen Zentren.

P024
Clinical Applications and Outcomes of the SHURUI Robotic Surgical System, a Systematic Review

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Background and objectives:
The SHURUI robotic surgical system is a novel single-port robotic platform developed for minimally invasive surgery with expected CE certification in 2025. Compared to Intuitive SP, the SHURUI system's dual-continuum mechanism provides superior technical capabilities because of the superelastic nitinol rod structural bones: larger bending angles (SHURUI: 120° vs Intuitive SP: 90°), higher payload capability (SHURUI: 10N vs Intuitive SP: 2N) allowing stronger traction, wider range of motion (SHURUI: 23cm vs Intuitive SP: 12cm), smaller minimum deployment space requirement (SHURUI: 7cm vs Intuitive SP: 12cm), and more diverse entry port configurations (linear, round 3 arms, round 4 arms). This systematic review aimed to analyze the current literature on SHURUI's clinical applications, safety, and efficacy across various surgical specialties.

Material and methods:
We analyzed 27 clinical studies (2022–2025) reporting use of SHURUI SP across surgical specialties. Extracted data included procedure type, patient characteristics, intraoperative parameters, safety outcomes, and comparisons with conventional systems.

Results:
A total of 426 patients were treated using SHURUI SP in urology (13 studies), gynecology (6), general surgery (4), pediatric (2), and thoracic surgery (2). Radical prostatectomy was most common (6 studies), followed by partial nephrectomy (4), gynecological (2), and total hysterectomy (2). All studies reported 100% technical success without SHURUI-related complications. For partial nephrectomy, median operative time was 149 min (IQR: 178–239), blood loss 18 ml (IQR: 10–50), and warm ischemia time 27 min (IQR: 24.5–30). Other urological procedures included adrenalectomy (50-96 minutes operative time) and pediatric urological procedures (pyeloplasty, ureteral repair, renal cyst decortication). One comparative study showed longer operative times for SHURUI vs da Vinci SP in prostatectomy (215 vs 110 min), but similar outcomes: positive margin rates (19% vs 15%) and 1-year continence (96% in both).

Conclusions:
The SHURUI SP robotic surgical system appears technically very reliable and demonstrates promising early clinical outcomes across multiple surgical specialties.

P025

Predictors of infectious complications following ureteroscopy and laser lithotripsy (URSL): Prospective cohort study over a 12-year period from a university teaching hospital

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Background & Objectives

Infections are among the most frequent complications following URSL. Previous studies have identified risk factors such as preoperative stent placement, positive urine culture (UC), diabetes, older age, and longer procedure times, but they are limited by retrospective designs or multi-center involvement. This study aimed to evaluate risk factors for postoperative infectious complications using a large, prospectively maintained dataset from a single, high-volume stone surgeon.

Materials & Methods

Consecutive URSL patients from 2012 to 2024, performed by a single surgeon at a university teaching hospital, were reviewed. Patients were categorized into those without (Group A) and with (Group B) postoperative infectious complications. Collected data included demographics, preoperative parameters, stone characteristics, intraoperative details, and stone-free rates. Descriptive statistics and regression analyses were used to identify risk factors for infectious complications within 30 days postoperatively. The patients consented for the procedure and the study was registered as an audit.

Results

Among 1,207 patients, 2.5% (30 patients) experienced infectious complications. Group B patients were significantly older (70 vs 60 years; $p = 0.005$), more often female (53 vs 36%; $p = 0.05$), had a higher rate of positive preoperative UC (47 vs 11%; $p < 0.001$), underwent longer procedures (53 vs 40 minutes; $p = 0.008$), had larger cumulative stone sizes (18 vs 10 mm; $p < 0.001$), and lower stone-free rates (SFR) (77 vs 91%; $p = 0.02$). Patients with a positive preoperative UC had a 6.5-fold increased risk of developing postoperative infectious complications compared to those with a negative UC. Univariable regression analysis identified age, positive UC, surgery duration, stone size, and postoperative residual stones as significant risk factors. On multivariable regression analysis, positive preoperative UC (OR 9.52; $p < 0.001$) and residual stones (OR 2.97; $p = 0.033$) remained as independent predictors.

Conclusion

Female gender, advanced age, larger stone burden, longer operative time, and a positive preoperative UC were associated with an increased risk of postoperative infectious complications. Our findings underscore the importance of optimising preoperative patient preparation, particularly ensuring timely UC testing. In selected high-risk patients, extended perioperative antibiotic prophylaxis may further reduce the incidence of infection.

P026
With great power comes great risk: High ureteral stricture rate after high-power, high-frequency Thulium fiber laser lithotripsy in ureteroscopy

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Purpose
To compare the safety and efficacy of Thulium Fiber Laser (TFL) using either manufacturer presets (MP) or individualized presets (IP) in ureteroscopy.

Materials and Methods
Multi-institutional, retrospective analysis on the first patients treated with SOLTIVE® Premium (Olympus Medical Systems®) TFL in Switzerland in 2020. MP were used at the University Hospital of Geneva, while IP were used at the University Hospital of Zurich. Patient demographics, stone characteristics, and procedural details were collected. Primary outcome was postoperative ureteral stricture (US). Secondary outcome was stone-free rate (SFR).

Results
A total of 158 patients were analyzed, 79 in each group. Demographics were similar between the two groups, except for a lower pre-stenting rate in the MP group (56% vs. 91%; $p < 0.001$) and a higher rate of ureteral access sheath use in the MP group (65% vs. 44%; $p = 0.011$). No significant differences in stone burden (median stone diameter 9 mm, median stone volume 267 mm3), nor in the rate of impacted ureteral stones (29% vs. 34%; $p = 0.49$). Mean power, maximal power, frequency settings, and energy consumption were significantly higher in the MP group. US rate was 11% in MP group compared to 1% in IP group ($p = 0.009$). MP were a significant predictor of US on multivariable analysis (OR 12.4; $p = 0.02$), independently from impacted ureteral stones. No difference in SFR between groups (85% and 84%; $p = 0.67$).

Conclusion
High-power, high-frequency laser settings from manufacturer laser presets increase the risk of US, without improving SFR. Future studies shall further evaluate optimal laser settings depending on patient characteristics and intraoperative situation.

P027
Outcome of Ureterorenoscopy in Patients with Neurogenic Bladder

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Hypothesis / Aims of Study
Patients with neurogenic bladder (NB) often require ureterorenoscopy (URS) for conditions such as urolithiasis and urothelial carcinoma. However, the postoperative outcomes of URS in this population remain underexplored. We hypothesize that NB patients experience higher rates of infectious complications and prolonged hospital stays compared to patients with non-neurogenic bladder (NNB). This study aims to evaluate the perioperative and postoperative outcomes of URS in NB patients.

Study Design, Material and Methods
A retrospective analysis was conducted on patients undergoing URS between October 2022 and December 2023. Patients were categorized into two groups: NB (N=36) and NNB (N=314). Demographic characteristics, surgical indications, and perioperative outcomes were analyzed. The primary outcomes included postoperative infectious complications (febrile episodes >38°C, inflammatory syndrome, hospitalization duration (>3 days), and 30-day readmission rates). Univariable and multivariable logistic regression analyses were performed to identify independent predictors of infectious failure.

Results
The median age was significantly higher in the NB group (65 vs. 55 years, $p < 0.001$). Males constituted 89% of the NB group and 68% of the NNB group ($p = 0.007$). Urolithiasis was the primary indication for URS in both groups (NB: 92%, NNB: 90%, $p = 0.411$).
Preoperative positive urine cultures were significantly more common in NB patients (39% vs. 15%, $p < 0.001$).
Postoperative infectious complications were significantly more frequent in the NB versus NNB group (28% vs. 6%, $p < 0.001$), consisting of fever (20% vs. 26%, $p = 0.086$), inflammatory syndrome (20% vs. 32%, $p < 0.001$), hospitalization rate > 3 days (80% vs. 74%, $p < 0.001$) and 30-day readmission rate (30% vs. 32%, $p < 0.001$).

Conclusion
Patients with NB undergoing URS face a significantly higher risk of infectious complications, especially prolonged hospitalization, and readmission compared to NNB patients. This may be due to factors such as increased preoperative bacteriuria, impaired bladder emptying, and altered immune responses. The findings suggest that enhanced perioperative strategies, including tailored prophylactic antibiotics and closer postoperative monitoring, may be necessary to reduce complications.

P028
Prolonged Preoperative Double J Stenting Increases Post-Ureteroscopy Infectious Complications

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Background & Purpose
Preoperative ureteric double J (JJ) stenting before ureterorenoscopy (URS) for uncomplicated stones is debated but remains indicated for emergent drainage in obstructive pyelonephritis or when definitive treatment is delayed. The relationship between dwell time of JJ stenting and sepsis has been shown but evidence remains limited. This study aims to evaluate whether prolonged preoperative JJ stenting increases infectious complications after URS and support the development of a fast-track pathway for stone management.

Materials & Method
We conducted a monocentric retrospective study of all patients who underwent URS between January and December 2023. The primary outcome was infectious failure, defined as the occurrence of at least one of the following within 30 days postoperatively: fever > 38.0°C, systemic inflammatory response, hospitalization > 3 days, or readmission for urinary infection. Among collected variables, ten predefined factors were analysed using univariable and multivariable logistic regression: age, sex, body mass index (BMI), ASA score, urinary tract anomalies, neurogenic bladder, urolithiasis, preoperative positive urine culture, operative time, and time from stent insertion to URS.

Results
A total of 350 patients underwent URS in 2023 (median age: 56 years [IQR 44–69]; 70% male). Of these, 34(10%) were treated for urogenital malignancies and 316(90%) for urolithiasis. Preoperative JJ stenting was performed in 289 cases (83%), and postoperative infectious failure occurred in 29 patients (8.3%). Among stented patients, the mean stent dwell time was 36.6 days (range: 2–365). Patients who developed infectious complications had a significantly longer stent duration compared to those without infection (63.9 vs 36.3 days; mean difference: 27.5 days; $p < 0.001$). In multivariable logistic regression, prolonged JJ stent dwell time remained independently associated with increased risk of infection (OR 0.984 per day; 95% CI 0.973–0.995; $p < 0.001$). Neurogenic bladder also emerged as a significant independent predictor of infectious failure (OR 0.871; 95% CI 2.196–6.739; $p < 0.001$). No significant associations were observed for the other factors.

Conclusion
Prolonged JJ stent indwelling time prior to URS is independently associated with postoperative infectious complications. These results underscore the need to implement fast-track surgical pathways, to minimize infection-related morbidity through timely stone management.

P029
Retrograde Ureteral Stents Versus Percutaneous Nephrostomy in the Management of Malignant Ureteral Obstruction: A Systematic Review and Meta-Analysis

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Objective:
To evaluate outcomes in cancer patients with ureteral obstruction by comparison of retrograde stenting and percutaneous nephrostomy techniques.

Methods:
Systematic review of all studies up to October 2023. Studies were identified from all major databases including MEDLINE, Cochrane, and EMBASE. All comparative studies between retrograde stenting and percutaneous nephrostomy were searched; studies with paediatric populations were excluded. Primary outcomes were procedure and intervention failure rates; secondary outcomes were infection, blockage, displacement, and unplanned exchange rates along with procedure time and length of stay.

Results:
Eighteen studies with 1228 patients contributed to the summative outcome. Percutaneous nephrostomy was statistically superior to retrograde stenting for procedure failure rate (P < .00001) and intervention failure rate (P = .0004). Retrograde stenting was statistically superior to percutaneous nephrostomy for displacement rates (P = .003), procedure time (P < .00001), and length of stay (P < .00001). Retrograde stenting showed no difference to percutaneous nephrostomy for infection rates (P = .94), blockage rates (P = .93), unplanned exchange rates (P = .48).

Conclusion:
There is no absolute superiority for retrograde stenting or percutaneous nephrostomy for malignant ureteral obstruction. Both techniques have their advantages and disadvantages, with some comparable outcomes; patients are key when selecting the best technique. Larger studies are required to assess the outcomes of both techniques.

P030

Analyzing the Epidemiology of Urolithiasis and identifying risk factors associated with their formation: Insights from a population-based cohort study in Switzerland

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Context and Objectives

Urolithiasis is a growing global health concern, with reported prevalence ranging from 7–13% in North America, 5–9% in Europe, and 1–5% in Asia. The incidence of kidney stones follows a characteristic age-related bell curve. Moreover, urolithiasis is increasingly viewed as a systemic disorder associated with chronic diseases, including a 31% and 33% higher risk of incident hypertension and diabetes, respectively.
This study uses data from the Swiss Kidney Project on Genes in Hypertension (SKIPOGH), designed to explore genetic and environmental influences on blood pressure and kidney function, to investigate the epidemiology of urolithiasis and associated risk factors in a Swiss cohort. The aim is to provide region-specific insights to support prevention and inform healthcare strategies.

Materials and Methods

SKIPOGH is a multicenter observational cohort study involving 1,129 participants from Lausanne, Geneva, and Bern, recruited between October 2009 and April 2012. All participants underwent renal ultrasound at the beginning of the study to detect the presence of kidney stones and determine the incidence of urolithiasis. Among all collected variables, ten predefined factors potentially associated with the incidence of urolithiasis were analyzed: age, sex, body mass index (BMI), 24-h urine volume, obesity, hypertension, smoking, diabetes mellitus, dyslipidemia and kidney insufficiency. Univariable and multivariable logistic regression analyses were performed to identify independent predictors of infectious failure.

Results

The overall incidence of kidney stones was 6.2%, slightly higher in men (7%) than women (5.4%). Affected participants were older (mean age 54 vs. 47 years old). Logistic regression confirmed that older age, diabetes mellitus, and impaired kidney function are significant predictors of urolithiasis. Cardiovascular risk factors—including obesity, smoking, and dyslipidemia—were not significantly associated. Hypertension showed a borderline association (p=0.06), suggesting a possible link requiring further investigation.

Conclusion

The incidence of kidney stones was 6.2% in our local population, which aligns with the incidence reported in European countries. Age, diabetes, and reduced kidney function are significant predictors of urolithiasis. These findings support early detection and targeted prevention.

P031
Classifying Recurrent Kidney Stone Formers Using Machine Learning: A Single-Center Experience

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Background and aims: Recurrent kidney stone formation remains a prevalent urological condition, often necessitating repeated interventions and contributing to rising healthcare expenses. Although diagnostic imaging and metabolic assessments have improved, the clinical application of recurrence risk prediction tools remains limited. Machine learning (ML) can be a powerful tool for early and personalized risk stratification.

Materials and methods: This study used data from 934 adults (median age: 34 years [IQR: 26–45], 73% male) enrolled in the Bern Kidney Stone Registry (BKSR) [1], all with a documented history of nephrolithiasis. Following data preprocessing, which included removal of duplicate entries, median imputation for missing values, and exclusion of highly correlated variables (correlation > 0.90), 160 features were kept. These included demographic, clinical, and biochemical features, alongside a binary outcome indicating stone recurrence (82%) versus non-recurrence (18%). A logistic regression model was trained using class-weighted learning and recursive feature elimination (RFE). Model evaluation employed 5-fold cross-validation on 80% of the data, with the remaining 20% used as an independent test set. Ensemble predictions on the test data were computed for performance, and statistically relevant features were examined via odds ratios. The study report conforms to the TRIPOD+AI guidelines [2].

Results: Model performance on the test set yielded a mean ROC AUC of approximately 0.81. Variables repeatedly identified as strong predictors included sex, age at first stone event, and calcium oxalate. Ensemble prediction on the test set resulted in an ROC AUC near 0.81. The model is currently optimized for precision to minimize false positives, though further tuning could emphasize recall to reduce the risk of missed high-risk cases.

Conclusion: This study highlights the predictive value of routinely collected clinical and laboratory data for assessing kidney stone recurrence risk. The developed ML model demonstrated superior performance compared to existing approaches [3,4], offering a promising tool for individualized risk stratification. Implementing such predictive models in clinical practice could guide targeted follow-up and reduce recurrence-related complications and healthcare costs.

P032
Bilateral same-session flexible ureteroscopy with flexible and navigable suction ureteral access sheath : the Geneva experience

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Introduction
Flexible and navigable suction ureteral access sheath (FANS) has emerged as a breakthrough innovation in endourology, enhancing outcomes in flexible ureteroscopy (FURS). This study aims to report the outcomes of our initial experience with bilateral same-session FURS using FANS for the management of renal stones.

Material and Methods
We retrospectively included consecutive patients who underwent bilateral same-session FURS with FANS for renal stones treatment at our institution between February 2024 and March 2025. Primary outcome was the stone-free rate (SFR), defined as no significant residual fragments on intraoperative endoscopic/fluoroscopic assessment or postop CT-scan (>2 mm). Complication rate was analyzed as a secondary outcome and assessed using the Clavien classification. Patient and stone characteristics as well as operative parameters were recorded. A 10/12Fr or 12/14Fr FANS and a 7.5Fr single-use flexible ureteroscope were used for all procedures. Stones were fragmented using Thulium laser.

Results
A total of 31 patients underwent bilateral same-session FURS with FANS, with a median age of 65 years (IQR 53-71) and a median ASA score of 2 (IQR 2–3). The median maximal stone diameter was 12 mm (IQR 9-17) on the left side and 11 mm (IQR 8-12) on the right. The median cumulative stone burden was 27 mm (IQR 23–30) and the median stone density was 1380 HU (IQR 1282-1574). One patient (3%) presented with pelvic stones, 24 patients (77%) had calyceal stones, and 6 patients (19%) had both pelvic and calyceal stones. 24 patients were pre-stented (77%), 3 on one side and 21 on both sides. The median operative time was 75 minutes (IQR 60-90). A 10/12Fr FANS was used in 12 patients (39%) and a 12/14Fr in 19 patients (61%). In 24 patients (77%), a stone basket was not used during the procedure. The SFR was 90%, with two patients (6%) presenting with unilateral residual stones and one (3%) with bilateral residual stones. After second-look FURS, the SFR reached 100%. Outpatient management was achieved in 30 cases (97%), with one patient requiring overnight hospitalization for pain control. No Clavien grade 2 or higher complications were observed.

Conclusion
Bilateral same-session FURS using FANS appears to be a safe and effective technique addressing kidney stones. It is associated with a high stone-free rate, low basket usage and a low incidence of significant complications.

P033
Incidence and management of postoperative bleeding complications in patients undergoing partial nephrectomy, a single-center retrospective cohort study

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Background:
While partial nephrectomy has become the standard of care for small renal masses, postoperative bleeding remains a significant complication. This study analyzes the incidence, risk factors, and management of postoperative bleeding complications across dif-ferent surgical approaches.

Methods:
conducted a retrospective cohort study of 462 consecutive patients undergoing open, laparoscopic, or robot-assisted partial nephrectomy at a tertiary referral center between 2010 and 2023. Primary outcomes included postoperative bleeding requiring intervention, associated risk factors, and management strategies.

Results:
Among 462 patients (71% male, median age 63 years [IQR 54-70]), surgical ap-proaches included robot-assisted (52%), laparoscopic (36%), and open surgery (12%). Post-operative active bleeding detected on imaging occurred in 3% of the overall cohort and in 3% after robotic procedures. Treatment included endovascular coiling (2%) and blood transfu-sions (2%), with no cases requiring radical nephrectomy because of postoperative bleeding. Robot-assisted procedures demonstrated significantly lower bleeding complications (OR 0.3, 95% CI 0.1-0.8, p = 0.01) compared to other approaches. In univariable analysis, advanced age, male gender, and higher clinical tumor stage were identified as associated risk factors for postoperative bleeding, although they did not reach statistical significance. Two in-hospital deaths (< 1%) occurred, one due to intraoperative cardiac arrest and one due to undetected postoperative hemorrhage on the ward.

Conclusion:
We observed an increasing adoption of robotic surgery, which demonstrated a lower risk of postoperative bleeding requiring endovascular coiling. In response to a fatal complication, we implemented systematic hemoglobin monitoring every 6 hours for the first 48 hours postoperatively.

P034
First Swiss experience with the HUGO RAS robotic platform for partial nephrectomy in case of localized kidney cancer

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First Swiss experience with the HUGO RAS robotic platform for partial nephrectomy in case of localized kidney cancer

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Introduction:
Robot-assisted laparoscopic partial nephrectomy (RAPN) is an established procedure for patients with localized renal cancer. In recent years, new platforms have been developed. We report the first experience in Switzerland with Medtronic's HUGO RAS platform.

Methods:
From March to April 2025, two partial nephrectomies were performed at our institution by a single open surgeon with no prior experience in laparoscopy. Patient age was 56/74 years and their Charlson's Comorbidity Score was 3/5. On preoperative imaging, tumor size was 23/34 mm and the nephrometry score was 9p/7x.

All the patients successfully underwent RAPN without the need for conversion. Docking time was 7/6 min and time from first trocar insertion to console 26/27min. Console time was 145/282 min. Warm ischemia time was 25/60 min. Estimated blood loss was 1200/900 ml. No blood transfusion was needed. No intraoperative or postoperative complications occured. We encountered no technical problems with the robotic platform. Length of stay was 6/4 days. At discharge, serum creatinine was similar to preoperative values in both cases.

Histopathological results showed no positive surgical margins.

Conclusion:
In this first Swiss experience with HUGO RAS, the robotic platform demonstrated excellent reliability, safety, and ease of use. We plan to present a larger series by the time of the Swiss Urological Congress 2025. We expect improvements in intraoperative parameters as the surgeon and his team gain more experience.

P035
Assessing the rate of benign pathology in renal cancer surgery: 12 year analysis from a tertiary center of care

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Background and Aims:
The incidence of small renal masses (SRMs) has increased due to widespread use of imaging. While management of SRMs has evolved—with greater application of nephron-sparing surgery and minimally invasive techniques—surgical overtreatment of benign lesions remains common. The utility of preoperative biopsies remains debated and may depend on institutional imaging protocols. This study aims to assess the rate of benign histology in nephrectomy and partial nephrectomy cases at out institution.

Methods:
We retrospectively analyzed all nephrectomies and partial nephrectomies performed at the Cantonal Hospital of St. Gallen between January 2012 and November 2024. Data were collected from pathology reports concerning renal pathologies. Exclusion criteria included upper tract urothelial carcinoma and biopsies for nephrological evaluation. We recorded tumor size, histology, and malignancy status.

Results:
Of 1555 cases reviewed, 868 patients met inclusion criteria. Excluded were kidney biopsies, ureteroscopic biopsies, and nephroureterectomies for upper tract urothelial cancer. Of the 868 included patients, 430 underwent nephrectomy and 438 partial nephrectomy. 93 patients were treated for non-malignant indications (e.g., non-functional kidney, xanthogranulomatous pyelonephritis, polycystic kidney disease). Malignancy was found in 76.4% (n = 592), with 60% clear cell RCC (n = 350), 21.5% papillary RCC (n = 128), and 10.9% chromophobe RCC (n = 65). Other malignancies included sarcomatoid RCC, neuroendocrine tumors, metastases, squamous cell carcinoma, and Bellini duct carcinoma. Benign histology was found in 21% (n = 163). Of these, 76.1% had undergone partial nephrectomy, and 23.9% radical nephrectomy.

Conclusions:
Over 12 years, a substantial proportion of renal surgeries were performed for benign disease. These findings support the potential role of preoperative biopsy in SRM management. Further evaluation of radiologic features is needed to guide standardized use of biopsy, particularly regarding tumor size and imaging characteristics.

P036
Vulnerability of CRPC subtype to CD44/NRF2-mediated ferroptosis

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Background:
Prostate cancer represents the second most prevalent malignancy among men, with androgen deprivation therapy (ADT) serving as the cornerstone of treatment due to the hormone sensitivity of prostate tumors. However, resistance to ADT often leads to the development of castration-resistant prostate cancer (CRPC), a lethal and therapeutically challenging condition. Recent research has classified CRPC into distinct molecular subtypes based on chromatin profiling, including androgen receptor (AR)-driven, Wnt-driven, neuroendocrine (NE), and stem cell-like subtypes. Among these, the stem cell-like subtype is distinguished by the expression of CD44, a cell surface glycoprotein that facilitates the binding and uptake of hyaluronic acid. However, the specific role of CD44 in the CRPC stage and its regulatory mechanisms in driving CRPC features remain unclear.

Methods:
Flow cytometry sorted the CRPC model LAPC9 tumor into CD44hi and CD44low cells. RNA sequencing was performed on these subpopulations to explore their transcriptomic profiles. CD44 expression was validated at the cDNA and protein levels using qPCR and Western blot (WB) analysis. Sorted cells were maintained as organoids in vitro. In order to trace the dynamics of CD44hi and CD44low subpopulations in vivo, LAPC9 tumor was labeled by fluorescent and luciferent markers. The CD44 status was determined by flow cytometry when tumor growth.

Results:
We demonstrate that the CD44hi subpopulation exhibits enhanced tumorigenic and proliferative potential in CRPC. Notably, CD44low cells possess the capacity to transition into a CD44hi phenotype, contributing to sustained tumor growth during CRPC progression. Our findings also identify iron as a key regulator of CD44-mediated tumorigenic properties through its role in epigenetic modulation. Elevated iron levels in CD44hi cells promote their aggressive phenotype, while inducing iron overload selectively triggers ferroptosis in these cells through suppression of nuclear factor erythroid 2-related factor 2 (Nrf2). This observation highlights a potential therapeutic vulnerability within the CD44hi subpopulation.

P037
G9a epigenetic targeting upregulates androgen and p53 signaling in advanced prostate cancer

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Tumor progression after standard-of-care therapy remains a major clinical challenge in prostate cancer (PCa) [1]. Histone modifications are known to impact chromatin compactness, influencing cancer-related molecular programs. Indeed, chromatin accessibility was recently shown to stratify advanced PCa samples into different molecular subtypes, highlighting the impact of chromatin dynamics in PCa [2]. The histone methyltransferase G9a, which catalyzes a repressive histone modification (di-methylation of histone H3 lysine 9), is frequently upregulated in advanced PCa [3]. Given the promise anti-tumoral effect of G9a inhibition with CM-272 observed in our previous in vitro study, G9a holds significant therapeutic promise in PCa [4]. Therefore, in vivo validation was essential to address its efficacy and translatability. Hence, we used the PCa patient-derived xenograft (PDX) model BM18 to assess the in vivo effect of CM-272-mediated G9a inhibition. Moreover, RNA sequencing analysis of treated and untreated tumor tissue was performed to further explore the molecular mechanisms underlying the observed anti-tumoral effects.
Our results showed that CM-272 significantly delayed BM18 PDX tumor growth, inducing growth arrest in the first 10 days of treatment, specifically impairing tumor cell G9a activity and proliferation in vivo. Importantly, no drug-induced toxicity or typical tissue damage was observed upon drug administration. Differential gene expression analysis revealed 119 significantly upregulated and 99 downregulated genes in response to G9a inhibition. Notably, by integrating our gene expression dataset with published chromatin accessibility data, we demonstrated an increase in the androgen signature and a concomitant decrease in the neuroendocrine features in CM-272-treated samples. Moreover, pathway enrichment and master regulator analysis pinpointed the androgen receptor signaling pathway and TP53 network as significantly upregulated processes in CM-272-treated tissues, whereas the MYC oncogenic transcription program was the most significantly downregulated. Specifically, the upregulation of AZGP1, STK39, and DPP4 correlated with an increased AR enrichment, whereas the downregulation of AURKA, CDC25B, and CD44 was associated with the activation of the TP53 pathway.
Overall, targeting G9a with CM-272 might hold promising therapeutic potential for the management of advanced prostate cancer, potentially by modulating important transcriptional programs.

P038
Unveiling the Metabolic Profiles of Prostate Cancer to Anticipate Patient Response to Treatment

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Intro: Mapping the metabolic landscapes of prostate cancer (PCa) with near single-cell precision and understanding their treatment responses can uncover new biomarkers and oncometabolites. This could pave the way for metabolically informed approaches to personalized treatment decisions.

Methods: Organoids and spatial metabolomics by imaging mass spectrometry were employed to generate the PCa Atlas of metabolic states. PDXOs and PDOs models were used to model different stages of the disease: androgen-dependent (AD) state, castration resistant (CR), and neuroendocrine stages. Organoids were treated with 20 metabolic enzyme-targeting compounds (metabolic perturbators) to reveal their metabolic dependencies. Sublethal concentrations of the perturbators were used on the organoids for two analyses: spatial metabolomics and RNA sequencing.

Results: Spatial metabolomics detected an average of 35.000 pixels/slide, at the near-single-cell resolution. 144 and 705 ions were detected for the metabolomic and lipidomic analysis, respectively. Different metabolic perturbations induced different metabolic states, visualized using UMAP. 2-deoxy-glucose (2-DG) induced a cluster separation for the control sample with differential analysis revealing metabolites enrichment according to the treatment (e.g. glucose, glucose 6-P, erythrose 4-P) in both AD and CR models. Palmitate supplementation, on the other hand, elicited clustering for the lipidomic UMAP, with enrichment of oleic, linoleic, and palmitoleic acid, confirming method reliability. A multiplexing approach was implemented to increment the throughput: organoids were labeled with live dyes, and the colors used were assigned a metabolic perturbation. MSI readout proved the feasibility of the multiplexing approach with the dye not altering the metabolic readout. Transcriptomic data clustered according to the models; at a second level, within each model, metabolic perturbations clustering could be observed with ETC inhibitors which induced the most evident perturbations in all the models. The mitochondria are the hub of metabolic processes, and their morphology was investigated at the transmission electron microscope (TEM). Organoid treatments revealed a shift in their morphology.

In conclusion the initial experiments showed the feasibility of creating the first Prostate Cancer Atlas. The Atlas could reveal new metabolite markers and steer the development of personlized treatments guided by metabolic insights.

P039
Immunocompetent bladder cancer-on-chip model: A 3D model to study urothelial tumours under physiological stretch

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Bladder cancer (BLCa) is one of the most common cancers of the genitourinary tract and can be classified into non-muscle invasive and muscle invasive, associated with distinct clinical profiles and prognosis. Non-muscle invasive BLCa (NMIBC) is characterised by a high short-term reoccurrence rate after the first resection, a low probability of progression and overall high survival rate. In muscle invasive BLCa (MIBC) however, fast metastatic progression, frequent treatment failure and high mortality rate are of major clinical relevance. Despite huge efforts undertaken to understand the biology of BLCa evolution and therapy resistance, the lack of reliable human-derived BLCa models to study these clinical aspects of BLCa is of significant concern. We have developed a 3D in vitro model that recreates urothelial tumours in a physiological microenvironment including immune cells and physical stretch to mimic the micturition cycle. The urothelial barrier was created by inducing differentiation of pluripotent stem cells (iPSC) into cells of the bladder urothelium, characterised by increased expression of CK5, CK14, CK20, P63 and UPK2. Firstly, cells were seeded onto inserts and characterised for urothelial makers and barrier function by means of immunofluorescence staining, RT-qPCR and transepithelial resistance (TER) measurements. Thereafter, the same study design was implemented onto the AXBarrier-on-Chip system (AlveoliX). This system allows for the application of a 3D stretch, with the stretch profile being optimised to mimic a 6 h micturition cycle. Finally, BLCa and peripheral blood mononuclear cells (PBMCs) were added to the system to create the immunocompetent BLCa-on-chip. Barrier formation was confirmed by an increase in TER values following cell seeding on the chip. A primary human-derived BLCa cell line stably grows on-chip and maintained expression of urothelial markers. Furthermore, preliminary data suggests that PBMCs introduced into the system can target BLCa cells in response to Nivolumab by reducing overall cell viability. Future work will focus on further development of our BLCa-on-chip model to study cancer cell invasion, immune evasion and immunotherapy efficacy in combination with standard-of-care therapy. This will not only provide deeper insights into the molecular mechanisms of immunotherapies but allow for the application of personalised medicine in BLCa patients.

P040
The molecular investigation of prostate cancer residual disease in a model of bone microenvironment

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Introduction & Objectives
Advanced prostate cancer often progresses to incurable bone metastases, where osteoblasts crucially contribute by secreting matrix proteins and interacting with tumor cells. This study investigates the influence of the osteogenic microenvironment on advanced PCa, focusing on the identification of ligands and receptors mediating PCa-bone crosstalk, with the aim of targeting these interactions to disrupt this network.

Materials & Methods
We developed 2D and 3D co-culture models to investigate the interactions between PCa cells and the osteogenic microenvironment in vitro. The use of advanced bioinformatic tools provided an opportunity to analyze cellular interactomes, enabling the identification of functional clusters and biochemical pathways involved in the dynamic crosstalk between PCa cells and osteoblasts. Human mesenchymal stem cells (hMSCs) were differentiated into osteogenic organoids (3D) or osteoblasts (2D) and co-cultured with various PCa models for 7 days. These included the PDO models PM154 and PCa16 and the PCa cell lines LNCaP and C4-2B. Calcium deposition and organoid morphology were assessed using Alizarin Red Staining (ALZ) and H&E staining, respectively.

Results
ALZ staining confirmed the mineralization and well-preserved architecture of osteogenic organoids during differentiation. H&E staining of the 3D co-culture model revealed that the structural integrity of osteogenic organoids was disrupted by PCa cells, demonstrating active interaction and invasion of PCa cells within the osteogenic microenvironment. We found that the osteoblastic microenvironment inhibited PCa cell proliferation and reduced their sensitivity to the chemotherapy drug docetaxel, highlighting its role in promoting drug resistance. Furthermore, the ligands and receptors mediating PCa-osteoblast interactions, as inferred by bioinformatics, were validated. qPCR results demonstrated an increased expression of ERBB3, ITGB4, LSR, and TSPAN15 in PCa16 and LNCaP, while ITGB4 and LSR expression levels were elevated in PM154.

Conclusion
Our study demonstrates the critical role of the osteogenic microenvironment in shaping PCa behavior. These findings deepen our understanding of PCa-bone microenvironment interactions and provide a foundation for targeting these pathways to disrupt metastasis and drug resistance mechanisms.

P041
Role of infiltrating macrophages in EAE-induced bladder dysfunction and its implication for MS

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Aims of Study: Our prior research identified macrophage infiltration in bladder biopsies from patients with benign prostatic obstruction. Based on this, we hypothesize that pro-inflammatory M1 macrophages play a critical role in bladder dysfunction, promoting fibrosis and reduced contractility.
We aimed to determine whether bladder deterioration in MS is a passive result of disrupted neuronal pathways ("innocent bystander") or actively driven by infiltrating immune cells releasing cytokines that cause overactivity, underactivity, and loss of contractility ("active participant").

Study Design, Materials, and Methods: We investigated the role of pro-inflammatory macrophages in bladder dysfunction related to MS and its model, experimental autoimmune encephalomyelitis (EAE). Proteomic analysis via mass spectrometry was used to identify macrophage-related pathways in EAE bladders. We examined the balance between CCR2+ (pro-inflammatory) and CCR2− (anti-inflammatory) macrophages and their role in MS-related lower urinary tract symptoms (LUTS). Repeated urodynamic investigations (UDI) in awake mice, developed in our lab, were used to characterize bladder function. We also analyzed molecular changes in control vs. EAE mouse bladders through shotgun proteomics.

Results: EAE-induced bladder dysfunction is evident through increased bladder-to-body weight ratios and abnormal UDI profiles. These mice show elevated markers of macrophages (F4/80, CD68) and CCR2, indicating M1 macrophage infiltration. Proteomic data revealed IL-12 signalling activation and altered expression of proteins such as APOM, COL1A1–3, GATA3, ITGAM. Markers linked to nitric oxide and reactive oxygen species (APOM, ARG2, CYBB, MPO, NGFR, RAC2) were also altered. These changes support the involvement of macrophages in MS-related LUTS and suggest active tissue remodeling.
EAE bladders showed activation of extracellular matrix and fibrosis-related pathways: integrin interactions, collagen assembly/trimerization/degradation, hepatic fibrosis signaling, ECM organization, and elastic fiber formation.

Conclusion: Our findings support the hypothesis that pro-inflammatory M1 macrophages actively contribute to bladder dysfunction and fibrosis in MS, beyond mere neuronal disruption. IL-12 signaling and oxidative stress pathways further underline macrophage involvement in symptom development. Proteomic differences confirm bladder remodelling processes in EAE mice.

P042
Eradicating Encrustation with Ultrasound-Activated Cilia: A Microfluidic Ureteral Stent Model

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Background and Aims: Ureteral stents are widely used to restore urine flow in obstructed ureters. However, they are prone to surface encrustation and biofilm formation, particularly in regions of fluid stagnation. This limits their long-term use, as patients requiring chronic stenting must undergo regular replacements every two to six months [1]. Despite ongoing advances, a stent capable of maintaining patency without complications over extended periods remains an unmet clinical need [2]. This study presents a novel, non-invasive technology for cleaning urinary stents and catheters based on the combination of artificial cilia and ultrasound. In our previous work, we demonstrated that ultrasound induced cilia vibrations resulting into localized steady streaming and high wall shear stress [3]. Building on these findings, we now explore their potential to actively remove encrustations.

Materials and Methods: As a proof of concept, we developed a microfluidic model mimicking the architecture and flow conditions of a stented ureter. The model featured a polydimethylsiloxane (PDMS) channel with cilia on the channel walls. Another microfluidic model, without cilia, served as a control. Both regions were perfused with supersaturated artificial urine for 30 minutes to induce encrustation, followed by a drying phase to allow crystal deposition. Ultrasound activation was applied using a piezoelectric transducer (f = 99.6 kHz, 52.5 Vpp), driven by a function generator and amplifier.

Results: Upon ultrasound activation, the ciliated wall exhibited pronounced steady streaming and elevated wall shear stress, which effectively disrupted and cleared crystalline deposits within few seconds. In
contrast, the control channel without cilia showed no visible changes in flow or crystal accumulation.

Conclusion: These findings demonstrate the potential of our technology in preventing/eliminating stent encrustation through non-invasive ultrasound activation. Future work will focus on scaling this approach to full-length stent prototypes. If successful, this innovation could significantly extend ureteral stent lifespan and reduce the need of frequent replacement procedures.

P043
Inosine and the road to Neurogenic Bladder Recovery: Targeting DNA Damage and Oxidative Stress in Spinal Cord Injury

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Background & Objectives:
Spinal cord injury (SCI), depending on its location and severity, disrupts neural control of the bladder, resulting in significant morbidity and a reduced quality of life for patients. SCI-induced bladder dysfunction is driven by neuroinflammation, oxidative stress, and extracellular matrix remodeling. Previous research has highlighted excessive activation of Poly(ADP-ribose) polymerase 1 (PARP1), a key enzyme in DNA repair, after SCI. Inosine, a purine nucleoside with neuroprotective properties, improves motor function, sparking interest in its potential role in bladder function recovery. This study aims to investigate bladder alterations post-SCI, focusing on bladder function, mitochondrial dysfunction, and oxidative stress. Furthermore, it examines the effects of inosine treatment on DNA damage, PARP1 activation, and bladder function preservation.

Materials and Methods:
Using a mouse model of SCI, we analyzed bladder responses during spinal shock phase and over four weeks using urodynamic investigation (UDI) in awake animals, comparing inosine and PARP inhibitor olaparib treatments to untreated SCI and sham controls. DNA damage and repair were assessed via the comet assay and immunofluorescence staining, while mitochondrial reactive oxygen species (ROS) levels were measured by flow cytometry using MitoSOX staining in dissociated bladder cells following inosine treatment.

Results:
Urodynamic tracings confirmed sustained bladder dysfunction following SCI, with detrusor pressure amplitudes approximately threefold higher and persistent non-voiding contractions (NVCs) compared to Sham. Early-phase data showed involuntary pressure spikes during spinal shock, followed by sustained high pressures from days 7 to 21 due to onset of detrusor-sphincter dyssynergia, reflecting uncoordinated voiding. Olaparib worsened early bladder instability, while inosine reduced both NVC frequency and mean detrusor pressure amplitude. SCI-induced bladder changes correlated with mitochondrial dysfunction and elevated ROS levels. Preliminary findings suggest inosine reduces DNA damage and oxidative stress, supporting cellular recovery and secondary injury mitigation.

Conclusion:
Inosine treatment was associated with a reduction in bladder dysfunction, alongside a decrease in DNA damage, oxidative stress, and mitochondrial dysfunction. These findings position inosine as a promising candidate for improving bladder function recovery post-SCI.

P044
Engineered phage therapy against catheter-associated urinary tract infections (CAUTI)

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Background & Objectives:
Catheter-associated urinary tract infections (CAUTI) are the most frequent nosocomial bacterial infections and the leading cause of secondary bloodstream infections. Widespread antibiotic use in CAUTI management plays a critical role in the emergence and spread of antimicrobial resistance (AMR), a global health concern repeatedly emphasized by the World Health Organization (WHO). Bacteriophages (phages) offer a potential alternative to antibiotics to combat multidrug-resistant bacteria and to treat UTIs. Here, we present preclinical data for a two-phage cocktail, uroCOLE7-01, targeting uropathogenic Escherichia coli, the leading cause of UTIs and a WHO priority pathogen.

Materials and Methods:
The two phages, E2 and 41S, were engineered using homologous recombination and CRISPR-Cas counterselection to incorporate the endonuclease colicin E7. The host range of engineered phages E2 and 41S was assessed on a panel of 260 clinical E. coli isolates using plaque-forming assays. A set of 20 representative strains was selected to evaluate bacterial suppression and resistance development with turbidity reduction assays (TRA). The phage cocktail was evaluated in an ascending UTI mouse model to assess its efficacy in reducing bacteria in the bladder, kidney, and urine, and to evaluate distribution and clearance of the phages.

Results:
The engineered phages E2 and 41S infected 58% and 37% of strains, respectively, for a combined host range of 68%. The engineered cocktail suppressed bacterial growth more than wild-type phages in TRAs over 24h. Furthermore, it led to a 1.8-fold decrease in the development of phage resistance compared to the wild type when monitored over 36h (30% versus 55%, respectively). uroCOLE7-01 significantly reduced bacterial loads in the bladder, kidney, and urine of phage-treated mice. Phages were rapidly cleared from the bloodstream after intravenous administration and were present in the target tissues of the bladder and kidney within 15 min.

Conclusions:
The preclinical results highlight the possibility of efficient development of phage-based therapeutics, enabled by advanced gene editing techniques. The phages are currently being produced under good manufacturing practices, with the prospect of a phase I trial in asymptomatic bacteriuria patients by the end of 2025. This work addresses the urgent need for alternative interventions, especially in high-burden, low-resource settings where AMR impact is greatest.

P045
Non-Invasive Acoustic Encrustation Control in Urological Devices: A Feasibility Study in Artificial Tissue

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Background and Aims
In urological practice, encrustation and biofilm formation on indwelling devices such as urinary stents and catheters present a major clinical concern, contributing to lumen obstruction and increasing the risk of infection [1]. As a result, patients undergoing prolonged catheterization or stenting often face recurrent, uncomfortable device exchanges to maintain functionality and prevent complications. To address this, we are developing acoustic-responsive stents and catheters equipped with microstructures ('cilia') that generate localized streaming flows along their surface, and are assessing their performance through phantom tissue testing [2]. This mechanism can enable transcutaneous, on-demand removal of biofilm and encrustation, offering a non-invasive strategy to extend device lifespan and improve patient comfort.

Materials and Methods
A ciliated model device, made from polydimethylsiloxane (PDMS), was operated in a t = 1.5 - 3.0 cm thick agar-based ultrasound tissue phantom and visualized using an inverted optical microscope [3]. To integrate arrays of microfabricated hair-like cilia (length L = 100 µm) on its surface, the device was fabricated using soft lithography and replica molding techniques. Upon activation by a custom-designed sonic probe (f ≈ 5.0 kHz), the ciliated device generated acoustic streaming along its surface. To evaluate its capacity for encrustation removal, the device was initially perfused with artificial urine to induce surface encrustation before being placed in the tissue phantom.

Results
We investigated cilia-driven flow fields and shear stress distributions in urological model devices exposed to acoustic fields. Streaming velocities through a tissue phantom with a thickness of t = 3.0 cm reached up to 1 mm/s, generating local shear stress values of 0.03 Pa. Furthermore, calcium phosphate crystals, formed from artificial urine, were displaced from the ciliary tips when the acoustic field was applied through a tissue phantom with a thickness of t = 1.5 cm.

Conclusion
For practical applications, existing literature reports that our targeted implants are positioned at tissue depths ranging up to t = 8.0 cm [4]. Consequently, future research will focus on developing optimized acoustic (ultrasonic) actuation and full-scale ciliated urological devices capable of functioning effectively at these tissue depths.

P046
Prostate cancer-derived extracellular vesicles drive macrophage immunosuppression via GDF15

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Background
Prostate cancer (PCa), the most common male malignancy, remains poorly responsive to immunotherapy due to its immunologically “cold” microenvironment, marked by low immune infiltration. This may result from PCa-derived immunosuppressive cytokines and extracellular vesicles (EVs) that recruit regulatory immune cells and suppress antitumor immunity in the tumor microenvironment.

Methods
We analyzed publicly available single-cell RNA sequencing (scRNA-seq) datasets from prostate cancer patients and healthy controls to assess immune cell changes within the tumor microenvironment during cancer progression. To validate these findings, we engineered a tumor cell line to express CD9-mEmerald, enabling continuous release of fluorescent extracellular vesicles (EVs). After implanting these cells into mice, we tracked EV interactions with immune cells in vivo and assessed their immunosuppressive impact. Post-sacrifice, we used a 10-antibody flow cytometry panel to characterize the tumor-infiltrating immune populations and delineate the resulting immunomodulatory cascade.

Results
Our scRNA-seq analysis of the immune-cell compartment revealed that Growth Differentiation Factor 15 (GDF15) is highly upregulated in prostate cancer-associated macrophages compared to macrophages in healthy prostate tissue. As a stress-responsive cytokine from the TGF-β family, GDF15 promotes immunosuppression by expanding regulatory immune populations, suggesting it plays a central role in establishing an immune-evasive tumor microenvironment. To investigate whether tumor-derived EVs contribute to this effect, we used a mouse model with fluorescently labeled EV-secreting tumor cells. Post-implantation analysis showed EV uptake by by $CD45^+$ immune cells and $CD31^+$ endothelial cells, with $CD45^+$ $CD11b^+$ $CD64^+$ macrophages demonstrating particularly high uptake of tumor EVs. Additionally, EV exposure drove macrophage polarization toward an M2-like immunosuppressive phenotype, validating our scRNA-seq findings.

Outlook
Our findings reveal, for the first time, that tumor-derived EVs suppress immune cells via a GDF15-driven feedback loop. We aim to identify the specific EV cargo initiating this feedback loop, which could uncover novel drug targets to overcome immune suppression and enhance immunotherapy efficacy in prostate cancer.

P047
Ketogenic Diet Enhances the Effect of Apalutamide and Complex I Inhibition in a Prostate Cancer Xenograft Model

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Background:
Prostate cancer (PCa) cells undergo metabolic shifts from glycolysis to oxidative phosphorylation (OXPHOS) as the disease progresses, presenting targets for therapy. Mitochondrial complex I inhibition with IACS-010759 ("IACS"), although effective in disrupting energy production, has been shown to cause side effects like peripheral neuropathy. The ketogenic diet (KD), low in carbohydrates and high in fats, is a promising strategy to sensitize cancer cells to therapeutic interventions.

Methods:
This study examines the effects of KD, IACS, and Apalutamide (ARN) on PCa growth and peripheral neuropathy in a mouse xenograft model. Castrated mice were injected with LNCaP and assigned to either a chow diet or KD, receiving ARN, IACS, or both (Combo) over four weeks. Tumor growth, blood glucose, ketone levels, autophagy, and neuropathy markers were analyzed.

Results:
Results showed that KD reduced glucose and increased ketone bodies and reduced tumor growth. The Combo therapy reduced tumor weight and volume more than single treatments in both diets. Immunostaining revealed fewer proliferative cells and more apoptotic markers, especially in the KD group. Autophagy markers varied, with ARN slightly enhancing and IACS rather suppressing their activity. Histological analysis of sciatic nerves indicated KD might reduce IACS-related peripheral neuropathy, shown by stable nerve fiber thickness and Schwann cell density in KD-fed mice.

Conclusion
In conclusion, combining KD with ARN and IACS can enhance anticancer effects and potentially reduce side effects, offering a promising PCa treatment strategy.

P048
Intradetrusor abobotulinumtoxinA (Dysport) injections for refractory neurogenic detrusor overactivity: a promising therapeutic option after failed onabodulinumtoxinA (Botox) treatment

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Background:
Intradetrusor onabotulinumtoxinA (Botox) injections are a cornerstone in the treatment of refractory neurogenic detrusor overactivity (NDO). AbobotulinumtoxinA (Dysport) represents an alternative therapeutic option before escalating treatment with surgery. Comparative data, especially following a switch from Botox to Dysport, remain limited.

Objective:
To analyze both subjective and urodynamic outcomes after switching from Botox to Dysport in a cohort of patients with refractory NDO.

Methods:
A consecutive series of 24 patients who were treated with intradetrusor Dysport injections for refractory NDO after failed Botox therapy were assessed. Patients' questionnaires and urodynamic investigations were performed before and 6 weeks after intradetrusor Dysport injections. Groups were categorized based on subjective satisfaction (no, partial, or good effect after Dysport), urodynamic response (≥ 10cmH_2O reduction in maximum detrusor pressure during storage phase (max. pDet storage) after Dysport, initial classification of max. pDet storage 6 weeks after Botox (< 40 versus ≥ 40cmH_2O), conversion from ≥ 40 to < 40cmH_2O in max. pDet storage after switch from Botox to Dysport.

Results:
A subjective response was reported as a partial or good effect after Dysport in 13/24 patients (54%). In urodynamics, 9/24 (38%) had a ≥ 10cmH_2O reduction in max. pDet storage. 3/24 converted from > 40cmH_2O after Botox to < 40cmH_2O after Dysport. No significant difference in max. pDet storage or max. bladder capacity was found between subjective or urodynamic responders versus non-responders. Stratification by max. pDet storage after Botox (< 40 vs. ≥ 40 cmH_2O) revealed significant differences: In the ≥ 40 cmH_2O group (n = 11), subjective satisfaction improved (p = 0.018), max. bladder capacity increased (p = 0.017, mean 28mL) and max. pDet storage remained significantly higher (p = 0.008) after Dysport treatment.

Conclusions:
Switching from Botox to Dysport was associated with subjective improvement in more than half of our patients. Clinical and urodynamic outcomes after the toxin switch were significantly influenced by initial max. pDet storage values after Botox treatment, highlighting a potential role for max. pDet storage as a predictive marker of response.

P049
Assessment of renal function in patients with chronic neurogenic lower urinary tract dysfunction and Spinal Cord Injury

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Introduction: In SCI patients, scintigraphy exams are considered the gold standard for assessing kidney function in individuals with neurogenic lower urinary tract dysfunction (NLUTD). However, scintigraphy is time-consuming, costly, and is not widely available. Thus, alternative diagnostic parameters which are both reliable and less burdensome would be helpful to identify patients who require scintigraphy examination. We have, therefore, investigated the extent to which renal sonography measurements and cystatin-C levels are consistent with renal scintigraphy results in individuals with chronic NLUTD.

Methods: In this monocentric cross-sectional study, 50 adults (≥18 years old) with chronic (≥5 years duration) NLUTD were included. The study participants underwent renal sonography and measurement of serum cystatin-C concentration as part of an outpatient neuro-urological check-up, followed by renal scintigraphy within six weeks. The following sonographic parameters were measured: arterial resistance index (RI), parenchymal thickness and kidney size.
The Spearman rank correlation coefficient (R) was used to assess the correlations of the sonographic measurements and cystatin-C serum concentration with the scintigraphy clearance values.

Results: The data of 50 patients (8 women and 42 men) with an average age of 54±14 years were analyzed. The mean duration of NLUTD was 24.4±14.6 years and mainly due to traumatic paraplegia (45 of 50 / 90%) or motor and sensory complete thoracic lesion (20 of 50 / 40%). The majority (34 of 50 / 68%) emptied the bladder using intermittent catheterization.
The correlation coefficients between scintigraphy clearance and cystatin-C levels ($R = -0.37$, $p=0.013$) and mean RI of the left kidney ($R = -0.4$, $p=0.0067$) were significant. However, no significant correlations were observed for the mean RI of both kidneys combined ($p=0.079$), the mean RI of the right kidney ($p=0.96$), parenchymal thickness (left $p=0.45$; right $p=0.72$) and kidney size (left length $p=0.96$; right length $p=0.13$; left width $p=0.51$; right width $p=0.55$; left height $p=0.068$; right height $p=0.86$).

Conclusions: Cystatin-C serum concentration and left renal arterial resistance index correlated significantly with scintigraphy clearance in individuals with chronic NLUTD. These parameters may serve as additional diagnostic parameters to assess renal function and to determine whether further scintigraphy examination is required. Further studies with a larger cohort are needed.

P050
Occurrence of symptomatic urinary tract infections and asymptomatic bacteriuria during primary rehabilitation after spinal cord injury or disease

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Introduction
The distinction between symptomatic urinary tract infections (UTIs) requiring treatment and asymptomatic bacteriuria (ASB) is challenging in individuals with spinal cord injury or disease (SCI/D). The presence of bacteria in urine can lead to overdiagnosis of UTIs and unnecessary antibiotic treatment. We aimed to investigate the occurrence of symptomatic UTIs and ASB as well as antibiotic treatment of UTIs during primary rehabilitation after SCI/D.

Methods
In a retrospective analysis, patients who have started and completed their primary rehabilitation in a specialized center for SCI/D from January 2024 to February 2025 were included. Collected data included patient and SCI/D characteristics, duration of transurethral catheter use, urinalysis and urine culture results, documented UTI symptoms and antibiotics administered for UTIs. Cases of positive urine cultures and analyses (i.e. ≥103 CFU/ml and leukocyturia ≥100/mm3) were assessed by an experienced neuro-urologist and categorized as ASB or symptomatic UTI, based on documented symptoms and the medical records.

Results
The data from 55 patients (20 women, 35 men) with an average age of 56.8±21.7 years were analyzed. The majority (67.3%, n=37) presented with paraplegia and a transurethral catheter at admission. In 89.1% (n=49) patients, a total of 207 positive urine cultures and analyses (1-13 per patient) were observed during primary rehabilitation. Most (82.1%, 170/207) positive urine cultures and analyses were categorized as ASB. Symptomatic UTIs were identified in 15.9% (33/207) of the cases. Antibiotic treatment was initiated in 38.8% (66/170) of the ASB cases. The most frequently identified bacterial species were Escherichia coli (ASB 20.3% / UTI 30.0%), Klebsiella pneumoniae (ASB 19.5% / UTI 22.0%) and Klebsiella variicola (ASB 15.6% / UTI 20.0%). Sex, age and duration of transurethral catheter use had no significant ($p>0.12$) effect on the occurrence of symptomatic UTIs during primary rehabilitation.

Conclusions
An average of four positive urine cultures and analyses per patient were observed during primary rehabilitation. Only one of six positive cases were symptomatic UTIs, and two of five ASB cases were treated with antibiotics. These data show the need for a differential diagnostic algorithm to assess suspected UTIs in patients with SCI/D and to prevent unnecessary antibiotic treatment.

P051
From Broth to Bladder: Assessing Phage Activity Against UPEC in Physiological Conditions

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Background & Objectives:
Urinary tract infections (UTIs), primarily caused by uropathogenic Escherichia coli (UPEC), face increasing antibiotic resistance, highlighting the need for alternatives like bacteriophage therapy. Phage treatment requires accurate susceptibility testing, but standardization is lacking. We examined phage lytic activity against E. coli in Luria Broth (LB) and synthetic human urine (SHU) and patient-derived urine (PDU) to better mimic clinical conditions.

Materials and Methods:
Phage susceptibility was assessed through turbidity reduction assays (TRA) with 15 phages tested at two concentrations against 12 E. coli strains in LB and SHU. The percentage of inhibition (PI%) was calculated at 5h and 24h. Strains were classified as susceptible (PI% > 80), intermediate (20–80), or resistant (PI% < 20). Spot assays evaluated relations with TRA results. Several phage-bacterial pairs were additionally tested in diluted SHU and/or in PDU.

Results:
Susceptibility differed significantly between LB and SHU ($p < 0.001$). Among 360 phage-strain combinations, 30% (5h) and 38% (24h) changed susceptibility categories between media. Over time, LB supported more frequent regrowth, while SHU showed more susceptible interactions at later time points (28% susceptible interactions in LB at 5h and 37% in SHU at 24h). While TRA and spot assays were the same for 74-78% of pairs in LB, results in TRAs in SHU were more dissimilar (61% at 24h). Additionally, both SHU dilution and different PDUs influenced susceptibility results, but not in a specific direction.

Conclusions:
Phage activity was strongly influenced by medium and time, raising the question as to which conditions would provide accurate and timely phage diagnostic results. Differences in method and media shown here argue for testing in physiologically relevant environments to support patient treatments. Variable results observed in PDU indicate that individual factors, such as osmolarity, pH, or inhibitory substances, may affect bacterial physiology and, thus, phage interactions. These findings underscore the need for personalized susceptibility testing for effective phage therapy.

P052
Safety and Efficacy of e-Sense Electronic Catheters in Urodynamics: A Prospective Study

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Background and Objectives
Urodynamic evaluation is a fundamental tool in neuro-urology for diagnosing lower urinary tract dysfunctions. The choice of equipment, particularly catheters, influences both the quality of the collected data and patient comfort. This single-center prospective study aims to assess the safety, tolerance, and technical performance of the newly available e-Sense electronic catheters (Laborie).

Materials and Methods
This prospective study included all consecutive patients undergoing urodynamic assessment in a specialized neuro-urology center between March and April 2025. The following parameters were analysed with specific questionnaires: adverse events, quality and stability of pressure tracings, ease of use for clinicians, patient-reported experience post-examination, willingness to repeat the test. Follow-up was conducted at 3 to 5 days and post-examination complications were analysed.

Results
A total of 31 patients were included. No major complications were reported during urodynamic assessment. Of the 27 patients for whom we had complete follow-up data, moderate discomfort was noted in 5 patients (18.5%). Minor adverse effects such as burning sensation when urinating was reported by 11 patients (40.7%), and bleeding or dysuria were reported by 2 patients (7.4%). All patients stated they would be willing to repeat the examination if necessary. Among those who had previously undergone urodynamic studies with other sensors, the perceived pain with the e-Sense catheters was considered equivalent or slightly lower. After one month of use, the quality of pressure tracings was judged satisfactory by all clinicians and better than water-filled catheters by most of them. The main issue encountered was instability of the rectal pressure signal. Overall, clinicians found the handling intuitive, and the general appreciation by healthcare providers improved after one month of regular use.

Conclusion
The e-Sense electronic catheters proved to be safe and well-tolerated by patients, with low post-examination complications. Despite a noted issue with rectal pressure signal stability, overall technical performance was satisfying for clinicians. These findings support their use as an alternative to conventional catheters. Further analysis on a larger cohort and direct comparison with the reference method (water-filled catheters) will help consolidate these results and optimize their integration into clinical practice.

P053
Der maximale Urethralsphinkterdruck beim Mann – Veränderungen mit dem Alter und nach Prostatektomie

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Einleitung:
Diese Studie beleuchtet Veränderungen des maximalen Urethralsphinkterdrucks (USDmax) beim Mann mit dem Alter und bei Belastungsinkontinenz nach radikaler (PPBIK) bzw. transurethraler (PTURBIK) Prostatektomie.

Material und Methoden:
Bei 425 Männern wurde urodynamisch der USDmax bestimmt (219 mit Blasenfunktionsstörungen, 182 mit PP-BIK, 24 mit PTURP-BIK). Alters- und operationsbedingte Veränderungen und der Einfluss auf die Auswahl der Methode der prothetischen Versorgung wurden analysiert.

Ergebnisse:
Der mittlere USDmax beträgt im 4. Lebensjahrzehnt 161 cm H2O und sinkt auf 144 im 5., 125 im 6., 114 im 7., 108 im 8. und 95 cm H2O im 9 Lebensjahrzehnt. Pro Lebensjahrzehnt geht der USDmax um im Mittel 13 cm H2O (10 %) zurück. Verglichen mit dem Alter von 30 bis 40 Jahren hat sich der USDmax beim Männern zwischen 80 und 90 Jahren um 41% reduziert.
Bei Männer mit PP-BIK reduziert sich der USDmax im 6. Lebensjahrzehnt auf 89 cm H2O (-29% verglichen mit gleichalten nichtoperierten Männern), im 7. auf 83 (-27%), im 8. auf 73 (-32%) und im 9. auf 78 cm H2O (-18%). Bei PTURP-BIK reduzierte sich der USDmax verglichen mit gleichalten nichtoperierten Männern auf 70 cm H2O (-39%) im 7., auf 77 (-28%) im 8. und 70 cm H2O (-26%) im 9. Lebensjahrzehnt. Der USDmax wurde in der Gruppe mit einer ATOMS-Prothese (n=43) mit 77 cm H2O und in der Gruppe mit AUS (n=14) mit 57 cm H2O bestimmt.

Schlussfolgerungen:
Der USDmax sinkt mit zunehmendem Lebensalter kontinuierlich ab. Verglichen mit nicht operierten gleichalten Männern weisen Männer mit PPBIK einen um 28% und Männer mit PTURP-BIK einen um 33% tieferen USDmax auf. Die Auswahl einer sinnvollen prothetischen Versorgung lässt sich mit dem USDmax nachvollziehen und verbessern.

P054
Efficacy of Optilume Balloon Dilation in Primary and Recurrent Urethral Strictures: A Retrospective Single-Center Cohort Study

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Introduction:
Urethral stricture commonly presents with a spectrum of clinical manifestations, including lower urinary tract symptoms reported in 54.3% of cases, acute urinary retention in 22.3%, and urinary tract infections in 6.1%. Therapeutic interventions encompass open reconstructive procedures and minimally invasive endoscopic modalities. Optilume™ represents an innovative, minimally invasive technology that employs mechanical dilation via a balloon catheter coupled with localized pharmacological elution to mitigate postoperative fibrosis and associated complications. This single-center, retrospective cohort study aims to evaluate the efficacy and safety profile of Optilume™ balloon dilation over a 12-month follow-up period.

Materials and methods:
Data from 34 patients treated with Optilume at the University Hospital of Zurich (July 2023–December 2024) were retrospectively analyzed. Primary outcomes were anatomical success (atraumatic cystoscopy) and functional success (Patient satisfaction without need to re-intervention). Secondary outcomes included Qmax and PVR improvement.

Results:
34 patients (mean age 73.3 ± 12.8 years) underwent Optilume treatment with strictures mainly located in the presphincteric (41.2%) and bulbar (35.3%) urethra. Most strictures were < 2 cm, and half of the patients had ≥ 3 prior interventions. Functional success was 100% at 3 weeks, 97.1% at 3 months, 84.0% at 6 months, and 90% at 12 months. Anatomical success declined from 82.4% at 3 months to 33.3% at 12 months. Qmax improved from 5.3 ml/s at baseline to 17.2 ml/s at 3 weeks, gradually decreasing to 12.8 ml/s at 12 months and mean PVR decreased from 79.3 ml at baseline to 27.3 ml at 3 weeks and rose to 56.7 ml at 12 months (n=9).

Conclusion:
In conclusion, Optilume™ balloon dilation demonstrates a favorable safety profile and appears to be an effective minimally invasive intervention for anterior urethral strictures, evidenced by high early functional success rates and clinically significant improvements in urinary flow metrics and post-void residual volume. While anatomical patency may decrease beyond 12 months, functional outcomes tend to persist.

P055
Intra-plaque Platelet-Rich Plasma (PRP) injections for stable phase Peyronie's Disease: a two-center real-life prospective pilot study

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INTRODUCTION AND OBJECTIVE:
Platelet-Rich Plasma (PRP) into penile plaques has emerged as promising approach for treating stable-phase Peyronie's Disease (PD), although it is still investigational. We aimed to analyze preliminary results of 2-center real-life prospective pilot study.

METHODS:
Data from 38 patients undergoing at least two PRP injections were prospectively collected. All patients underwent dynamic penile Color Doppler-duplex ultrasound (CDDU) at baseline to assess penile hemodynamic parameters and measure penile curvature. All men completed International Index of Erectile Function (IIEF-EF) and Peyronie's Disease Questionnaire (PDQ) at baseline and follow-up (FU). According to the center, PRP was obtained using double or single blood centrifugation. All patients received two injections, each consisting of an average of 4+4 mL of PRP, administered 4-week apart. All patients had 3-mo FU assessment, including CDDU, IIEF-EF and PDQ. Descriptive statistics were used to detail population characteristics and changes in curvature, IIEF-EF and PDQ.

RESULTS:
Median (IQR) age was 60 yrs (54-67). 22 (57.9%) received PRP injection after 2 centrifuge cycles and 16 (42.1%) after 1. 2-cycle group showed a median penile curvature of 45° (37-70) at baseline which decreased to 40° (30-50) at 3-mo FU (p=0.001). The 1-cycle group had a baseline median curvature of 60° (50-67.5) which decreased to 50° (40-57.5) (p=0.003) (Figure 1). Overall, median (IQR) penile curvature was 55° (45-70) at baseline and significantly decreased to 45° (30-55) after PRP treatments, with a median reduction of 10° (p=0.02). Median (IQR) IIEF-EF and PDQ scores were 21.5 (12.3-26.8) and 22 (18-34) at baseline, respectively, and 23.0 (13.8-26) and 18 (14.5-22) at 3-mo FU, both showing no significant difference from baseline. The median (IQR) peak systolic velocity showed non- significant increase from 38.8 cm/s (35.2-53.8) to 46.9 cm/s (37.9-64.5) at 3-mo FU (p=0.11). Median plaque diameter decreased from 14 to 9.6 mm post-treatment. No adverse effects were reported.

CONCLUSIONS:
Preliminary findings would indicate that PRP injections are a safe therapeutic option. We observed a median 10° improvement in penile curvature, with both one and two centrifuge cycles showing significant curvature reduction. The observed decrease in penile curvature is still inadequate to extrapolate clinically significant long-term outcomes.

P056
Comparison of Laparoscopic and Microsurgical Varicocele Repair in an Outpatient Setting

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Introduction
A wide range of techniques is available for the surgical management of varicocele. Despite varying rates of success, complications and persistent pain, practices differ between hospitals. The microsurgical sub-inguinal approach has recently been introduced in our institution. It is considered to be less invasive and potentially more effective in improving fertility parameters.
The aim of this study is to evaluate the results of the microsurgical procedure with an outpatient approach in our institution compared with those obtained with the laparoscopic technique used until then.

Material and methods
Single-centre retrospective study including 61 patients treated for varicocele between 2020 and 2025. 46 patients underwent laparoscopic procedure and 15 underwent subinguinal microsurgery. Variables analysed included: operative time, length of stay (inpatient vs outpatient), postoperative complications and 2-month success rate.

Results
- Operating time was significantly shorter in the microsurgical group (50,11 ± 11.6 min) than in the laparoscopic group (73.3 ± 27.0 min), (p = 0.002).
- 23 patients in the laparoscopic group required hospitalisation, half of them because of postoperative pain.
- No complications were reported in the microsurgical group compared with 5 cases in the laparoscopic group (p = 0.3), one of which required repeat surgery (epiploic venous bleeding).
- Complete resolution of the varicocele did not differ significantly between the 2 groups (63% with laparoscopy and 81% with microsurgery, p = 0.46).

Conclusion
Subinguinal microsurgery appears to be a faster technique, well tolerated and suitable for outpatient management.
Its feasibility as an outpatient procedure was confirmed in this series, in contrast to the rate of hospitalisations observed with laparoscopy. These results reinforce the growing interest in this minimally invasive approach, particularly with a view to optimising care pathways, favouring outpatient management and controlling hospital costs.

P057
Ergebnisse eines individualisierten, multimodalen und defizitorientieren Rehabilitationsprogramms bei Postprostatektomie-inkontinenz

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Einleitung:
Diese Studie untersucht die Bedeutung spezifischer funktioneller Defizite und die Effektivität eines darauf aufbauenden, individualisierten und multimodalen Rehabilitationsprogramms bei Postprostatektomie-Inkontinenz (PPI).

Material und Methoden:
Von 2012 bis 2023 wurden 664 Männer mit PPI in ein 24-wöchiges Rehabilitationsprogramm aufgenommen. Basierend auf Trink- und Entleerungsprotokollen, spezialisierten videourodynamische Untersuchungen und Biofeedback-gestützte Analysen der Sphinktermuskulatur wurde ein defizitorientiertes Therapieprogramm erarbeitet und umgesetzt. Re-Evaluationen nach 8 und 16 Wochen sowie eine Abschlussevaluation nach 24 Wochen dokumentierten den Verlauf und die Therapieergebnisse.

Ergebnisse:
Von den 602 Patienten, die das Programm abschlossen (91 %), erreichten 314 (52 %) eine signifikante Verbesserung der Kontinenz. Der primäre Endpunkt (eine Einlage, an 6 von 7 Tagen trocken) wurde bei 21 % erreicht, während 31 % den sekundären Endpunkt (VAS < 30) erfüllten. Urodynamisch zeigten sich bei 284 Patienten (48%) detrusorbedingte Störungen, die durch kombinierte Pharmakotherapie und Verhaltensanpassungen behandelt wurde. Die intensive und defizitorientierte Sphinkterrehabilitation erwies sich als Schlüsselkomponente der Rehabilitation. Insgesamt benötigten 156 Patienten (26 %) mit persistierender Inkontinenz nach Abschluss des Programms eine prothetische Versorgung.

Schlussfolgerungen:
Ein individualisiertes, multimodales Rehabilitationsprogramm, das die Pathophysiologie der PPI umfassend adressiert, verbessert signifikant die Kontinenz und Lebensqualität. In therapieresistenten Fällen bleibt die prothetische Versorgung eine effektive Option zur Wiederherstellung der Funktionalität.

P058

Personalised indications for adjuvant therapy after primary RPLND reduces chemotherapy exposure in marker negative clinical stage II non-teratomatous germ cell tumours: A decision tree analysis using data of an international multicenter study

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Introduction

Primary retroperitoneal lymph node dissection (pRPLND) is a treatment option for men with clinical stage 2 marker negative non-seminomatous germ cell tumors (CS2-MK-NSGCT). Following confirmation of pN+ disease, clinicians may recommend either surveillance or two cycles of adjuvant chemotherapy. The positive lymph node ratio (PLNR)—defined as the number of positive lymph nodes divided by the total number of excised lymph nodes—has emerged as a potential risk stratification tool to identify patients at higher recurrence risk who might benefit most from adjuvant chemotherapy. This study aimed to validate PLNR as a predictive factor in men undergoing pRPLND for CS II NSGCT.

Methods

We included men with CS2-MK-NSGCT with pRPLND without adjuvant chemotherapy, and who had pathologically confirmed non-teratomatous NSGCT from 7 international centers between 2010 and 2020. Using this baseline risk with surgery only in comparison to a 98% 5-year disease-free survival (DFS) for patients receiving adjuvant BEP×2 we conducted decision analysis comparing four treatment strategies: A) standard chemotherapy (3 cycles of BEP), B) pRPLND without adjuvant chemotherapy, C) pRPLND with adjuvant 2×BEP for all patients, and D) a risk-stratified approach using various PLNR cut-offs to guide adjuvant chemotherapy decisions.

Results

109/634 men met the inclusion criteria with a median number of 20 lymph nodes removed (IQR 15−31), and a median of 2 positive nodes (IQR 1−3). The median PLNR was 11% (IQR 6−18). After a median follow-up of 39 months, 25 men (23%) relapsed. In our decision analysis comparing treatment strategies, we found meaningful difference in chemotherapy exposure per 100 patients. Strategy A resulted in 300 chemotherapy cycles. Strategy B caused approximately 69 cycles. Strategy C led to 215 cycles. Strategy D showed varying results depending on the threshold used. Using a PLNR cut-off of 30% optimized the risk-benefit ratio, resulted in 84.5 chemotherapy cycles. This > 30% PLNR cut-off strategy would administer adjuvant BEPx2 to only 10% of patients (the highest-risk group), while 90% of men would undergo surveillance after pRPLND with a DFS rate of 77%.

Conclusion

Simulated data on patients with CS2-MK-NSGCT, suggests that Strategy B may reduce overall chemotherapy exposure compared to first-line BEP×3. Overall chemotherapy utilization could potentially be further decreased through a PLNR-driven decision aid to guide adjuvant treatment decisions.

P059
Virtual Reality as an Adjunct to Local Anaesthesia in Urologic Procedures: Preliminary Data from a Single-Centre Feasibility Study

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Background & Aims:
Effective pain management is essential in urological procedures performed under local anaesthesia (1). Virtual reality (VR) has emerged as a promising non-pharmacological adjunct, using immersive environments to divert patients' attention from painful stimuli, potentially reducing the perception of pain and anxiety. Studies across various medical disciplines suggest that VR may contribute to improved patient comfort and reduced reliance on analgesia (2). This study aims to evaluate the feasibility and effectiveness of VR in enhancing patient experience during prostate biopsy, vasectomy, and circumcision at our clinic.

Material and Methods:
This single-centre feasibility study included a total of 51 patients undergoing prostate biopsy (n = 30), vasectomy (n = 14), and circumcision (n = 7), all performed under local anaesthesia. Patients were given the option to wear VR goggles with headphones, providing an immersive setting of calming virtual nature scenes, music, and a hypnotic narrative. Postoperatively, patient-reported outcome measures were assessed using a structured questionnaire evaluating pain, anxiety, overall satisfaction, and tolerability.

Results:
Overall satisfaction with VR was high (mean 7.9 ± 1.9, VAS 0 – 10), with subgroup scores highest in vasectomy (8.2 ± 1.6), followed by prostate biopsy (8.0 ± 1.8) and circumcision (6.9 ± 2.7). Most patients indicated that VR effectively distracted them from the procedure (4.1 ± 0.8) and positively influenced their sense of wellbeing (4.2 ± 0.8; Likert scale 1 – 5). A notable proportion also reported subjective relief in both pain (3.6 ± 1.0) and anxiety (3.8 ± 1.0; Likert scale 1 – 5). Adverse effects were minimal and transient; a small number of patients experienced mild symptoms commonly associated with cybersickness, such as headache (0.2 ± 0.6), nausea (1.0 ± 2.0), or dizziness (0.8 ± 1.5; VAS 0 – 10), none of which required medical attention.

Conclusions:
These preliminary findings support VR as a feasible and valuable adjunct to local anaesthesia, being both well tolerated and positively perceived by patients undergoing urological interventions. Given the growing emphasis on non-pharmacological pain management strategies, VR presents a cost-effective, patient-friendly tool that may reduce the need for analgesia and enhance overall patient satisfaction. Further controlled studies are warranted to validate these results and explore broader clinical integration.

P060
Solitär fibröser Tumor der Harnblase - ein Fallbericht

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Hintergrund:
Solitär fibröse Tumore (SFT) sind eine seltene Tumorentität mesenchymalen Ursprungs, die überwiegend in der Pleura und im Mediastinum auftreten. Es sind jedoch auch Fälle von extrapleuralen Lokalisationen bekannt. SFT in der Harnblase sind äußerst selten. In der Literatur wurden weniger als 40 Fälle beschrieben.

Methode:
Wir berichten über einen 88-jährigen Patienten, der sich mit ausgeprägten irritativen Miktionsbeschwerden und neu aufgetretener Makrohämaturie vorstellte. In der Computertomographie zeigte sich eine ausgeprägte Raumforderung von 6,8 x 6,7 x 6,2 cm im rechten dorsolateralen Bereich der Blase ohne Hinweise auf eine extrakapsuläre Ausdehnung oder Fernmetastasierung. Die histopathologische Analyse nach bioptischer Abklärung identifizierte die Masse in der Blase als SFT. Zur Behandlung der ausgeprägten Dranginkontinenz und Pollakisurie wurden mit dem Patienten mehrere Therapieoptionen besprochen. Schlussendlich entschied sich der Patient für die transurethrale Resektion des fibrösen Tumors. Intraoperativ konnte der fibröse Blasentumor en-bloc reseziert werden, wobei eine makroskopisch vollständige R0-Resektion erzielt wurde.

Resultat:
Insgesamt wurden 300 Gramm Tumorgewebe mittels transurethraler Resektion entfernt. Die histopathologische Aufarbeitung bestätigte die Diagnose eines SFT.

Schlussfolgerung:
Hier wurde der seltene Fall eines SFT der Harnblase beschrieben. Diese Tumore werden am häufigsten bei Personen im fünften bis siebten Lebensjahrzehnt diagnostiziert und zeichnen sich in der Regel durch ein indolentes, asymptomatisches Wachstum aus. Die Diagnosestellung basiert auf klinischen Symptomen, bildgebenden Befunden und pathologischen Untersuchungen. Differentialdiagnostisch muss ein Blasenkarzinom ausgeschlossen werden. Zur Behandlung wird die vollständige Resektion des Tumors empfohlen. Die meisten Fälle weisen nach der Operation eine gute Prognose auf, ohne dass ein Rezidiv oder Metastasen auftreten. Eine Minderheit der Patienten kann jedoch auch lokale Rezidive maligner Dignität entwickeln. Der wichtigste Prognosefaktor ist eine vollständig Tumorentfernung. Es sind jedoch mehr klinische Daten und längere Nachuntersuchungen erforderlich, um den Verlauf der Erkrankung besser bewerten zu können.

P061
Conservative Approach to Intraperitoneal Bladder Perforation in a High-Risk Patient: A Case Report

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This report presents a case of an elderly patient with an indwelling urethral catheter who developed an intraperitoneal urinary bladder perforation following a routine bladder rinse.
An 86-year-old patient with synchronous bone-metastasized adenocarcinoma of the prostate, undergoing antiandrogen therapy and dialysis due to end-stage renal failure with minimal residual urine output, presented to the emergency department with acute right lower abdominal pain of two days' duration. Given the suspicion of appendicitis, an abdominal CT scan was performed, revealing an intraperitoneal bladder perforation. Empirical intravenous antibiotic therapy was initiated, and the patient was admitted for close monitoring due to multiple comorbidities and complex clinical status.
Due to its greater flexibility and absence of a traumatic tip, a 16 French silicon balloon nephrostomy catheter was inserted to replace the indwelling transurethral catheter, under radiological guidance. Due to a multimorbid and anuric patient, a conservative treatment approach was decided, with targeted combined antibiotic therapy based on the most recent urine culture (Co-Amoxicillin and Ciprofloxacin. This regimen resulted in a reduction of symptoms and inflammatory markers in the blood. The patient was discharged five days post-admission. A follow-up retrograde cystography conducted four weeks later showed no extravasation of contrast material. The nephrostomy catheter was subsequently exchanged cautiously under radiological guidance with a new nephrostomy catheter.
Urinary bladder perforation in patients with indwelling urethral catheters is a rare but serious complication, associated with significant morbidity and mortality. The preferred diagnostic modalities for confirming bladder perforation are retrograde cystography and CT cystography. Management strategies for bladder perforation depend on the perforation's location, categorized as either intraperitoneal or extraperitoneal. Traditionally, intraperitoneal perforations have been treated with surgical repair. However, recent guidelines support a conservative approach for uncomplicated intraperitoneal injuries in the absence of peritonitis and ileus, expanding treatment options in selected cases.
In conclusion, conservative management of intraperitoneal bladder perforations, including catheterization and targeted antibiotics, offers a viable alternative to surgery, especially patients with comorbidities, resulting in acceptable outcomes.

P062
Molecular and Cellular Mechanisms of Resistance to Intravesical Chemotherapy in Non-Muscle-Invasive Bladder Cancer: A Scoping Review

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Context & Objectives:
In non-muscle-invasive bladder cancer (NMIBC), intravesical administration of chemotherapeutic agents—such as epirubicin, mitomycin C, gemcitabine, and docetaxel—remains a cornerstone of adjuvant treatment. However, considerable variability in clinical response has been reported, suggesting the involvement of incompletely understood molecular and cellular mechanisms of resistance. This scoping review aims to systematically identify and synthesize the main resistance pathways associated with intravesical chemotherapy in NMIBC.

Materials and Methods:
PubMed, Embase, IEEE Xplore, BASE, and SpringerLink were searched for relevant studies without publication date constraints. These studies focused on preclinical or experimental bladder cancer models, specifically NMIBC, and involved the use of intravesical chemotherapy.
Only English-language studies were considered. Out of 814 records initially identified, 31 articles were retained for inclusion after duplicate removal and exclusion based on inaccessibility or failure to meet eligibility criteria.

Results:
Among the 31 included studies, 21 (67.7%) used in vitro models, 9 (29.0%) used in vivo models, and 5 (16.1%) employed ex vivo approaches such as histocultures or organoids with some studies employing more than one experimental model. All studies examined resistance to intravesical agents; gemcitabine and mitomycin C were the most frequently studied (25 studies, 80%), while epirubicin and docetaxel were addressed in 8 (26%) and 1 study, respectively. Key resistance mechanisms included apoptosis evasion (16%), activation of NF-κB and EGFR pathways (13%), EMT (10%), and drug efflux (6.5%), with additional roles for c-Myc overexpression and compartmental resistance.

Conclusions:
NMIBC resists intravesical chemotherapies through multiple molecular and cellular pathways. EMT, aberrant signalling cascade activation, drug efflux, and apoptosis evasion are the main causes of therapeutic failure.
Despite the insights obtained from preclinical studies—especially those using resistance models, multimodal validation, and new delivery systems—many are still limited to in vitro study, limiting clinical applicability. To improve NMIBC chemoresistance translation, future research should focus on standardized methods, in vivo and patient-derived models, and the further investigation of less often researched drugs such as epirubicin and docetaxel.

P064
Post-Cystectomy ctDNA Dynamics and Their Association with Clinical Outcomes in Muscle-Invasive Bladder Cancer: Updated Analysis

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Background and objective:
Despite the emergence of several novel therapeutic options for patients with muscle-invasive bladder cancer (MIBC), treatment responses remain highly variable. Circulating tumor DNA (ctDNA), a subset of cell-free DNA (cfDNA) shed into the bloodstream through tumor cell apoptosis or necrosis, may serve as a biomarker of disease activity. In this study, we examined whether ctDNA levels measured pre- and post-radical cystectomy are associated with disease recurrence.

Methods:
We prospectively collected plasma, tumor tissue, and germline samples pre- and post-RC. 70 patients had complete data for both pre- and post-surgery r analysis. Commonly mutated genes in plasma and tissue, particularly TERT and TP53, were assessed using the AVENIO ctDNA platform (Roche, Research Use Only) and then evaluated for potential association with patient outcome measures, including survival and disease recurrence.

Key findings Update and limitations:
In the overall study population, patients with negative ctDNA status in post-surgery plasma had a significantly longer RFS compared to those with positive ctDNA status (p=0.01). ctDNA positivity fell from 46 % presurgery to 23 % postsurgery, and a positive postoperative result independently predicted recurrence. Patients who were ctDNA positive pre-surgery and converted to ctDNA negative post-surgery showed longer survival than those remaining ctDNA positive (median survival 36 months vs. 18 months).

Conclusion and clinical implications:
Our updated results highlight that perioperative ctDNA status is associated with patient prognosis in MIBC.

P065
Two Malignancies, One Urogenital Tract – A Case Report

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Clinical Background
Mucosal melanoma is a rare and aggressive form of melanoma, accounting for approximately 1% of all melanomas, with distinct clinical and molecular features that differ significantly from cutaneous melanomas. It is often associated with poor prognosis and high recurrence rates.

Case Report
This report presents the case of a 75-year-old patient who self-presented with a mass in the genital area, which clinically appeared as a displaced external urethral meatus with a 1.5 cm mass exhibiting superficial necrosis. Cystoscopic examination revealed a papillary, non-invasive lesion in the bladder. Histological analysis of the urethral lesion confirmed an ulcerated malignant melanoma. Further biopsies of the vulva revealed multiple melanoma in situ lesions.
During a TUR-B procedure, a complete resection of a finding corresponding to urothelial carcinoma pTa G2 high grade was performed. Imaging with FDG-PET-CT identified a metabolically active lesion at the urethral meatus, without locoregional or distant metastasis.
Given the absence of sufficient evidence to support immunotherapy for mucosal melanomas, an interdisciplinary approach involving local excision, cystectomy, and ileal conduit formation was undertaken. Histology from the procedure revealed an ulcerated mucosal melanoma at the vulvourethral junction, with minimal margins of 2 mm on the right and 4 mm on the left. Additionally, lentiginous melanoma in situ extended into both lateral resection margins. A follow-up resection shows that tumor-free resection margins were obtained from 7 to 3 o'clock, with melanoma in situ detected in the left lateral resection margin from 3 to 5 o'clock.
Postoperatively, a clinical and imaging follow-up will be conducted.

Conclusion
This case underscores the importance of considering melanoma in the differential diagnosis of urethral caruncle, regardless of pigmentation. Early histological diagnosis is crucial, as misdiagnosis or delayed treatment significantly worsens the prognosis due to the rapid metastatic potential of mucosal melanoma.

P066
Translational Insights from Muscle-Invasive Bladder Cancer Organoids: Toward Personalized Therapy Optimization

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Introduction
Muscle-invasive bladder cancer (MIBC) exhibits high inter-patient heterogeneity, driving recurrence, treatment failure, and poor prognosis, underscoring the need for precision oncology. Patient-derived organoids (PDOs) are robust preclinical models that preserve parental tumors' (PT) molecular and cellular complexity. This study developed a PDO-based drug screening platform to improve therapeutic precision.

Materials and Methods
MIBC PDOs were derived from resected tumors (43 samples) and expanded under optimized 3D culture. PDOs were treated for 48h with the reported human Cmax values of both standard-of-care (SOC) chemotherapy and selected FDA-approved compounds, including Tyrosine kinase inhibitors (TKIs), mTOR inhibitors, PARP inhibitor, and other non-SOC drugs. Cell viability was assessed using Cell Titer-Glo® luminescent assay. Differences between treatment groups and the respective controls were analyzed using ordinary one-way ANOVA). Morphology alterations were observed before and after treatment using CQ1 confocal imaging cytometer.

Results
Our study confirms that PDOs preserved key PT markers, with an establishment success rate of 81.4% within 6–14 days. MIBC PDOs showed two main morphologies: mixed (51.43%) and solid (48.57%). SOC chemotherapy—cisplatin/gemcitabine (78%, 25/32) and MVAC (88%, 14/16)—showed strong efficacy, significantly reducing PDO-cell viability, aligning with the widely observed clinical response of patients, which reinforced the model's predictive reliability. Notably, in some non-SOC compounds like daunorubicin (50%, 10/20) and epirubicin (84%, 16/19), the cytotoxic effect was equal to or even better than SOC. Nonetheless, lapatinib (30%, 6/20) and olaparib (31%, 5/16), dual TKIs (EGFR/HER2) and PARP inhibitor, respectively, also showed to be promising for MIBC treatment. We unexpectedly discovered a highly aggressive MIBC during the process, exhibiting a cell line-like growth pattern with rapid, sustained proliferation and morphological stability after multiple passages. It provides a novel model for studying aggressive MIBC. Ongoing research is in progress to explore therapeutic vulnerabilities.

Conclusions
In this study, we established a valuable MIBC biobank for drug discovery and validation. Inter-sample drug variability reflects MIBC heterogeneity, emphasizing the need for molecular profiling and in vitro screening to guide personalized treatment and informed clinical decisions.

P067
Verschluss Aorta abdominalis unter neoadjuvanter Cisplatin-basierter Chemotherapie bei muskelinvasivem Urothelkarzinom der Harnblase – Ein Fallbericht

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Einleitung
Die Gabe von cisplatinhaltiger Chemotherapie sowie maligne Tumoren sind mit einem erhöhten Risiko für thromboembolische Ereignisse assoziiert. Während venöse Thrombosen gut untersucht sind, stellen arterielle Ereignisse eine seltene, wenig erforschte Komplikation dar. Wir beschreiben den Fall eines 59-jährigen Patienten, bei dem es im Rahmen eines muskelinvasiven Urothelkarzinoms der Harnblase nach einem Zyklus neoadjuvanter Chemotherapie mit Gemcitabin/Cisplatin zu einer vollständigen Okklusion der Aorta abdominalis kam.

Fallbeschreibung
Bei Herrn C., 59-jährig, wurde im Mai 2024 ein muskelinvasives Urothelkarzinom (pT2, G3) mittels TUR-B diagnostiziert. Das Staging zeigte keine Metastasen. Im Juni 2024 erfolgte der Start der neoadjuvanten Chemotherapie mit Cisplatin/Gemcitabin. Kurz nach Beginn des 2. Zyklus kam es zu Sensibilitätsstörungen und Schmerzen der unteren Extremität. Die CT-Angiographie zeigte ein Leriche-Syndrom mit vollständiger infrarenaler Aortenokklusion sowie Verschlüssen der Iliakal- und Femoralarterien. Es folgte die Überweisung ans Inselspital Bern zur Thrombektomie und Patchplastik. Die neoadjuvante Chemotherapie wurde nach zwei Zyklen nicht weitergeführt. Ein Re-Staging zeigte eine stabile Tumorsituation. Im September 2024 erfolgte die operative Versorgung mittels radikaler Zystektomie, pelviner Lymphadenektomie und Anlage einer Ersatzblase. Histologisch zeigte sich ein Urothelkarzinom ypT2b, pN2 L1 V0 Pn0 R0. Auf eine cisplatinhaltige adjuvante Therapie wurde aufgrund der schwerwiegenden Komplikation verzichtet. Eine adjuvante Immuntherapie mit Nivolumab wurde evaluiert. Aufgrund einer Verschlechterung des Allgemeinzustands mit wiederholten Hospitalisationen aufgrund urogenitaler Infekte konnte diese jedoch nicht mehr durchgeführt werden. Der Patient verstarb im April 2025.

Schlussfolgerung
Dieser Fall verdeutlicht den Einfluss des Auftretens arterieller Thrombosen auf den Krankheits- und Therapieverlauf bei Tumorpatienten. Solche Komplikationen haben entscheidenden Einfluss auf die Morbidität und Mortalität und sollten bei der Therapieplanung berücksichtigt werden. In ausgewählten Fällen kann eine prophylaktische Antikoagulation zur Reduktion krebsassoziierter thromboembolischer Ereignisse nach sorgfältiger Abwägung des Blutungsrisikos erwogen werden.

P068
Intraoperative stone spillage after CHE mimicking peritoneal carcinomatosis

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Introduction:
We present the case of a 57-year-old Jehovah's Witness patient with recurrent, multilocular bladder cancer under EAU MIBC follow-up. The patient had previously undergone radical cystectomy with urethrectomy, bilateral pelvic lymphadenectomy, and ileal conduit formation on March 31, 2023. Histopathology confirmed urothelial carcinoma of the bladder (ypTa, ypTIS, ypN0 (0/17), cM0, LVI0, Pn0, R0) and urothelial carcinoma of the prostatic urethra with focal stromal invasion (ypT2, ypN0 (0/17), cM0, LVI0, Pn0, R0).

Case Presentation:
On October 18, 2024, a follow-up CT scan of the thorax and abdomen raised suspicion of peritoneal carcinomatosis in the right hemiabdomen with metastasis-suspect lesions. A prior cholecystectomy had been performed on September 6, 2024. The patient was directly referred to oncology, and cost approval was obtained for treatment with Enfortumab Vedotin (Padcev®) in combination with Pembrolizumab (Keytruda®) according to the EV-302 trial. The tumor board recommended a CT-guided fine-needle biopsy, which yielded histological results showing fibrolipomatous tissue with chronic lymphoplasmacytic and acute abscess-forming inflammation, without evidence of malignancy.
A follow-up CT on January 7, 2025, showed progressive nodular intra-abdominal lesions, maintaining suspicion of peritoneal carcinomatosis despite the benign biopsy. The case was re-evaluated in the tumor board, leading to a decision for diagnostic laparoscopy with potential conversion to laparotomy and biopsy collection by surgery. Histological analysis revealed fibrolipomatous, variably vascularized tissue fragments with abscess-forming, organizing inflammation. Within the purulent material, several small, yellow foreign particles (up to 3 mm) were identified as pigment stone fragments, surrounded by a foreign body giant cell reaction and fibrotic demarcation.

Conclusion:
The initial suspicion of peritoneal carcinomatosis was ultimately incorrect. The radiological findings were due to gallstones lost intraoperatively during cholecystectomy on September 6, 2024, emphasizing the importance of considering post-surgical complications in differential diagnoses of abdominal lesions.

P069
Case Report: Metachron Intravesikal Metastasiertes Klarzelliges Nierenzellkarzinom

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Einleitung
Das Nierenzellkarzinom metastasiert typischerweise hämatogen in Lunge, Skelett, Gehirn oder Leber. Eine intravesikale Metastasierung wird in wenigen Fällen beschrieben, wobei in der Literatur eine hämatogene Genese oder eine Abtropfmetastase über den Ureter diskutiert wird. In den publizierten Fällen zeigte die Mehrheit der Nierenzellkarzinom-Patienten eine schmerzlose Makrohämaturie, häufig lag ein ein klarzelliges Nierenzellkarzinom zugrunde. Folgend wird der Fall einer Patientin mit intravesikal metastasierten Nierenzellkarzinom unter Immuntherapie vorgestellt.

Fallbeschreibung
Eine 70-jährige Patientin wurde im März 2025 von unserer onkologischen Abteilung zur Abklärung einer rezidivierenden, schmerzlosen Makrohämaturie ohne weitere Miktionsbeschwerden an unsere Klinik verwiesen. Die Patientin befand sich bei einem ossär metastasierten klarzelligen Nierenzellkarzinom unter palliativer Drittlinienimmuntherapie mit Zanzalintinib Rahmen der Stellar-002 Studie. Bei Erstdiagnose November 2023 wurde eine Raumforderung im Bereich der rechten Niere mit einer singulären ossären Metastasierung nachgewiesen. Aufgrund der oligometastasierten Situation bei "good risk" -Einteilung erfolgten die Tumornephrektomie und Radiatio der Metastase. Bei Progress folgte eine Erst- und Zweitlinien Immuntherapie mit Nivolumab/Ipilimumab und Axitinib ergänzend mit Radiotherapie weiterer ossärer Metastasen. Eine Zystoskopie zeigte fünf bis zu 1cm grosse, solide Läsionen mit Gefässzeichnung und Einblutungen an der Blasenhinterwand sowie der rechten Seitenwand. In der Spülzytologie wurden atypische Zellen nachgewiesen. Es wurde eine vollständige transurethrale Resektion der Befunde durchgeführt. Histologisch und immunhistochemisch konnten ulzerierte und eingeblutete Metastasen des klarzelligen Nierenzellkarzinoms nachgewiesen werden. Im Anschluss wurde die Patientin zur Fortführung der Drittlinien-Systemtherapie wieder an die Onkologie überwiesen. Eine Makrohämaturie ist seither nicht mehr aufgetreten.

Diskussion
Eine intrasvesikale Tumormanifestation eines Nierenzellkarzinoms ist selten. Die Indikation zur transurethralen Resektion ergibt sich in erster Linie zum Ausschluss einer Neoplasie der Harnblase, sowie palliativ zur Therapie der Makrohämaturie. Eine therapeutische Resektion zur Tumorlastsenkung kann bei isoliert intravesikal metastasiertem Nierenzellkarzinom diskutiert werden, folgend sollten regelmässige Zystoskopien erwogen werden.

P070
Impact of age on tumor recurrence and progression of patients with primary pT1 high-grade urothelial bladder cancer after transurethral resection and BCG therapy: a multicenter retrospective cohort study

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Background and Objectives:
There are clear recommendations for the use of Bacillus Calmette-Guérin (BCG) therapy after transurethral resection of pT1 high-grade urothelial bladder cancer regardless of patient's age. However, there is evidence that effectiveness of BCG therapy might decrease with increasing age. The aim of our study was to investigate the impact of patient age on recurrence-free survival (RFS) and progression-free survival (PFS) after treatment of pT1 high-grade urothelial bladder cancer according to current guidelines.

Material and Methods:
We conducted a multicenter retrospective cohort study including patients with primary pT1 high-grade urothelial bladder cancer who underwent transurethral resection and repeat resection with no residual tumor followed by at least 6 cycles of BCG therapy. Patient groups, stratified by age (≤ 70 versus > 70 years and ≤ 75 versus > 75 years), were compared using Kaplan-Meier curves and log-rank tests investigating RFS and PFS. Univariable and multivariable Cox regression models were used to determine risk factors for recurrence and progression.

Results:
64 patients were included. Median follow-up was 43 months (IQR 18-70). Kaplan-Meier curves showed no significant difference in RFS and PFS comparing age thresholds of > 70 and > 75 years. In univariable Cox regression analysis, carcinoma in situ (p = 0.027) and EAU very high-risk tumors (p = 0.023) were associated with shorter PFS. In multivariable Cox regression analysis, female sex was associated with shorter RFS (p = 0.043) and PFS (p = 0.019).

Conclusion:
Patient age alone does not appear to negatively impact the risk of recurrence and progression after transurethral resection, repeat resection and BCG therapy of primary pT1 high-grade urothelial bladder cancer, in accordance with current guidelines. Therefore, patients with these tumor characteristics should not be denied BCG therapy based solely on age.

P071
Sodium-glucose linked transporter 2 (SGLT2) inhibitor intake does not increase risk of urinary tract infection in patients with urinary diversion and diabetes mellitus

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Background and Objectives:
The role of sodium-glucose linked transporter 2 (SGLT2) inhibitors regarding risk of urinary tract infections (UTI) in the general population is unclear and might be dose-dependent. Furthermore, no data exists investigating the impact of SGLT2 inhibitors on risk of UTI in patients with diabetes mellitus (DM) and urinary diversion after cystectomy. Primary aim of our study was to investigate and compare the risk of UTI in patients with urinary diversion and DM depending on the intake of SGLT2 inhibitors. Secondary aims were to compare rates of asymptomatic bacteriuria and level of glucosuria between the two groups.

Material and Methods:
We conducted a retrospective cohort study including patients who underwent cystectomy at the Department of Urology at Inselspital Bern between March 1996 and November 2023, receiving one of three forms of urinary diversion (ileum conduit, orthotopic neobladder, catheterizable pouch) and having been diagnosed with DM. We compared risk of UTI of patients with and without SGLT2 inhibition as part of antidiabetic mediation by using logistic regression analysis. Time to first UTI was investigated by using Kaplan-Meier curves.

Results:
We included 123 patients, of whom 89 (72.4 %) were male and 34 (27.6%) were female. Median follow-up was 51 (IQR 15-96) months. Urinary diversion was ileum conduit in 76 (61.8 %), neobladder in 43 (35.0 %), and catheterizable pouch in 4 (3.2 %) cases. During postoperative course, 18 (14.6 %) patients were taking an SGLT2 inhibitor as part of antidiabetic mediation. A total of 121 UTI were observed. During a median follow-up of 11 (IQR 3-31) months, six UTI occurred in the group of patients taking a SGLT2 inhibitor as part of antidiabetic medication, while during a median follow-up of 68 (IQR 19-107) months 115 UTI were detected in the group of patients without SGLT2 inhibitor intake. Logistic regression analysis did not identify SGLT2 inhibitor as risk factor for UTI in patients with DM and urinary diversion.

Conclusion:
SGLT2 inhibitor intake does not seem to be associated with increased risk of UTI in patients with DM and urinary diversion after cystectomy Accordingly, SGLT2 inhibitors should not be withheld from patients with urinary diversion if indicated.

P072
When the Guide Takes the Wrong Path: Suprapubic Catheter Malposition Leading to Obstructive Uropathy

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Introduction & Objectives
Suprapubic cystotomy is a frequent procedure, especially in patients with neurogenic bladder who require long-term bladder drainage. The most frequent complications associated with cystostomy are bacteriuria, bleeding, and bladder stones

Materials and Methods
Case 1
A 74-year-old male patient with multiple comorbidities, including chronic kidney disease. The patient had been carrying a suprapubic catheter due to a multifactorial mixed-type bladder voiding dysfunction.
24 hours after the last replacement, the patient presented to the emergency department with general deterioration. Vital signs were as follows: temperature 38.5°C, blood pressure 90/50 mmHg, respiratory rate 50/min, heart rate 150 bpm. Physical examination revealed diffuse abdominal pain, a distended bladder, and mottling extending to the upper abdomen.
Blood tests showed leukocytosis 14.3 G/L, creatinine 192 µmol/L. Arterial blood gas analysis revealed metabolic acidosis with a lactate level of 4.9 mmol/L. Abdominal CT scan showed that the balloon of the suprapubic catheter was erroneously positioned inside the urethra. The catheter was repositioned. The patient was admitted to hospitalization for 8 days for treatment of obstructive septic shock. He was discharged home without sequels.

Case 2
An 89-year-old female patient with a medical history of multiple sclerosis. She had a suprapubic catheter in this context. During a routine pulmonary follow-up, the patient complained of diffuse abdominal pain for several days, without fever. An abdominal CT scan revealed an obstructive pyelocaliceal dilation due to the mispositioning of the suprapubic catheter balloon at the level of the right ureteral orifice. The catheter was repositioned. The patient was managed conservatively and did not require hospitalization. Follow-up ultrasound showed complete resolution of the dilation.

CONCLUSION
The initial placement of a suprapubic catheter is a key intervention that requires careful attention. However, it is equally important to emphasize that catheter replacement, though often delegated to trained nurses or medical residents, is not without significant risk. As illustrated in these cases, misplacement during routine procedures can lead to severe complications, including obstructive uropathy and septic shock. To ensure greater procedural safety, it is important to perform a bladder flush with a syringe to test catheter function or to verify balloon positioning using ultrasound.

P073
ROBOT-ASSISTED SURGICAL REPAIR OF A IATROGENIC VESICO-VAGINAL FISTULA: A CASE REPORT

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Context and Objectives
Vesico-vaginal fistula (VVF) is a rare but challenging condition that creates an abnormal connection between the bladder and the vagina, resulting in urinary leakage. This study aims to share a case of VVF that occurred after hysterectomy.

Materials and methods
We present the case of a 47-year-old woman that came to our department with ongoing vaginal urinary leakage following hysterectomy. Contrast-enhanced CT urography and flexible cystoscopy identified a fistula on the bladder's posterior wall, about 4 cm above the trigone, connected with the vaginal fornix. After unsuccessful conservative management with extended catheterization, we proceeded with surgical repair. We carried out the intervention using a transperitoneal robot-assisted technique with the Da Vinci Xi system in February 2024. The patient was positioned at a 35° Trendelenburg angle. We placed four 8 mm robotic trocars in a semicircular arrangement above the belly button, along with two assistant laparoscopic ports (5 mm and 12 mm). We made a peritoneal incision at the Douglas pouch level and carefully developed the fibrotic vesico-vaginal space. After filling the bladder with 100 ml of saline, we made a small incision in the posterior bladder wall to locate the fistulous tract. We performed a complete excision of the fistulous tract, ensuring a circumferential resection about 1 cm from the orifice, followed by the removal of the corresponding segment of the vaginal wall. We used a double-layer semi-continuous suture and interposed a pedicled omental flap to close the bladder defect.

Results
Operative time was 110 minutes, with negligible blood loss. There were no complications during and after the procedure. Hospital stay was 3 days. Bladder catheter was removed after one month, following a cystogram that was negative for leakage. Histology was negative for malignancy. At the 45-day follow-up visit, the patient reported complete resolution of symptoms, spontaneous voiding, and no urinary incontinence. These results were confirmed at one-year follow-up.

Conclusion
In this case report, we presented the surgical technique of robot-assisted surgical repair of iatrogenic vesico-vaginal fistula. The procedure resulted in favorable intraoperative and perioperative outcomes, as well as satisfactory clinical and functional results at one-year follow-up.

P074
Outcomes of radical cystectomy in high-risk and very high-risk non muscle invasive bladder cancer : a single-center experience

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Introduction
In the area of bladder-sparing strategies, early radical cystectomy (RC) remains the gold-standard treatment for selected cases of high-risk (HR) and very high-risk (vHR) non-muscle invasive bladder cancer (NMIBC). However, its timing and true benefit remain uncertain. This study aimed to assess perioperative and oncological outcomes of RC in this setting.

Method
Consecutive patients with HR or vHR NMIBC treated by RC in our center between 2002 and 2024 were included. Recurrence-free (RFS), cancer-specific (CSS) and overall survival (OS) were primary outcomes. Postoperative complications classified according to the Clavien-Dindo (CD) system were secondary outcomes.

Results
A total of 51 patients were included, mostly men (N=40, 78%), with a smoking history (N=39, 78%), a median age of 74 [IQR 68–79] years, and ASA score >23-4 in 29 (58%), ASA 2 in 21 (42%)., ASA in 28 (56%) and ASA 4 in 1 (2%)). Recurrent NMIBC was present in 65% of themthe included patients, and 14% had concomitant upper tract urothelial carcinoma. Patients were pre-treated either with mitomycin C (N=13, 25%), BCG (N=23, 45%) or pelvic radiation therapy (N=7,14%). Transurethral resection of bladder tumor prior RC showed a stage pTa in 10 (22%), pT1 in 27 (59%) and pTis in 9 (20%) patients, respectively. Tumors were mostly high-grade (98%) and pure urothelial (84%).

RC approach was mainly open (N=XX39, 76%) and the preferred urinary diversion was ileal conduct (N=40, 79%). Median BL was 535 [IQR 150 – 900] mL and OT 374(IQR 270 – 434) minutes. RC specimen showed a stage pT0 in 4 (8%), pTa in 5 (10%), pT1 in 20 (39%), pTis in 10 (19%), and ≥ pT2 in 12 (24%) patients, respectively. To note, 4 (9%) patients had nodal involvement at RC. CD grade ≥ III complications occurred in 16 patients (31%).

After a median follow-up of 15 (7 - 29) months, a total of 9 (18%) patients recured, 7 (14%) died from cancer and 21 (41%) died from any cause. 5-year RFS, CSS and OS were 63% (95% CI 31 – 83%), 70% (95% CI 34–89%) and 28% (95% CI 7–54%), respectively.

Conclusion
Early RC for HR and vHR NMIBC provides favorable oncological outcomes in appropriately selected patients, despite notable perioperative morbidity. These find

P075
Comparative cost analysis of intracorporal vs. extracorporal urinary diversion in patients undergoing cystectomy for bladder cancer: insights from the Swiss healthcare system

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Introduction:
Robot-assisted radical cystectomy (RARC) has seen growing use in Switzerland, evolving from a hybrid approach with extracorporal urinary diversion (ECUD) to predominantly intracorporal urinary diversion (ICUD) in high-volume centers. ICUD has been associated with reduced blood loss, lower transfusion rates, faster recovery, and shorter hospital stays, though it remains technically demanding and may increase operative time and expenses. We present a detailed cost comparison of RARC with ECUD vs. ICUD at a Swiss tertiary care center.

Methods:
In 2024 RARC with ICUD was introduced at a tertiary care center. Prior to this, RARC was performed with ECUD. A retrospective cost analysis was conducted using the REKOLE system, comparing the first ten consecutive patients who underwent ICUD with the last ten consecutive patients who received ECUD. Detailed cost data were available for nursing staff and physician services, multidisciplinary expenses, hospitality, and material costs. In addition, perioperative outcome parameters were analyzed.

Results:
The mean age was 67 years ([SD] ±9) in the ECUD group and 71 years (±10) in the ICUD group. Mean operative time was comparable: 372 minutes (±43) for ECUD vs. 363 minutes (±43) for ICUD. Patients undergoing ICUD had a shorter hospital stay (10.5 ±3 days) compared to ECUD (17.1 ±5.2 days). The 30-day readmission rates were similar across both groups (3 ECUD patients vs. 2 ICUD patients). The mean reimbursement from compulsory health insurance was CHF 42.168 (±8.534) for ICUD and CHF 49.555 (±8.493) for ECUD. Healthcare staff costs were lower in the ICUD group (CHF 13.982 ±1.696) than in ECUD (CHF 18.906 ±4.080), a difference of CHF 4.925. Material costs were higher in ICUD (CHF 9.860 ±1.155) compared to ECUD (CHF 8.092 ±2.052), with a difference of CHF 1.769. Hospitality costs were CHF 1.357 (±332) for ICUD and CHF 2.086 (±613) for ECUD (diff. CHF 729). Multidisciplinary service costs were CHF 4.994 (±651) for ICUD and CHF 4.054 (±1.454) for ECUD (diff. CHF 940). Total mean costs amounted to CHF 30.211 (±4.665) for ICUD and CHF 33.147 (±8.598) for ECUD, reflecting a cost difference of CHF 2.937.

Conclusion:
Transitioning from ECUD to ICUD resulted in similar operative times and a 7-day reduction in hospitalization. This led to lower staff and hospitality costs, despite higher material expenses. Overall, ICUD showed lower internal costs, suggesting potential financial advantages for broader implementation.

P076
Urinary tract Complications Following Nesbit Uretero-Ileal Anastomosis in Bricker conduit: A Single-Center Experience

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Introduction
Urinary tract complications (UTC) such as uretero-ileal strictures (UIL), urinary leaks (UL), and urosepsis (US) are common issues after radical cystectomy (RC) with urinary diversion (UD), leading to substantial morbidity and often requiring additional interventions. The Nesbit uretero-ileal anastomosis (UIA) provides independent ureteral drainage, reducing bilateral obstruction risk, but may increase the risk of strictures. This study aims to evaluate urinary tract functional outcomes of the Nesbit UIA in a single center, following the adoption of this technique in our institution in August 2023.

Material & Methods
We retrospectively included consecutive patients undergoing open RC with UD for bladder cancer at our institution between August 2023 and December 2024. UIA were performed using the Nesbit method, with a 3-5 cm ureteral resection and extensive spatulation. Vascularization control using indocyanine green was not routinely performed. Mono-J stents were systematically placed intra-operatively. Pre-, peri-, and postoperative data were extracted from prospectively documented records.

Results
A total of 37 patients were included, of which 30 (81%) were men with a median age of 72 (IQR 64 - 78). Median Charlson Comorbidity Index (CCI) was 5 (3 - 7) and BMI 25 (23 - 29). Median preoperative creatinine was 93 (73 - 110) µmol/L. Preoperative upper urinary tract dilation was present in 32 (86%) patients, and 32% required drainage. 14 (38%) patients received neoadjuvant chemotherapy and 4 (11%) had prior radiation therapy (RT). UD type was either ileal conduit (N = 28, 76%) or orthotopic neobladder (N = 9, 24%). Mono-J stents were removed after the return of bowel function, in a median of 8 (6 - 10) days.
After a median follow-up of 7 (3 - 10) months, 12 (32%) patients presented a UTC: 11 US and 1 UL, respectively. No UIS was observed. Among the US, 4 (36%) occurred with ureteral stents in place, and 7 (64%) after removal. Median postoperative creatinine was 92 (81 - 120) µmol/L. Univariate analysis showed no significant associations between the occurrence of UTC and BMI (p = 0.827), prior RT (p = 0.609), smoking (p = 0.678) or preoperative drainage (p = 0.317).

Conclusion
The Nesbit UIA appears to be a safe and effective method, with primarily non-obstructive infectious UTC. In this cohort, one-third of urosepsis cases occurred before the removal of mono-J stents, emphasizing the potential benefit of stentless UIA.

P077

External validation of the VESPER trial comparing the efficacy of dd-MVAC vs. GC regimen for neoadjuvant chemotherapy in patients undergoing radical cystectomy for localized muscle-invasive bladder cancer: A real-world analysis of the BLADRAC cohort

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Background & Objectives

The objective of our study was to conduct an external validation of the VESPER trial comparing the efficacy of dd-MVAC vs GC regimen for neoadjuvant chemotherapy (NAC) in patients undergoing radical cystectomy (RC) for localized muscle-invasive bladder cancer (MIBC).

Material & Method

We identified 730 patients who underwent NAC followed by RC for localized MIBC between 2001 and 2023 at 15 French centers (BLADRAC cohort). Multivariable logistic and Cox regression models were used to assess the impact of the dd-MVAC vs GC regimen and the number of NAC cycles received (< 4 vs. ≥ 4) on pathological objective (pOR ≤ ypT1N0) and complete (pCR = ypT0N0) response, or recurrence-free (RFS), cancer-specific (CSS), and overall (OS) survival, respectively. Interaction tests between the NAC regimen and the number of cycles received were conducted in each of these models.

Results

Overall, 513 (70 %) and 217 (30 %) patients received dd-MVAC or GC, respectively. Additionally, 202 (28 %) and 528 (72 %) received < 4 or ≥ 4 NAC cycles. The median number of NAC cycles was 4.1 [4.0 - 4.2] in the dd-MVAC group and 3.5 [3.3 - 3.7] in the GC group (p < 0.001). Among them, 86 (17 %) and 127 (59 %) received the target of 6 and 4 NAC cycles in the dd-MVAC and GC groups, respectively.
The use of dd-MVAC vs GC was associated with better pOR (OR = 1.47 ; 95 % CI = [1.04 - 2.07] ; p = 0.029), but not with pCR (OR = 1.18 ; 95 % CI = [0.83 - 1.67] ; p = 0.368). Receiving ≥ 4 was associated with better pOR (OR = 1.61 ; 95 % CI = [1.14 - 2.27] ; p = 0.007) and pCR (OR = 1.59 ; 95 % CI = [1.10 - 2.28] ; p = 0.013). No significant interaction was found between regimen and number of NAC cycles for pOR (p = 0.332) or pCR (p = 0.978). After a median follow-up of 35 [15 - 64] months, dd-MVAC was associated with prolonged RFS (HR = 0.76 ; 95 % CI = [0.57 - 0.99] ; p = 0.045), CSS (HR = 0.66 ; 95 % CI = [0.45 - 0.97] ; p = 0.033) and OS (HR = 0.63 ; 95 % CI = [0.45 - 0.88] ; p = 0.007). Receiving ≥ 4 had no significant effect on RFS

(HR = 0.77 ; 95 % CI = [0.58 - 1.01] ; p = 0.064), CSS (HR = 0.90 ; 95 % CI = [0.61 - 1.34] ; p = 0.616) or OS (HR = 0.86 ; 95 % CI = [0.61 - 1.20] ; p = 0.366). No interaction was observed for RFS (p = 0.453), CSS (p = 0.250) or OS (p = 0.364).

Conclusion

This study confirms the VESPER trial findings, showing better effectiveness of dd-MVAC vs GC as NAC, regardless of the number of cycles received, in patients undergoing RC for localized MIBC.

P078
Paraganglioma of the bladder: A Case Report

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Introduction
Bladder paragangliomas are rare, comprising < 0.5 % of all bladder tumors, yet represent the most common extra-adrenal site within the genitourinary tract. With an estimated malignancy rate of 10 –20 %, their behavior cannot be reliably predicted histologically, necessitating long-term follow-up. Complete excision remains the standard of care.

Case Presentation
A 69-year-old male under oncological surveillance since a left-sided tumor nephrectomy in 2016 showed a 4 × 5 mm bladder wall thickening on CT after approx. 7 years of follow-up while cystoscopy was unremarkable. In 03 / 2024, he underwent cardiac workup for palpitations and hypertension, with cardiac imaging ruling out coronary disease. Due to bradycardia and suspected sick sinus syndrome, electro cardioversion was performed.
Follow-up CT in 02 / 2025 showed lesion progression (8 × 6 mm); repeat cystoscopy confirmed a visible lesion, and TUR-B was performed without any cardiac or hypertensive complications. The antihypertensive therapy was initially continued. Histology identified a paraganglioma with diffuse synaptophysin and chromogranin A expression, low Ki-67 (< 5 %), and preserved SDHA/SDHB expression. Given the low risk of malignant progression, a decision against partial bladder resection was taken and conservative approach was chosen as primary treatment.

Discussion
Given the potential for late recurrence and a low malignant potential, lifelong surveillance is recommended, especially in high-risk patients (lesion size, high Ki-67 no SDHA/SDHB-expression), characterized by. Despite the low proliferative index and absence of adverse features, our follow-up strategy follows NCCN Guidelines. Especially after endorulogical treatment an early (within 3 months) F18-DOPA-PET CT Scan should be performed to detect suspected neuroendocrine tumor activity. Our case indicates that for small lesions less than 1 cm, TUR-B instead of partial bladder resection is a viable treatment option when accompanied by a close follow-up strategy, as supported by the literature.

P079
Cas clinique : Un cas de diverticules de Hutch bilatéraux compliqués de calculs vésicaux

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Introduction:
On classe les diverticules vésicaux en congénitaux, acquis ou iatrogènes. Chez l'adulte, ils sont majoritairement secondaires à un obstacle infra-vésicale, et donc acquis. Nous décrivons ici un cas rare de diverticules de Hutch congénitaux et bilatéraux chez un adulte de 72 ans.

Cas:
Un patient de 72 ans est adressé en urologie à la suite d'une prostatite aigue à Escherichia Coli. Il ne présente pas de symptômes irritatifs mais décrit une diminution du jet urinaire ainsi qu'une hématurie macroscopique évoluant depuis plusieurs semaines. L'échographie réalisée en consultation révèle la présence de 2 diverticules rétro-méatiques, bilatéraux et symétriques, contenant de multiples lithiases, confirmé par uroscanner. Une cystoscopie rigide est alors réalisée, permettant une cystolitholapaxie et excluant une lésion diverticulaire et vésicale. Les suites post-opératoires étaient simples et un traitement conservateur par surveillance régulière est alors poursuivi.

Discussion:
Les diverticules de Hutch sont des entités congénitales rares, particulièrement chez l'adulte. Deux hypothèses principales sont avancées quant à leur étiologie : une anomalie de fusion embryologique entre la vessie et les canaux mésonéphriques, ou un défaut de développement du muscle détrusor au niveau de la paroi para-urétérale. Ils sont généralement retrouvés chez les enfants, prédominent dans le sexe masculin et sont le plus fréquemment unilatéraux. Leur diagnostic à l'âge adulte reste donc rare, encore plus lorsqu'ils sont bilatéraux et associés à la présence de lithiases. Les signes cliniques les plus souvent retrouvés sont les infections urinaires récidivantes, l'hématurie macroscopique et les douleurs lombaires secondaire à une obstruction de la voie urinaire haute. Les patients peuvent aussi rester asymptomatique. La prise en charge varie selon les symptômes, les complications ainsi que du patient. On peut soit réaliser une surveillance ou réaliser une diverticulotomie endoscopique ou chirurgicale.

Conclusion:
Nous illustrons donc un rare cas de diverticules de Hutch bilatéraux chez un adulte de 72 ans compliqué de lithiases vésicale. Bien que rare, il s'agit d'une malformation vésicale à ne pas méconnaitre afin de réaliser une prise en charge adaptée au patient et sa symptomatologie.

P080
Primary lymphoma of mucosa-associated lymphoid tissue mimicking bladder cancer: case report and review of the literature

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Primary lymphoma of mucosa-associated lymphoid tissue mimicking bladder cancer: case report and review of the literature

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Background:
Primary bladder lymphoma is an extremely rare neoplastic lesion, representing only 0.2% of non-Hodgkin lymphomas and less than 1% of bladder tumors. The most frequent histological type is mucosa-associated lymphoid tissue (MALT) lymphoma, most commonly described in women between the ages of 50 and 60 years. Herein we report a case encountered in our urology service.

Case presentation:
A 53-year-old patient was referred by the treating gynaecologist following the incidental discovery of an intravesical mass during routine transvaginal ultrasound. The patient was asymptomatic, in particular did not report any pollakiuria, nocturia, lower abdominal pain or macrohematuria. She had no history of smoking.
Outpatient uretro-cystoscopy revealed a protrusion of the right lateral wall, with preserved, smooth mucosa. Urine cytology was not suspicious of malignancy.
Further investigation with computed tomography showed a mass located at and infiltrating the right posterolateral bladder wall, measuring 28 mm. There was no evidence of lymph node or distant metastases.
The patient subsequently underwent diagnostic transurethral resection of the vesical mass.
Pathological results suggested a low-grade MALT-type B small-cell lympho-proliferative process. More precisely, microscopic and immunohistochemical analyses showed diffuse infiltration of the bladder wall by a dense small-cell B-CD20+ lymphoid infiltrate. We subsequently referred the patient to the hemato-oncological unit.

Conclusion :
Mucosa-associated lymphoid tissue (MALT) lymphoma of the bladder is a rare disease, with approximately 70 cases reported to date. We report our case and offer a review of the literature.

P081
Clinical Challenges of Cystectomy for Radiation-Induced Cystitis : Insights from a Monocentric Experience

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Background&Objectives:
Radiation-induced cystitis (RIC) is a severe complication of pelvic radiation therapy (RT), leading to hematuria, bladder contracture, chronic pain, and fistula. In case of refractory RIC symptoms, cystectomy remains the most reliable therapeutic option, although it is technically challenging and associated with significant morbidity. However, data on perioperative outcomes in this setting remain limited. This study aims to describe per-operative outcomes of patients undergoing cystectomy for RIC.

Materials & Methods:
All consecutive patients who underwent cystectomy with ileal conduit for RIC between 2015 and 2025 at our institution were included. Preoperative, perioperative, and postoperative data were collected from a prospectively maintained database. Postoperative complications (CPL) were graded according to the Clavien-Dindo (CD) classification.

Results: Eighteen patients were included, with a median age of 78 years (IQR 76 – 80); 94% were men. The median Charlson Comorbidity Index was 6 (4 – 8), and 39% had a history of smoking. RT was primarily indicated for prostate cancer (N=15, 83%) with curative intent in 12 (67%) patients and salvage intent in 6 (33%). The median RT dose delivered was 74 Gy (60 – 78). RT-induced CPL included hematuria (50%), non-functional bladder (44%), symphyseal or visceral fistulas (33%), urethral (28%) or ureteral strictures (11%), and radiation proctitis (22%). The median time between RT and first symptoms onset was 9.8 years (3.6 – 13.7). All patients underwent cystectomy, with 3 requiring pelvic exenteration for rectal fistulas. The median operative time was 305 (264 - 330) minutes with a median intra-operative blood loss of 625 (500–800) mL. Blood transfusions were required in 22% of patients. The overall CPL rate within 90 days was 94%. Among these, 5 (28%) patients experienced a serious CPL (CD ≥ 3b) and 2 (11%) required revision surgery. Hospital readmission was needed in 39%, primarily due to infections. After a median follow-up of 21 (4-35) months, 94% of patients had been treated for RT-induced urinary CPL, except one who died from osteomyelitis secondary to a vesico-symphyseal fistula.

Conclusion: despite its technical challenges and high morbidity, cystectomy is a highly effective treatment for RIC. In this frail patient population, it led to resolution of RT-induced CPL in the vast majority of cases, supporting its role as a definitive therapeutic option when conservative measures fail.

P082
Preoperative Predictors of Postoperative Urinary Tract Infections Following Robot-Assisted Radical Cystectomy with Intracorporeal Urinary Diversion: A Retrospective Cohort Study

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Objective:
To identify preoperative predictors associated with the occurrence of postoperative urinary tract infections (UTIs) in patients undergoing robot-assisted radical cystectomy with intracorporeal urinary diversion (iRARC).

Methods:
We retrospectively analyzed 131 consecutive patients who underwent iRARC between 2017 and 2023. Perioperative outcomes and complications were evaluated at 30 and 90 days. The incidence of postoperative urinary tract infections was assessed, and potential predisposing risk factors were analyzed.

Results:
Our cohort consisted of 106 male and 25 female patients. Of the 131 patients, 101 underwent ileal conduit diversion and 30 received an orthotopic neobladder. The overall UTI rate was 19.1%. The median age was 72 years (IQR: 64–79). The median duration of ureteral catheterization was 12 days (IQR: 10–13). Univariable logistic regression models revealed no statistically significant association between postoperative UTI and ASA score (OR: 1.40, 95% CI: 0.31–5.56, p = 0.633), BMI (OR: 1.09, 95% CI: 0.98–1.24, p = 0.146), or operative time (OR: 1.003, 95% CI: 0.995–1.011, p = 0.405). Baseline characteristics such as age, sex distribution, comorbidity burden, and preoperative infection status were comparable between UTI and non-UTI groups.

Conclusion:
In this cohort, neither ASA score, BMI, nor operative duration significantly predicted the occurrence of postoperative UTI. Larger studies with multivariable models may be necessary to better delineate independent risk factors. These findings underscore the complexity of postoperative infection risk stratification and the need for further investigation.

P083
Robot-assisted management of the distal ureter during nephrouretectomy for upper tract urothelial cancer does not influence oncological outcomes

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Introduction & objectives: The oncological safety of performing the resection of the distal ureter with a robotic platform during radical nephroureterectomy (RNU) for upper tract urothelial cancer (UTUC) has been poorly investigated. We tested the hypothesis that bladder recurrence-free survival (BRFS), metastasis-free survival (MFS), cancer-specific survival (CSS) and overall survival (OS) are not influenced by the surgical approach of the distal ureter during RNU.

Material & methods: This was a multicenter retrospective contemporary cohort study including 1014 patients with UTUC treated with open (oRNU) or robotic r(RNU) nephroureterectomy from 2010 to 2019 at 21 academic centers in Europe, Asia, and the United States. Missing values of relevant baseline characteristics were estimated through multiple imputation of chained equations. Baseline patients' heterogeneity for age, sex, body mass index, American Society of Anesthesiologists (ASA) score, Charlson comorbidity index (CCI), cT and cN stage, performance of ureterorenoscopy, and administration of neoadjuvant chemotherapy was balanced using a 1:1 nearest neighbor propensity score matching estimated using logistic regression, without replacement. Uni- and multivariable Cox regression analyses for bladder recurrence, metastasis, cancer-specific death and overall death were performed according to clinical and pathological characteristics. Kaplan Meier (KM) estimates and log-rank test were used to compare BRFS, MFS, CSS and OS according to clinical and pathological features.

Results: After propensity score matching, two cohorts of 324 patients each with similar baseline characteristics were obtained. Patients undergoing rRNU had lower estimated blood loss (300 vs 100 ml, $p < 0.001$) and a shorter hospital stay (7 vs 3 days, $p < 0.001$) while more patients in the oRNU group had a pT≥ 3 disease (39% vs 31%, $p = 0.04$). After a median follow-up of 25 months (IQR = 12 - 48), we did not find any difference in terms of BRFS, MFS, CSS and OS between the oRNU and rRNU.

Conclusions: The surgical and oncological outcomes of oRNU vs rRNU in patients with UTUC are similar. The type of surgical approach to the distal ureter does not impact on surgical and oncological outcomes in this patient population.

P084
Case Report: Durable Disease Control in Mixed Small-Cell and Micropapillary Urothelial Carcinoma

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Background and Objectives
Histological subtypes of bladder cancer, such as micropapillary and small-cell neuroendocrine variants are rare and insufficiently studied, despite their prognostic and therapeutic relevance. This report highlights the clinical implications of histological and molecular heterogeneity.

Case Report
A 70-year-old man presented with painless gross hematuria. Cystoscopy showed a bladder tumor and transurethral resection confirmed small-cell neuroendocrine carcinoma with carcinoma in situ of the bladder and prostatic urethra, high proliferation index (Ki-67 ~100%).
Neoadjuvant cisplatin/etoposide was administered. Cystectomy revealed 90% micropapillary, 9% papillary/solid, and 1% residual small-cell components (ypT3a pN2 [2/22], R0), with carcinoma in situ and incidental prostate cancer (pT2a pN0 R0). Given nodal positivity and high expression of PD-L1, adjuvant nivolumab was administered.
Two years post-surgery, seizures revealed brain metastasis. The lesion was resected and confirmed as small-cell. The cavity was treated with stereotactic radiotherapy. Four months later, a lymphogenic metastasis in the right iliac region was detected. Biopsy showed micropapillary urothelial carcinoma without neuroendocrine features. The lesion was treated with stereotactic radiotherapy. The patient is currently in stable disease, with functioning neobladder and excellent general condition.

Discussion
Treatment of rare bladder cancer subtypes remains challenging due to limited evidence(1). In this case, treatment relied on protocols from small-cell lung cancer and standard urothelial carcinoma(2,3). This reflects the absence of specific guidelines for rare histologies. The strong response of the small-cell component to platinum-based chemotherapy contrasted with the resistance of the micropapillary part, highlighting biologically distinct behavior within one tumor. The long-term survival of this patient, now 3.5 years after diagnosis, despite aggressive disease and nodal involvement, suggests that a tailored multimodal approach guided by histology and molecular profile(4) can achieve durable control even in high-risk variants(5).

Conclusion
The coexistence of rare histological subtypes with distinct metastatic behavior and treatment response highlights the prognostic and therapeutic relevance of differentiation. Further data are needed to define evidence-based strategies for rare bladder cancer variants.

P085
Neurosarkoidose als seltene Ursache einer neurogenen Blasenfunktionsstörung – Fallbericht

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Einleitung:
Die Neurosarkoidose ist eine seltene Manifestation der Sarkoidose und betrifft etwa 5–10 % der Patientinnen und Patienten. Dabei kann es unter anderem zu neurogenen Blasenfunktionsstörungen kommen. Da sie häufig nicht in die Differenzialdiagnose einbezogen wird, kann es zu Verzögerungen bei Diagnosestellung und Therapie kommen. Die Pathogenese ist bislang nicht vollständig geklärt; Umwelt- und genetische Faktoren scheinen jedoch eine bedeutende Rolle zu spielen, indem sie eine überschiessende granulomatöse Immunreaktion auslösen. Die Erkrankung tritt weltweit auf und betrifft Menschen aller Altersgruppen und Ethnien. Klinik, Verlauf und Prognose sind sehr variabel. Viele Patientinnen und Patienten berichten insbesondere bei chronischem Verlauf über eine erhebliche Einschränkung der Lebensqualität

Material und Methoden:
Wir berichten über eine Patientin, die mit Drangsymptomatik und Inkontinenz urologisch vorstellig wurde. Zusätzlich klagte sie über neurologischen Auffälligkeiten (reithosenartige Parästhesien, Gangunsicherheit). Es wurden eine umfassende Bildgebung, Lumbalpunktion und zur Abklärung der Blasenfunktionsstörung eine urodynamische Untersuchung durchgeführt, um die Ursache der Beschwerden zu klären.

Resultate:
Die Bildgebung zeigte leptomeningeale Kontrastmittelanreicherungen und eine T2-hyperintense Läsion im Gyrus frontalis. Liquoranalysen ergaben eine lymphozytäre Pleozytose ohne maligne Zellen. Urodynamisch zeigten sich eine terminale Detrusorüberaktivität und erhöhte Restharnmengen. Die Behandlung mit einer detrusorsedierenden Therapie mit Fesoterodin, intermittierendem Selbstkatheterismus sowie eine immunsuppressive Therapie mit Azathioprin und Prednison führten zu einer Stabilisierung der Symptome.

Schlussfolgerung:
Neurosarkoidose sollte bei neurogener Blasenfunktionsstörung als seltene, aber mögliche Ursache in Betracht gezogen werden. Die Videourodynamik und eine interdisziplinäre Diagnostik sind entscheidend für die frühzeitige Diagnose und zielgerichtete Therapie, um die Lebensqualität der Betroffenen zu verbessern.

P086
Patientenzentrierte Tined-Lead Programmierung bei Sakraler Neuromodulation zur Behandlung von Harnblasenfunktionsstörungen: Systematischer Ansatz zur Stimulationsoptimierung

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Hintergrund und Ziele
Die sakrale Neuromodulation ist ein etabliertes Verfahren zur Behandlung therapierefraktärer Blasen- und Darmfunktionsstörungen. Die Programmierung der Stimulationsparameter ist entscheidend für den Therapieerfolg; evidenzbasierte Leitlinien fehlen jedoch. Generell gilt der Konsens, dass eine Mittelliniensensation (MLS) bei niedriger Stimulationsamplitude (nSA) mit einer erhöhten Therapieeffizienz assoziiert ist. In der Praxis werden dennoch oft herstellerspezifische Voreinstellungen übernommen.
Ziel dieser Arbeit war die Entwicklung eines strukturierten, patientenzentrierten Programmieransatzes zur Optimierung der Stimulationsparameter auf Basis intraoperativer Testergebnisse.

Material und Methoden
Zwischen September 2024 und März 2025 wurden Testphasen bei insgesamt 9 Patient:innen (7 Frauen, 2 Männer) prospektiv analysiert. Insgesamt wurden 11 Tined-Leads (TL) implantiert (7 unilateral, 2 bilateral). Die zugrundeliegenden Diagnosen umfassten: Sphinkterdysfunktion (n = 2), Frequency/Urgency-Syndrom (n = 2), nicht-obstruktive Harnretention (n = 1), Cauda-equina-Syndrom (n = 1) und Fowler-Syndrom (n = 3). Intraoperativ wurden die motorischen Schwellenwerte (mSW) für die sakralen Nervenwurzeln bestimmt. Postoperativ erfolgte eine standardisierte Programmierung. Die Kathode wurde auf die zwei Elektrodenpole gesetzt, die intraoperativ die niedrigsten mSW für die Sakralwurzel S4 aufwiesen. Sämtliche Anodenkombinationen wurden getestet. Die finale Konfiguration wurde gemeinsam mit den Patient:innen basierend auf MLS und nSA ausgewählt.

Resultate
Die mittlere Testphase dauerte 20 Tage (Spanne: 12 – 35). In 10 von 11 TL erwiesen sich die intraoperativ identifizierten motorisch sensitivsten Elektrodenpole als optimal. In 8 TL war keine weitere Anpassung der Polkonfiguration nötig; bei 3 TL wurde einmalig angepasst. Die Stimulationsfrequenz wurde bei 5 TL, die Pulsweite bei einem Patienten mit 2 TL modifiziert. In 10 von 11 TL erfolgte die Implantation eines permanenten Stimulators, wobei bei 7 TL die initial auf der intraoperativen Elektrodentestung basierende Elektrodenkonfiguration unverändert übernommen werden konnte.

Schlussfolgerungen
Ein strukturierter, patientenzentrierter Programmieransatz basierend auf intraoperativen mSW ermöglicht eine präzise Stimulationsanpassung.
Die frühe Einbindung der Patient:innen sowie die individualisierte Parameterauswahl fördern eine optimierte Therapieeffizienz - trotz initial erhöhtem Aufwand.

P087
Robot-assisted laparoscopic retrocaval tumorectomy of a kidney cancer relapse

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Introduction & Objectives
Local recurrence for kidney cancer after radical nephrectomy is a rare event, occurring in about 1-3% of cases. Most recurrences take place at the level of the renal fossa, followed by regional lymph nodes, the homolateral adrenal gland, or a combination of these. Surgical resection with negative margins of isolated local recurrences represents the only therapeutic option associated with improved survival. Hereby we present a case of robot-assisted laparoscopic retrocaval tumorectomy of a patient previously treated with laparoscopic radical nephrectomy for kidney cancer.

Materials & Methods
We present the case of a 44-year-old man who received in June 2022 a right laparoscopic radical nephrectomy for a 10.5 cm pT3a clear cell renal cell carcinoma (ccRCC). In October 2023 he presented with right costal pain. A CT-scan was performed, demonstrating a retrocaval relapse of 6.5x5.6x2.5cm, with possible invasion of the inferior vena cava (IVC). He received treatment with Axitinib from December 2023 to March 2024. At the end of February, an MRI showed a stable lesion, suggesting a compression of the IVC. The relapse was resected with a robot-assisted laparoscopic retrocaval tumorectomy.

Results
Robot-assisted laparoscopic transperitoneal right retrocaval tumorectomy was performed with a surgical time of 210 minutes and an estimated blood loss of 300 mL. Intraoperatively, the IVC was compressed by the tumor but not infiltrated; its dissection represented the most challenging part of the surgery, requiring IVC suture due to vessel violation. The intraabdominal drainage was removed on day 2. Hospital stay was 4 days. No early or late complications were reported. The pathology report showed a ccRCC of 8 cm in size, and negative surgical margins.

Conclusions
Robot-assisted transperitoneal laparoscopic retrocaval tumorectomy in case of relapse of ccRCC is a feasible approach. Since vascular lesions are possible, this surgery should be performed by experienced hands.

P088
Robot-assisted laparoscopic orthotopic kidney transplantation

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Background
Kidney transplantation remains the gold standard treatment for end-stage kidney disease (ESKD), even in patients with complex comorbidities. The use of robot-assisted laparoscopic techniques has expanded surgical options, particularly in high-risk populations. This report describes the successful orthotopic transplantation of a kidney in a 64-year-old male with extensive vascular calcifications and multiple comorbid conditions.

Methods
A 64-year-old male with a medical history of idiopathic ESKD, type 2 diabetes mellitus (DM2), atrial fibrillation (AF), peripheral vasculopathy, and hypertrophic cardiomyopathy began hemodialysis in December 2021 and was subsequently evaluated for kidney transplantation. In November 2022, preoperative CT imaging revealed extensive calcifications in the aorto-iliac axis. Despite this, the patient underwent robot-assisted laparoscopic left orthotopic kidney transplantation in February 2024. The surgical procedure included a rewarming time of 40 minutes.

Results
The postoperative course was uneventful, with no surgical complications. Drainage was removed on postoperative day 3. At one week post-transplantation, the patient's renal function was stable with an estimated glomerular filtration rate (eGFR) of 40 ml/min/1.73 m2, indicating good early graft function.

Conclusions
This case demonstrates that robot-assisted laparoscopic orthotopic kidney transplantation can be successfully performed in patients with extensive vascular disease and multiple systemic comorbidities. Careful preoperative evaluation and surgical planning are critical to achieving favorable outcomes in complex transplant recipients.

P089
Primary Retroperitoneal Mucinous Tumor with Borderline Malignancy – A Case Report

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Background:
Primary retroperitoneal mucinous tumors (PRMTs) are extremely rare neoplasms, with only a limited number of cases reported in the literature. They are classified into mucinous cystadenomas, mucinous borderline tumors, and mucinous cystadenocarcinomas.

Material-Case Presentation:
We report the case of a 78-year-old female who presented with fatigue, knee pain, and tingling sensations. MRI of the lumbar spine incidentally revealed Grade IV hydronephrosis on the right side. A subsequent CT scan suggested a large renal cell carcinoma, leading to an open radical nephrectomy through a transperitoneal approach. The patient's postoperative course was initially uneventful; however, she developed paralytic ileus requiring conservative management. Additionally, a persistent pulmonary lesion prompted a segmentectomy, confirming an in-situ adenocarcinoma of the lung.

Results:
Histopathological examination identified a primary retroperitoneal tumor with borderline malignancy adherent to the kidney. To our knowledge, including this case, only 35 case reports of primary retroperitoneal mucinous borderline tumors have been published. PRMTs with borderline malignancy are predominantly found in women, with a median age of 42.4 years. Their clinical presentation varies. Imaging studies lack specific diagnostic criteria, and tumor markers are inconsistently elevated. Complete surgical resection remains the primary treatment, yielding an excellent prognosis. Due to the absence of standardized follow-up guidelines, individualized surveillance strategies are recommended. In this case, interdisciplinary tumor board recommendations included follow-up imaging with abdominal sonography at six months and abdominal CT at twelve months postoperatively.

Conclusion:
Primary retroperitoneal mucinous tumors are a rare but a potential differential diagnosis for retroperitoneal masses. Given their excellent prognosis early recognition and complete resection are crucial. Further case studies are necessary to establish standardized management and follow-up protocols.

P090
Metanephrisches Adenom der Niere: Ein Fallbeispiel

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Metanephrisches Adenom der Niere: Ein Fallbeispiel
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Hintergrund & Ziele:
Das metanephrische Adenom (MA) ist ein seltener embryonaler epithelialer Nierentumor (< 1 %). Die Tumore sind meist gutartig und werden häufig zufällig diagnostiziert, können aber auch mit unspezifischen Symptomen wie Flankenschmerzen, Hämaturie, tastbarer Tumor und Polycythaemia vera einhergehen. Differentialdiagnostisch müssen Wilms-Tumore, nephrogene Reste oder renale papilläre Neoplasien in Betracht gezogen werden. Eine definitive Diagnose kann erst postoperativ anhand der pathologischen Befunde gestellt werden. Die Tumore haben eine durchschnittliche Grösse von 3 bis 6 cm. MA exprimieren typischerweise Wilms-Tumorsuppressorgen (WT) 1 und Cluster of Differentiation (CD) 57, färben aber negativ für Cytokeratin (CK) 7 und Racemasen. Ziel dieses Fallberichts ist es, die richtige Diagnostik, Abklärung und Behandlung zu erkennen, um ein positives Ergebnis im Umgang mit diesem seltenen Tumor zu erzielen.

Material und Methoden:
Dieser Fallbericht beschreibt das seltene Auftreten eines MAs, die möglichen Symptome sowie die Diagnose, Behandlung und immunologische Färbung.

Fallbericht (Resultate):
In diesem Fallbeschreibung stellte sich eine 63-jährige Frau mit computertomografisch zufällig entdeckter Nierenläsion am Oberpol der linken Niere vor. Im MRI zeigt sich eine mässige Kontrastmittelaufnahme ohne Nachweis von Makro- und Mikrofett mit deutlicher Diffusionsrestriktion. Es erfolgte eine roboterassistierte nierenerhaltende Tumorresektion links. Die Pathologie ergab ein MA mit 19 mm Durchmesser und tumorfreien Resektionsrand. Die Tumorzellen waren positiv für WT 1 mutiertes BRAF-Protein (V6000E) sowie CD 57 und negativ für α-Methylacyl-CoA Racemase (AMACR), CK 7 und epitheliale Membranantigen (EMA). Nach der Resektion waren keine weiteren Behandlungen erforderlich.

Schlussfolgerungen:
Das selten vorkommende MA der Niere lässt sich bildmorphologisch nicht eindeutig von bösartigen Nierentumoren differenzieren. Die rechtzeitige Untersuchung und Behandlung dieser Patientin führten zu guten Ergebnissen. Eine immunhistologische Untersuchung ist entscheidend um ihn von Wilms-Tumore oder Nierenzellkarzinome zu unterscheiden.

P091
Conservative Management of AAST Grade IV-V Renal Trauma in Pediatric Patients: A Safe and Effective Approach

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Background: Originally, kidney trauma - the most affected genitourinary organ in cases of blunt abdominal trauma - was primarily managed surgically. However, over time, there has been a significant shift toward less invasive management strategies, supported by evidence indicating improved renal preservation and better overall patient outcomes. Conservative management of blunt renal trauma (RT) is now widely endorsed in adult trauma literature and is gaining increasing acceptance for pediatric patients. For those with grade V injuries, according to the American Association for the Surgery of Trauma (AAST) classification, current guidelines offer variable recommendations.

Aim: We present a case of a pediatric patient with an AAST grade IV (or possibly grade V) renal trauma (RT), managed conservatively after sustaining polytrauma with an injury severity score (ISS) of 18.

Case description: A 16-year-old patient, with no comorbidities, presented to the emergency department following a bicycle accident, complaining of diffuse abdominal pain, macroscopic hematuria, and multiple skin excoriations.
Radiological assessment revealed an AAST grade IV-V renal laceration, accompanied by a perirenal urinoma, perirenal hematoma, and hemoperitoneum, but no signs of active bleeding.
The patient was hemodynamically stable upon admission, with an initial hemoglobin level of 129 g/L, within the normal range for this age group.

Therapy: The patient underwent conservative management in the intensive care unit, including close clinical monitoring, regular hemoglobin assessments, and administration of prophylactic antibiotics. Once macroscopic hematuria resolved, the urinary catheter was removed. An MRI urography performed one week after the trauma demonstrated a reduction in the renal lesion and retroperitoneal hematoma. The patient was discharged on day eight post-admission. At six weeks, follow-up imaging revealed significant regression of the renal lesion, with no evidence of urinary stasis or urinoma. A renal scintigraphy at three months revealed a decrease in right renal function to 39%, while the patient remained asymptomatic. A one-year follow-up with MRI urography and scintigraphy is planned.

Conclusion: Management recommendations for RT classified as AAST grade IV-V differ, but conservative management with close monitoring has been demonstrated to be both effective and safe, especially in young patients, reducing the risk of complications associated with invasive therapies.

P092
Case report of an adult nephroblastoma and review of the literature

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Introduction
Nephroblastoma, or Wilms tumor, is the most common renal neoplasm in children. It is, however, an exceptionally rare renal malignancy in adults and accounts for < 1% of all diagnosed renal tumors. To date, < 300 cases have been reported in the literature. We report a case of adult nephroblastoma encountered at our institution.

Report
A 36-year-old male presented with right flank discomfort for 10 days, with no associated symptoms. Further investigation with thoracic, abdominal and pelvic scan showed the presence of a 16cm multiloculated mass located in the upper pole of the right kidney. The patient was referred to our Urology Service.

Given the suspicion of a renal cancer, a right radical nephrectomy was performed. Macroscopic examination showed a mostly solid, focally cystic, yellow, well-defined tumor, located close to the hilum without invading the main vessels. Microscopically, the tumor was essentially tubular, composed of very tightly packed tubules within a stroma that was abundant and sclerotic in places. There was cellular monotony. The cells had relatively small, round nuclei that lacked nucleoli, and scant cytoplasm, with a high proliferation rate. Areas of ischemic tumor necrosis were present.

Immunohistochemistry showed diffuse expression of PAX8, WT1 and heterogeneous expression of CKMNF116, CD10 and Vimentin. Tumor cells did not express CK7, RACEMASE, CA-IX, CD117. The BRAF profile was non-mutated. Neuroendocrine markers and other markers such as p63, CK20, CDX2 and GAT3 were all negative.

The case was presented at a University Hospital, where the diagnosis of adult nephroblastoma was retained.

Discussion
While nephroblastoma is rare in adults, it remains an important differential diagnosis in cases of renal tumors. There is no recommendation for prognostic risk assessment in adult nephroblastoma, but in our case, the patient was classified as intermediate-risk group according to the International Society of Pediatric Oncology. Furthermore, the patient was referred for genetic counseling. No pathogenic mutations in genes that may be altered in the context of renal tumors (APC, ATM, VHL…) were found. Given the predominance of metastatic recurrences in lymph nodes, lungs, and liver in children, first follow-up was scheduled at 6 months with thoracic, abdominal and pelvic scan, as well as liver ultrasound. These exams showed no signs of recurrence.

P093

Prospective exploratory interventional study to evaluate the analgetic efficacy of rectus sheath catheters (PAINFusor) with continuous bupivacaine administration in patients undergoing open urological surgery.

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Introduction:
Effective postoperative pain control in open urological surgery remains challenging. Inadequate analgesia worsens clinical outcomes, while high opioid use increases risks like ileus, nausea, vomiting, delirium, and delayed mobilization. Thoracic epidural anesthesia, though effective, can cause hypotension, hypoperfusion of critical organs, fluid overload, and delayed recovery. This pilot study aims to evaluate the feasibility and efficacy of rectus sheath catheter analgesia as an alternative to thoracic epidural anaesthesia.

Methods:
Starting in March 2025, bilateral rectus sheath catheters (PAINFusor) were placed between the rectus muscle and posterior rectus sheath on each side of the incision before wound closure in patients undergoing open urological surgery. An initial 20 ml bolus followed by continuous 0.25% bupivacaine infusion (5 mL/h) via 300 mL prefilled elastomeric pump. Primary outcome: cumulative opioid use (oral morphine equivalents [OMEs]) within 72 h post-surgery. Secondary outcome: numeric rating scale (NRS) pain scores (0-10) within 72 h post-surgery. Outcomes were compared to a historical cohort (n=8) who received standard thoracic epidural anesthesia with similar open urological surgeries.

Results:
Between March and April 2025, 3 patients received rectus sheath catheters (median age 81, IQR 23). Procedures included robot-assisted cystectomy with extracorporeal urinary diversion (n=2) and open nephrectomy (n=1). All catheters were placed successfully without immediate complications. In the catheter group and epidural cohort, 67% and 63% required additional oral or intravenous opioids within 72 h post-surgery, respectively. Median cumulative opioid consumption (OME) was 4 (IQR 4) mg vs. 8 (IQR 31) mg ($p > 0.05$). Median NRS score was 2 (IQR 1) in both groups.

Discussion:
This pilot study demonstrates the feasibility and safety of using rectus sheath catheters as part of a multimodal pain management approach in patients undergoing open urological surgery. Preliminary results suggest comparable analgesic efficacy to thoracic epidural anesthesia.

P094
To intervene or not to intervene? A review of blunt high-grade renal injury management options

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Background:
Blunt kidney injuries represent the most common form of genitourinary trau-ma. While Grade 1–3 injuries are typically managed non-operatively (2), the optimal ap-proach to high-grade renal injuries remains controversial (3). This study systematically re-views the literature to evaluate management strategies for blunt high-grade renal injuries and to identify risk factors associated with failure of conservative treatment.

Methods:
A systematic review of the PubMed database was conducted to identify studies reporting on the management of blunt high-grade renal injuries.

Results:
Of 185 screened articles, we included ten studies, comprising a total of 2090 pa-tients. Of the 717 patients with high-grade renal injuries, 89% of Grade 4 injuries and 51 % of Grade 5 injuries were managed conservatively. Conservative management failure was re-ported in three studies, with a weighted mean of 10% (n = 42) of patients requiring operative intervention or angioembolization. Significant risk factors for requiring operative or endovas-cular intervention included increasing hematoma rim distance (OR 1.15, 95% CI 1.01 – 1.31, per cm increase, p = 0.03), presence of vascular contrast extravasation (OR 3.03, 95% CI 1.48 - 6.21, p = 0.002) and higher AAST injury grade (OR range: 22.6 - 69.4).

Conclusion:
While the majority of Grade 4 renal injuries can be managed conservatively, a significant proportion of Grade 5 injuries will require intervention. The challenge remains in prospectively identifying which high-grade injuries would benefit from early intervention. Equally concerning is the lack of standardization in what constitutes "conservative manage-ment" across studies. Protocols for antibiotic and thromboembolic prophylaxis, ureteral stent-ing indications, bed rest requirements, and optimal follow-up imaging timing vary widely between institutions or remain undefined. There is an urgent need for prospective cohorts and standardized protocols to improve the evidence base in this critical area.

P095
A case report of TFEB-altered renal cell carcinoma

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Introduction:
Renal cell carcinoma (RCC) is a diverse group of malignancies with evolving molecular classification. A rare subset includes MiT family translocation RCCs, defined by gene fusions involving transcription factors like TFE3 and TFEB. According to the WHO classification, TFEB-altered RCC includes two entities: TFEB-rearranged and TFEB-amplified RCC, both exceptionally rare.
TFEB-rearranged RCC, harbors a MALAT1::TFEB fusion and primarily affects younger patients. Histologically, about one-third of cases show biphasic morphology with larger epithelioid cells having clear or eosinophilic cytoplasm. Melanocytic marker (Melan-A and HMB45) are often expressed.
TFEB-amplified RCC typically affects older patients and is associated with high-grade features, aggressive clinical behavior, and an estimated 5-year survival of 48%. Morphologically, it often presents as a poorly differentiated tumor with prominent eosinophilic cytoplasm and nucleoli. TFEB break-apart FISH typically shows high TFEB amplification.
Diagnosing TFEB-altered RCC is challenging but crucial, especially in aggressive or unclassified cases.

Case Report:
A 60-year-old male presented with nephrotic syndrome, sonographically confirmed left-sided hydronephrosis and a suspicious mass in the right kidney's lower pole. Abdominal CT confirmed left-sided hydronephrosis and a double-J catheter was placed. MRI revealed a mass in the right kidney's lower pole and a scarred left ureter stricture causing hydronephrosis. An open partial nephrectomy was performed, revealing a tumor measuring 7.5 cm.
Histologically, the tumor resembled RCC with papillary and focal acinar growth patterns and clear, eosinophilic cytoplasm. The nuclei were relatively monomorphic with focal nucleoli. Only a small portion of the tumor exhibited biphasic morphology with smaller cells. About 20% of the tissue was necrotic, without extrarenal extension, vascular invasion, sarcomatoid/rhabdoid features. Immunohistochemistry was positive for MNF116, PAX8, vimentin, CD10, AMACR, and CK20, but negative for CK7 and melanocytic markers (Melan-A and HMB45). TFEB break-apart FISH confirmed a TFEB gene locus break, confirming the diagnosis of TFEB-rearranged RCC.

Discussion:
TFEB-altered RCC is a rare, morphologically and clinically heterogeneous tumor. Despite the diversity, all subtypes share similar immunohistochemical profiles. Thus, when encountering an unclassified RCC, TFEB FISH analysis is essential for accurate diagnosis.

P096
Individual renal unit sampling in patients with recurrent unilateral nephro- and ureterolithiasis to identify unilateral renal metabolic defects

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Contexte et objectifs
Urolithiasis is a common condition with a prevalence ranging from 1% to 20%, influenced by environmental, dietary, and genetic factors. Although many stones pass spontaneously, recurrence remains frequent, especially when underlying metabolic disorders are present. The standard 24-hour urine test assesses global kidney function but does not account for differences between the two kidneys. Recent research suggests that unilateral differences, especially in calcium metabolism, may contribute to stone formation on one side only. This raises the possibility of missed diagnoses and suboptimal prevention in patients with unilateral disease. Our study aims to evaluate renal metabolic asymmetries and explore targeted therapies to improve secondary prevention in these patients.

Matériel et méthode
This study was conducted in the Urology Division at CHUV and included adult patients with recurrent unilateral urolithiasis undergoing surgical treatment, after obtaining informed consent. During surgery, urine samples were collected separately from each kidney using a ureteral catheter, and analyzed for multiple lithogenic parameters, alongside stone composition analysis. Statistical analysis was performed using repeated measures ANOVA to compare the metabolic profiles between the two renal units within the same individual.

Résultats
A total of 15 patients were included (median age: 50 years [IQR 18–78]; 67% male). The median BMI was 24.2 kg/m² (IQR 20.5–31.3), with a median of 2.0 previous stone episodes (IQR 1.0–3.0) and 1.0 stone per patient (IQR 1.0–3.0). The median operative time was 40.0 minutes (IQR 17.0–95.0), and ureteroscopies were performed using rigid (47%), flexible (27%), or combined (27%) approaches. Repeated measures ANOVA revealed no statistically significant differences in urinary chemistry between the affected and unaffected sides. However, urine sediment showed higher levels of erythrocytes ($p < 0.001$) and leukocytes ($p = 0.012$), likely due to the presence of a JJ stent. No calcium oxalate crystals were observed in the sediment.

Conclusion
This study found no significant differences in urine chemistry between individual renal units in patients with unilateral urolithiasis. These results suggest that 24-hour urine collection remains a reliable tool for metabolic evaluation, without the need for separate analysis of each kidney in most cases.

P097
Patient-Controlled Analgesia (PCA) During ESWL: Preliminary Results from a Feasibility Trial

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Background & Aims:
Extracorporeal shock wave lithotripsy (ESWL) is a well-established, non-invasive treatment for urolithiasis. Despite its minimal invasiveness, ESWL often causes procedural pain that may compromise patient cooperation and stone targeting accuracy (1). Patient-Controlled Analgesia (PCA) offers an individualised approach, allowing patients to self-administer pre-programmed doses of opioids via an infusion pump. Previous research indicates that PCA is associated with higher patient satisfaction, improved pain control, and shorter treatment duration when compared to conventional analgesia (2, 3). This feasibility study aimed to evaluate the use of PCA in ESWL, focusing on usability, patient satisfaction, and subjective pain relief.

Material and Methods:
This prospective, single-arm feasibility trial included 11 consecutive patients undergoing ESWL for urinary stones. All participants received remifentanil administered via a PCA pump programmed to deliver bolus doses with a predefined lockout interval. Postoperatively, data was collected on user satisfaction, perceived pain control, procedural relief, technical handling, and side effects.

Results:
All patients found the PCA system intuitive and easy to use (mean 4.8 ± 0.4), reporting a very good pain control (4.8 ± 0.4) and a rapid onset of analgesic effect (4.3 ± 0.9), all measured on a 5-point Likert Scale. In addition, most participants indicated that PCA contributed to anxiety relief during the procedure (4.1 ± 0.9). Overall satisfaction with the analgesia method was high (9.2 ± 0.7) and side effects, assessed using a visual analogue scale 0 - 10 were minimal, including nausea (0.3 ± 0.5), dizziness (0.9 ± 1.0), and headache (0.4 ± 0.7). On average, patients attempted 9.4 ± 7.8 PCA boluses, with 7.0 ± 4.7 successfully administered, indicating effective usability and dose titration.

Conclusions:
PCA with remifentanil boluses appears to be a feasible, safe, and patient-centred method of analgesia for ESWL. Considering increasing interest in personalised pain management strategies, PCA offers advantages in efficacy, dosage optimisation, and patient satisfaction (1, 3). It also holds potential for reducing the burden on anaesthesia and nursing staff, saving time and resources, and ultimately lowering healthcare costs (2, 4). Further randomised studies with larger patient populations are needed to validate these findings and explore broader clinical integration.

P098
Access Matters: A Monocentric Comparison of Retroperitoneal and Transperitoneal Approaches in Robot-Assisted Partial Nephrectomy.

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Context and objectives:
Robot-assisted partial nephrectomy (RAPN) has become the standard of care for the management of small renal masses, offering the advantage of preserving renal function while ensuring oncological safety. Both transperitoneal (TP) and retroperitoneal (RP) approaches are routinely employed, with access route typically determined by tumor location. This anatomical reasoning echoes traditional surgery principles as posterior tumors were addressed via lombotomy.
In this monocentric retrospective study, we compare perioperative, functional, and oncological outcomes of each approach, aiming to better clarify their respective profiles in anatomically tailored cases of localized renal tumors.

Materials and methods:
We analyzed data from RAPN performed at our university hospital between May 2024 and February 2025. Data collected included patient demographics, perioperative parameters, and tumor histology. Continuous variables were tested for normality (Shapiro-Wilk) and compared using t-tests or Mann-Whitney U tests as appropriate; categorical variables were analyzed with Fisher's exact test. All tests were two-sided with a significance level of 0.05. No multivariate analysis was conducted due to small sample size.

Results:
Each group comprised 12 patients. Compared to the TP approach, the RP approach was associated with significantly lower postoperative pain on day one (mean VAS 2.3, RP versus 5.0, TP; p = 0.005) but resulted in a slightly worse postoperative renal function (postoperative creatinine level 100µmol/l, RP versus 81.2 µmol/l, TP; p = 0.045). Median age was comparable for both groups (p = 0.46) as were other demographic outcomes. Median operative time (OT) was comparable for both groups (131min, 157min, TP; p = 0.19). No significant differences were observed in other outcomes, such as hospital stay, renal artery clamping time, or positive surgical margins.

Conclusion:
Both transperitoneal and retroperitoneal approaches for RAPN demonstrated comparable outcomes in anatomically selected cases. The RP route was associated with significantly lower immediate postoperative pain, whereas the TP approach offered a modest advantage in early postoperative renal function. These findings support the use of anatomical considerations when selecting the surgical approach, reinforcing the principle of tumor-tailored strategies in minimally invasive nephron-sparing surgery.

P099
Complex Robotic-assisted (Da Vinci Xi) laparoscopic partial nephrectomy for a centrally located renal tumor: A case report

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Background & Objectives
Central renal tumor pose a surgical challenge due to their closeness to essential structures like the renal pelvis and vasculature. This case report aims to show the feasibility, safety, and effectiveness of using robotic-assisted laparoscopic partial nephrectomy to manage complex renal masses while preserving the organ.

Material and Methods
A 59-year-old male with no significant past medical history presented with an incidental finding of a renal mass following asymptomatic haematuria. An abdominal CT scan revealed a tumor in the pars intermedia of the left kidney, which was further confirmed by MRI as a 53 × 50 × 56 mm structure highly suspicious for malignancy. A staging CT of the thorax was negative. Ureterorenoscopy with selective cytology of the left upper urinary tract showed no signs of malignancy. Surgical removal was indicated. On April 14th 2025, a robotic-assisted laparoscopic partial nephrectomy of the left kidney was performed under warm ischemia lasting 20 minutes.

Results
The procedure was completed without intraoperative complications despite the presence of a tumor thrombus. Postoperatively, the patient showed a fast recovery with maintained renal function (Creatinine before surgery 98 µmol/l, after surgery 107 µmol /l). Because of a transient febrile episode an empirical antibiotics treatment (first Ceftriaxon, followed by Co-Amoxicillin) was established. Urin and blood cultures showed no growth of bacteria. The patient responded well to treatment and was discharged on the 9th postoperativ day. Histological evaluation showed a clear cell renal carcinoma pT3a with negative resection margins.

Conclusions
Organ preserving surgical management of complex and/or centrally located renal tumors can be feasible, safe and with an optimal oncological outcome. It should be preferred over a nephrectomy whenever possible.

P100
Seltene Ursache einer bilateralen Hydronephrose: Erdheim-Chester-Erkrankung – Fallbericht

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Einleitung:
Die Erdheim-Chester-Erkrankung (ECD) ist eine seltene nicht-Langerhans'sche Histiozytose mit Multiorganbeteiligung, die initial häufig uncharakteristische Symptome zeigt. Wir berichten über einen ungewöhnlichen urologischen Erstmanifestationsfall.

Fallbericht:
Ein 65-jähriger Patient stellte sich mit seit über einem Jahr progredienten, bewegungsunabhängigen Flankenschmerzen beidseits vor. Sonographisch wurde eine bilaterale Nierenbeckenkelcherweiterung (NBKE) festgestellt. Die initiale CT-Diagnostik ergab eine bilaterale Pyelonephritis mit konsekutivem Harnstau Grad III ohne Konkremente. Eine Doppel-J-Schienen-Einlage erfolgte beidseits. Im Rahmen der weiteren Abklärung zeigte die diagnostische Ureterorenoskopie (URS) eine Stenose am pyeloureteralen Übergang ohne malignitätsverdächtige Befunde. Eine ergänzende PET/CT-Untersuchung wies auf eine mögliche retroperitoneale Fibrose hin. Die serologische Diagnostik ergab diskret erhöhte IgG4-Werte, die eine IgG4-assoziierte Erkrankung vermuten liessen. Histologisch zeigten die Biopsien fibrolipomatöse Veränderungen ohne Malignität. Die molekulargenetische Untersuchung wies eine BRAF-Mutation nach. Zusammengenommen ergab sich die Diagnose einer Erdheim-Chester-Erkrankung.

Diskussion:
ECD ist eine seltene Differentialdiagnose bei bilateraler Hydronephrose und retroperitonealer Fibrose. Pathognomonisch sind osteosklerotische Veränderungen der langen Röhrenknochen sowie typische Bildgebungsbefunde (u.a. „hairy kidney sign“, „coated aorta“). Der Nachweis einer BRAF-Mutation unterstützt die Diagnose. Die frühe Diagnose ist essenziell, da moderne zielgerichtete Therapien (z.B. BRAF-Inhibitoren) den Verlauf günstig beeinflussen können.

Schlussfolgerung:
Bei unklarer bilateraler NBKE und retroperitonealen Veränderungen sollte die seltene Erdheim-Chester-Erkrankung differentialdiagnostisch in Betracht gezogen werden. Eine interdisziplinäre Abklärung und histologische Sicherung sind entscheidend für die adäquate Therapieeinleitung.

P101
Robot-assisted Marsupialization of a Large Parapelvic Renal Cyst Causing Upper Urinary Tract Obstruction: A Case Report

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Introduction
Parapelvic cysts are benign renal lesions located adjacent to the renal pelvis and are less common than simple renal cysts, with a prevalence of approximately 1 - 3% in the general population. Depending on their size and expansion they can compress surrounding tissue, causing obstruction, haematuria or pain. Symptomatic cysts are typically managed by endoscopic, percutaneous, or laparoscopic unroofing or marsupialization. We present the case of a 72-year-old female patient with a 7cm parapelvic cyst, including clinical presentation, diagnostic workup, and therapeutic management.

Case Report:
A 72-year old female patient presented in May 2024 with fever and worsening left-sided flank pain, which had persisted for several months. CT urography revealed a 7 cm parapelvic cyst, with a volume of 75 ml in the left kidney, compressing the upper and lower calyceal group, resulting in imparied urininary drainage and obstructive pyelonephritis. Urinary drainage was achieved by stenting of the upper calix and antibiotic treatment was given. Diagnostic ureterorenoscopy showed a highly compressed pelvicalyceal system surrounding the cyst. To evaluate the potential for functional recovery prior to definitive treatment of the large parapelvic cyst, a percutaneous drainage of the cyst was performed. Follow-up CT urography showed a decrease in cyst volume from 75ml to 20 ml, with restoration of urine flow from the upper and lower calyceal group and a significant reduction in calyceal dilatation. In January 2025 the patient underwent laparoscopic robot-assisted marsupialization of the left renal cyst. One month after surgery, CT urography showed normal contrast excretion bilaterally and parapelvic cyst volume of 10 ml. The previously reported left-sided flank pain had resolved. Renal function remained stable and within normal limits throughout the entire course of treatment.

Conclusion
Parapelvic cysts are a common benign condition, but can sometimes cause urinary tract obstruction, haematuria or pain. In such cases, robot-assisted cyst marsupialisation is an effective treatment option.

P102
Renale Papillennekrose als Ursache obstruktiver Pyelonephritiden – Eine Fallübersicht aus der klinischen Praxis

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Hintergrund & Ziele:
Die renale Papillennekrose (RPN) ist eine seltene, aber klinisch bedeutsame Ursache obstruktiver Pyelonephritiden. Zu den Risikofaktoren zählen unter anderem Analgetikaabusus, Diabetes mellitus, Harnabflussstörungen oder Sichelzellanämie. Nekrotisch abgelöste Papillen können den Harnleiter obstruieren und eine Infektion mit konsekutiver Pyelonephritis verursachen. Die Bildgebung erlaubt oft keine sichere Differenzierung zwischen nekrotischem Gewebe und malignen Prozessen.

Material und Methoden:
Retrospektiv wurden vier Patientinnen und Patienten analysiert, die zwischen 2024 und 2025 aufgrund obstruktiver Pyelonephritiden bei ätiologisch unklarer Abflussstörung in der urographischen Phase eines Computertomogramms des Abdomens in unsere Klinik aufgenommen wurden. Initial erfolgten eine Harnabflussentlastung mittels JJ-Katheter sowie eine empirische antibiotische Therapie. Nach klinischer Besserung wurde eine diagnostische Ureterorenoskopie (URS) durchgeführt, bei der auffälliges Gewebe entnommen und histopathologisch untersucht wurde.

Resultate:
Bei allen vier Patient:innen zeigte die URS gummiartiges Gewebe im Harntrakt, das histologisch als nekrotische Papillen identifiziert wurde. Zwei Patient:innen litten an einem vorbestehenden Diabetes mellitus, ein Patient hatte rezidivierende Harnwegsinfekte. Die Obstruktion konnte in allen Fällen erfolgreich behandelt werden, und es kam zu einer Stabilisierung der Nierenfunktion. Eine Patientin erlitt im Verlauf eine erneute obstruktive Pyelonephritis mit Hinweis auf eine erneute RPN.

Schlussfolgerungen:
Reno-papilläre Nekrosen sollten als Differenzialdiagnose bei obstruktiven Pyelonephritiden in Betracht gezogen werden, insbesondere bei entsprechender Risikokonstellation. Die definitive Diagnose ist meist nur mittels diagnostischer URS mit Gewebeentnahme möglich. Da in der Computertomographie keine zuverlässige Unterscheidung zwischen RPN und urothelialen Tumoren gelingt, ist die histologische Sicherung entscheidend für die Therapieplanung.

P103
Advancing Paediatric Renal Stone Management: The Role Of Percutaneous Nephrolithotomy

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Background & Objectives
Paediatric urolithiasis is a growing concern, particularly in children with metabolic or genetic disorders or recurrent urinary tract infections. While percutaneous nephrolithotomy (PNL) has traditionally been reserved for adults, it uses is increasingly in paediatric patients. We report a series of three paediatric cases treated with PNL to evaluate the feasibility, safety, and effectiveness of this approach in diverse clinical scenarios.

Materials and Methods
Three children aged between 13 and 15 years, diagnosed with symptomatic renal stones measuring 10 to 18 mm, underwent percutaneous nephrolithotomy (PNL) between 2022 and 2025. Indications for the procedure included recurrent flank pain and recurrent urinary tract infections. All procedures were performed in the prone position using lower calyceal access under radioscopic and fluoroscopic guidance. A ureteral catheter and a nephrostomy tube were placed perioperatively. The mean operative time was 70 minutes, and the average hospital stay was 3 days, with removal of the nephrostomy tube and ureteral catheter on the first postoperative day. Postoperative follow-up included renal ultrasound and clinical assessment at 1 and 3 months.

Results
Two patients achieved complete stone clearance without the need for additional procedures. One patient required a second intervention consisting of flexible ureteroscopy and mono-J stent placement for a residual stone. No major bleeding, visceral injury, or need for transfusion was observed.
In the paediatric cohort, a prolonged urine leakage from the percutaneous access site was observed compared to the adult population. Moreover, one patient developed intraoperative hypothermia, which resulted in delayed postoperative awakening.

Conclusion
PNL is a safe and effective treatment option for paediatric renal stones, offering high stone-free rates and a low complication profile, particularly in cases with complex or recurrent lithiasis. These results are consistent with recent evidence suggesting that PNL outperforms extracorporeal shock wave lithotripsy (ESWL) for stones larger than 15 mm and has a safety profile. A patient-tailored approach, taking into account stone size, location, and individual characteristics, remains essential to optimizing clinical outcomes.

P104
Robot-assisted versus open kidney transplantation from living donor

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Introduction & objectives: There is limited comparative evidence supporting the use of robot-assisted kidney transplantation (RAKT) over open kidney transplantation (OKT) in patients with end-stage kidney disease (ESKD). We tested the hypothesis that surgical approach impacts postoperative surgical and functional outcomes of patients receiving kidney transplantation (KT).

Material & methods: This is a multicenter retrospective study including patients with ESKD who received RAKT or OKT between June 2015 and December 2023 in 7 European academic centers. Baseline patients' heterogeneity was balanced using a 1 : 1 nearest neighbor propensity score matching, estimated using logistic regression without replacement. Uni- and multivariate logistic and Cox regression analysis for early postoperative complications and need for reintervention during follow-up, respectively, were performed based on clinical characteristics. Kaplan Meier (KM) estimates and log-rank test were used to compare dialysis-free survival (DFS), graft survival (GS), reintervention-free survival (RFS) and overall survival (OS) according to surgical approach.

Results: Overall, 733 patients were included. After propensity score matching, two cohorts of 306 patients each with similar baseline characteristics were obtained. The site of transplantation was the right iliac fossa in 240 (78%) and 204 (67%) patients undergoing OKT and RAKT, respectively. RAKT was associated with reduced total vascular anastomosis time (38 vs 32 minutes, $p < 0.001$) and hospital stay (8 vs 9 days, $p = 0.02$), whereas OKT was associated with reduced surgical time (165 vs 209 minutes, $p < 0.001$) and rewarming time (38 vs 45 minutes, $p < 0.001$). Overall, early (< 30 days) and Clavien-Dindo ≥ 3 postoperative complication rates were lower in the RAKT group (42% vs 29%, 37% vs 21%, 12.7% vs 5%, respectively; $p < 0.001$). In the multivariate regression analysis, RAKT was the only factor predicting lower risk of both early postoperative complications (odds ratio 0.43, IQR 0.29 - 0.62, $p < 0.001$) and reintervention (hazard ratio 0.38, IQR 0.22 - 0.66, $p < 0.001$), which was confirmed with the Kaplan-Meier estimates.

Conclusions: In the absence of randomized controlled trials, this study shows that RAKT may provide specific advantages in comparison with OKT in the living donor setting. Benefits of RAKT include shorter hospitalization, reduced risk of postoperative complications and reinterventions.

P105
Robot-assisted versus open kidney transplantation from deceased donor: A propensity score matching analysis

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Introduction & objectives: There is limited evidence demonstrating the safety of robot-assisted kidney transplantation (RAKT) over open kidney transplantation (OKT) in patients with end-stage renal disease (ESRD) in the deceased donor setting. We tested the hypothesis that the surgical approach impacts on intraoperative and postoperative surgical outcomes of patients receiving KT from deceased donors.

Material & methods: This was a multicenter retrospective cohort study including 676 patients with ESRD who received RAKT or OKT from 2015 to 2023 in 7 European academic centers. Baseline patients' heterogeneity for recipients' age, American Society of Anesthesiologists (ASA) score, preemptive status, blood group compatibility, type of dialysis, and donors' age was balanced using a 2 : 1 nearest neighbor propensity score matching, estimated using logistic regression. Intra- and postoperative complications were reported with the Clavien-Dindo classification. Kaplan Meier (KM) estimates and log-rank test were used to compare dialysis-free survival (DFS), graft survival (GS), reintervention-free survival (RFS) and overall survival (OS) according to the surgical approach.

Results: After propensity score matching, two cohorts of 72 (65%) recipients in the OKT group and 37 (35%) in the RAKT group with similar baseline characteristics were generated. The site of transplantation was the right iliac fossa in 59 (82%) and 28 (76%) patients undergoing OKT and RAKT, respectively. RAKT was associated with shorter rewarming time (53 vs 39 minutes), total vascular anastomosis time (55 vs 36 minutes), arterial (25 vs 17 minutes) and venous (28 vs 18 minutes) anastomosis time (all $p < 0.001$), whereas OKT was associated with reduced surgical time (180 vs 200 minutes, $p = 0.01$). Intraoperative complications were more commonly registered in recipients undergoing OKT (8.3% vs 2.7%, $p = 0.4$). Over a median follow-up of 35 months (IQR = 12 - 62), no differences in terms of postoperative complications, DFS, GS, RFS and OS were detected.

Conclusions: This is the largest comparative study in the setting of RAKT vs OKT from deceased donors. While it confirms the safety of RAKT in KT from deceased donors, it underscores the superiority of RAKT in selected patients in achieving vascular anastomosis and rewarming time in a shorter timeframe. The safety of the two approaches seems to be comparable.

P106
Metanephric adenoma presenting with polycythemia and normal EPO levels: a case report and literature review

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A 53-year-old healthy female was diagnosed with polycythemia by her general practitioner (GP) on routine examination. Hematocrit was 53% (N 0.37-0.47%) and hemoglobin was 171 g/l (N 120-160 g/l). She was then referred to the Zug Cantonal Hospital (Kantonsspital Zug, Switzerland) for further testing. Anamnesis was negative for familial history of hematological diseases, snoring, smoking, aquagenic pruritus, use of anabolic steroids, B symptoms and a recent journey in high altitude. The clinical examination revealed no cardiopulmonary abnormalities and no palpable intraabdominal mass. Primary polycythemia was considered excluded as genetic testing for JAK2 V617F and JAK2 Exon 12 mutations was negative. EPO serum levels were within normal limits at 14.5 IU/l (N 3.3–16.6) as well as creatinine and other hematological parameters. An abdominal ultrasound was performed and revealed a malrotated right kidney as well as an 8 x 4.6 x 6.4 cm solid heterogenic hypoechoic cortical mass with small calcifications. The ovaries, liver and spleen showed no abnormalities on the ultrasound examination. Because a renal carcinoma was initially suspected, a staging CT scan was performed which showed no intrathoracic or intraabdominal metastases. The renal lesion was well-demarcated with no visible infiltration of adjacent structures and no signs of local lymphadenopathy. A LRN was performed and the probe was sent to pathology, which retained the diagnosis of MA. Macroscopic examination of the tumor showed a completely encapsulated, sharply defined, beige, predominantly homogeneous tumor measuring up to 8.6 cm in diameter with no macroscopic necrosis or hemorrhages. The renal surface was intact and no infiltration of the large vessels or renal pelvis were observed. The hematoxylin and eosin stain (H&E) revealed a typical MA appearance, including dense tubular structures, scant cytoplasm, basophilic cells with small round nuclei, no visible nucleoli and a hyalinized, paucicellular stroma. No Psammoma-bodies or mitotic figures were found. Immunohistochemical studies revealed negative staining for CK7 and positive staining for BRAF V600E, PAX8, and WT1.

P107
Single-cell analysis uncovers preserved prostate cancer lineages and universally altered pathways in Matrigel-free patient-derived organoids

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Background: Patient-derived organoids (PDOs) offer new opportunities to model various cancers. However, their application in prostate cancer (PCa) has been hampered by poor success rates and overgrowth of benign cell types. Here, we aimed at modulating culture conditions and investigating in vitro-associated cellular heterogeneity to identify refined PCa PDO culture conditions.

Methods: 164 samples from 162 PCa patients undergoing radical prostatectomy, prostatic biopsies, transurethral resections of the prostate or bladder, or metastasis biopsy/resection were used to establish PDOs in various extracellular matrices and medium compositions. PDOs were characterized using immunofluorescence, immunohistochemistry, and FISH. Single-cell RNA sequencing (scRNA-seq) was performed on 11 tumor and organoid samples. Published spatial and bulk transcriptomic data were re-analyzed to validate specific markers. A prostate PDO scRNA-seq atlas was generated by integrating three published PDO datasets (Huang 2023, Song 2022, McCray 2019) together with our newly generated data.

Results: Exploiting a cohort of 166 PCa patient samples and tuning several culture parameters, we show that a Matrigel-free culture system increases the take-rate of PDOs comprising luminal-like and tumor cells. Single-cell RNA sequencing (scRNA-seq) reveals that Matrigel-free PDOs exhibit cellular heterogeneity and preserve patient-specific PCa cell populations with active AR signaling, while enriching in intermediate club cell populations. In contrast, Matrigel fails to maintain primary PCa cells and produces in vitro basal-like benign transcriptomic profiles that are divergent from patient samples. Furthermore, we redefine cell type-signatures, identifying RNA- and protein-based biomarkers discriminating tumor versus all other cell types ex vivo, and show that expression of laminin-binding integrins is a hallmark of Matrigel-derived organoids. Finally, integrating previously published datasets with our new data, we generate the first Prostate PDO single-cell atlas (PPScA). The PPScA captures a spectrum of cellular identities and malignancies, while revealing pathways universally altered in PDOs as compared to primary PCa tissues.

Conclusions: Matrigel-free PCa PDOs exhibit improved fidelity and in vitro-enriched cell populations, while aberrant benign lineage programs are associated with Matrigel culture. Our work contributes to significantly enhancing the potential of PDOs in PCa research.

P108
Exploring the role of glucocorticoid receptor signaling in cellular plasticity and bladder cancer progression

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Background:
Molecular subtypes and phenotype switching (i.e. plasticity) may be associated with bladder cancer progression and treatment outcomes. Here, we aim at investigating the contribution of the glucocorticoid receptor (GR) signaling to cellular plasticity and tumor progression in muscle invasive bladder cancer (MIBC).

Methods:
Expression of GR was evaluated by western blot, IHC, and immunofluorescence (IF) in newly generated MIBC patient-derived organoids (PDOs, n=8) and matched patient samples. Differential gene expression analysis was performed in public bulk RNA sequencing datasets comprising 134 luminal (Lum) and 152 basal (Bas) MIBC samples (Robertson et al.) and 42 PDO samples (Lee et al.). Overall survival (OS) was analyzed in two patient cohorts: one receiving neoadjuvant chemotherapy (NAC) and one without NAC (Seiler et al.). Single-cell GR expression was quantified by IF and QuPath image analysis on a tissue microarray (TMA) with 82 pTa, 41 pT1, and 69 pT2 BC cores. A custom 18-antibody panel targeting GR pathway markers (e.g., GR, FKBP5), bladder epithelial markers (e.g., CK14, FOXA1), and microenvironment proteins (e.g., SMA, Laminin) was used for multiplexed single-cell protein analysis with PhenoCycler.

Results:
NR3C1 (gene encoding GR) was found among the top genes overexpressed in Bas as compared to Lum tumors ($p < 0.0001$). Patients with high NR3C1 expression displayed the most improvement in OS with NAC as compared to surgery alone ($p = 0.01$). In the TMA, GR was highly expressed in the nuclei of Bas-like tumors, while expressed at low level in Lum-like tumors. BC tumors with a mixed phenotype displayed a heterogeneous expression of GR, mostly localized to Bas-like cells. Consistent with tumor samples, GR expression patterns ranged from low in Lum-like, to intermediate levels in mixed, and high expression in Bas-like and sarcomatoid PDOs generated in our laboratory. In published transcriptomic data, mixed PDOs with high NR3C1 expression switched towards a Bas-like phenotype upon long-term culture, while mixed PDOs with low NR3C1 remained stable over time. To precisely define the cellular identity and the functional relevance of GR+ cells, we are currently testing our PhenoCycler antibody panel in matched tumor/PDO samples and optimizing NR3C1 shRNA lentiviral-based systems.

Conclusions:
GR represents a novel candidate factor associated with basal identity with potential therapeutic and predictive significance in MIBC.

P109
IP9 – ATLAS (Approaches to Long-term Active Surveillance) : a randomised controlled trial of regular MRI scans versus standard care for low to intermediate risk prostate cancer on active surveillance

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Introduction:
Active surveillance protocols are internationally heterogeneous, using different follow-up tests (prostate specific antigen (PSA), digital rectal exam (DRE), repeat magnetic resonance imaging (MRI) and biopsy). Up to 43% of patients proceed to treatment without having cancer progression. This could possibly be related to the burden of tests or anxiety. Using prostate MRI scans to trigger repeat biopsies might be valuable but robust evidence is required. IP9-ATLAS aims to determine whether MRI scans during active surveillance, compared to standard of care, will improve detection of cancer progression over 5 years.

Patients and Methods:
IP9-ATLAS is a multi-centre RCT, comparing UK NICE-defined standard of care (PSA and yearly DRE), with the intervention (PSA and regular MRI scans), stratified by initial lesion visibility on baseline MRI and cancer Grade Group. Patients on active surveillance, without prior androgen deprivation, histologically diagnosed Grade Group 1 or 2 disease and a maximum of 9 months from their diagnostic biopsy are eligible. Exclusion criteria include bilateral hip replacements, or contraindication to a transrectal probe or MRI. Primary outcomes are cancer progression rates and time to progression defined on biopsy or staging scans.

Results:
1263 patients will be recruited. After an interim statistical analysis at 12 months, the final analysis will use an intention-to-treat basis, multivariable regression models, hazard ratios and Kaplan-Meier curves. Recruitment started in May 2024, due to finish in June 2027, with follow-up until 2032. The trial is registered with ISRCTN and ClinicalTrials.gov (ISRCTN11447662 / NCT06280781).

Conclusions:
IP9-ATLAS addresses a critical research gap in active surveillance protocols. If cancer progression is better detected with the intervention, this can have the potential to change the current standard of care.

P110
Thulium-Laser-Enukleation einer stark vergrösserten Prostata (390 g): Ein Fallbericht

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Hintergrund & Ziele: Sowohl die AUA- als auch die EAU-Leitlinie empfiehlt bei der operativen Therapie einer benignen Prostatahyperplasie mit einem Volumen von > 80 ml die Enukleation neben der einfachen Prostatektomie als Erstlinientherapie. Bis zu diesem Zeitpunkt existieren mehrere Fallberichte zur Holmium-Laser-Enukleation (HoLEP) bei einer Prostatagrösse von über 300 ml, jedoch gibt es keine Fallberichte zur Thulium-Laser-Enukleation (ThuLEP).

Material & Methoden: Wir berichten von einem 64-jährigen Mann mit obstruktiven und irritativen Miktionsbeschwerden sowie rezidivierenden Harnwegsinfektionen. Die medikamentöse Therapie blieb frustran bei unzureichender Symptomkontrolle (trotz geringer Restharnwerte von 50 ml). Der PSA-Wert lag bei 3.7 ng/ml und die PSA-Dichte bei 0,01 ng/ml/ml. Das MRI ergab ein Prostatavolumen von mindestens 300 ml ohne Hinweise auf malignitätsverdächtige Areale. Extern wurde sich für eine roboterassistierte transvesikale Prostatektomie entschieden, welche jedoch bei multiplen abdominellen Adhäsionen frustran verlief. Daher entschieden wir uns bei der Vorstellung in unserer Abteilung für die Durchführung einer ThuLEP. Eine präoperative Prostata-Arterien-Embolisation wurde vom Patienten abgelehnt.

Resultate: Es folgte die komplikationslose Durchführung der ThuLEP in en bloc Technik mit Erhalt der apikalen Mukosa. Die gesamte Operationszeit betrug 151 min und es wurden 390 g Gewebe entfernt. Postoperativ zeigte sich ein komplikationsfreier Verlauf. Der einliegende Spülkatheter konnte zeitgerecht am zweiten postoperativen Tag entfernt werden. Bei restharnfreier Spontanmiktion wurde der Patient selbentags entlassen. Die Histologie präsentierte eine chronische und leichte aktive Entzündung ohne Hinweise auf Malignität. Im 12-Wochen-Follow-Up zeigte sich eine deutliche Besserung der obstruktiven Symptomatik bei noch Fortbestehen der irritativen Beschwerden. Diese präsentierte sich zum 14-Wochen-Follow-Up unter Beckenbodentraining und spasmolytischer Therapie regredient. Das PSA lag 19 Wochen postoperativ bei 0.034 ng/ml und das Prostatarestvolumen bei 42 ml. Der Patient gab eine zufriedenstellende Lebensqualität an.

Schlussfolgerungen: Der vorliegende Fall zeigt, dass die Thulium-Laser-Enukleation der Prostata auch bei sehr großen Drüsenvolumina sicher und durchführbar ist. Nach unserem Kenntnisstand handelt es sich hierbei um die bislang grösste in der Literatur dokumentierte Prostata, die mittels Thulium-Laser behandelt wurde.

P111
Is it Worth Biopsying PI-RADS-3 Lesions on Multiparametric MRI in Men with Elevated PSA? Results of a Prospective Single Institutional Cohort Study

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Introduction:
The EAU Guidelines recommend biopsying all PI-RADS ≥ 4 lesions, but for PI-RADS-3 lesions, the decision should depend on the PSA density, DRE findings, and family history. Generally, 16% of PI-RADS 3 lesions harbor ISUP ≥ 2 cancer, ranging from 4% with PSA density < 0.10 to 29% with PSA density > 0.15. This study assessed biopsy results of PI-RADS-3 lesions to understand the real-world situation in Central Switzerland.

Methods:
We queried our prospective biopsy cohort of men who underwent prostate MRI followed by both targeted and systematic biopsies between November 2023 and March 2025. During this period, all men with PI-RADS 3 lesions were routinely recommended to undergo biopsy as per our institutional protocol. MRIs were performed and assessed either internally or in external institutions. We identified all patients with PI-RADS 3 lesions and analysed their biopsy results to determine the presence of clinically significant prostate cancer, defined as ISUP grade group ≥ 2.

Results:
Among 388 consecutive biopsy procedures, 42 PIRADS-3 lesions were identified. Target biopsies showed no cancer in 33 (79%) and ISUP 1 prostate cancer in 9 (21%) men. In the cases with ISUP 1, one case showed a 45% core involvement with cancer, while all others had < 20% core involvement. PSA-density was < 0.1 in 20 patiens (48%), between 0.10 – 0.20 in 13 patients (31%), and > 0.20 in 8 patients (19%) (and missing in 1 patient (2%)).
In additional systematic biopsies, only one case (2%) of ISUP 2 cancer was diagnosed in 1 core with 7% core involvement. This latter patient chose to undergo a prostatectomy and the final pathology showed an ISUP 2 tumor that consisted of only 1% of the prostate. This particular case had a PSA-Density of < 0.10.

Conclusion:
In this real-world clinical population, we found no case of prostate cancer requiring active treatment in men with PI-RADS-3 lesions. This finding challenges our previous practice of performing a biopsy in all PI-RADS-3 lesions. Based on our results, we have changed our clinical approach. We now counsel patients about the negligible risk of clinically significant prostate cancer in this setting. If the PSA density is low, we recommend follow-up with PSA monitoring and repeat MRI. This approach avoids unnecessary biopsy complications, prevents the diagnosis of inconsequential ISUP 1 cancer that would trigger active surveillance protocols, and reduces psychological burden for patients.

P112
Abstract: First Swiss experience with the HUGO robotic platform for radical prostatectomy in localized prostate cancer

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First Swiss experience with the HUGO robotic platform for radical prostatectomy in localized prostate cancer

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Introduction:
Robot-assisted laparoscopic radical prostatectomy is an established procedure for patients with localized prostate cancer. In recent years, new platforms have emerged. We report the first experience in Switzerland with Medtronic's HUGO RAS platform.

Methods:
From March to April 2025, two radical prostatectomies were performed at our institution by a single open surgeon with no prior experience in laparoscopy. Patient age was 65/65 years and their ECOG score was 1/2.
Preoperative prostate-specific antigen was 6.38/1.18 µmol/l and biopsy ISUP score 1 in both cases. Although the patients were classified as clinically low-risk prostate cancer, they did not wish active surveillance. No lymphadenectomy was performed based on preoperative risk of lymph node disease.
All the patients successfully underwent surgery without the need for conversion. Docking time was 7/6 min and time from first trocar insertion to console 60/20 min. Console time was 360/330 min. Estimated blood loss was 800/400 ml. No blood transfusion was needed perioperatively. No intraoperative or postoperative complications occured. We encountered no technical problems with the robotic platform. Length of stay was 4/9 days.
At catheter removal, both patients were totally continent.
Histological results showed tumor stage T2/T2 ISUP score 2/2 with no positive surgical margins.

Conclusion:
In this first Swiss experience with HUGO RAS, the robotic platform demonstrated reliability and safety comparable to its predecessors. We plan to present a larger series by the time of the Swiss Urological Congress 2025. We expect improvements in intraoperative parameters as the surgeon and his team gain more experience.

P113
Robot-Assisted YV-Plasty for Refractory Bladder Neck Stenosis: Long-Term Single-Centre Outcomes

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Introduction & Objectives
Bladder neck stenosis (BNS) remains an infrequent but challenging complication following transurethral resection of the prostate, with reported incidences reaching 9.2%. When endoscopic management is unsuccessful, robot-assisted YV-plasty (RAYV) represents a surgical alternative. This study aims to evaluate the long-term effectiveness of RAYV in patients with therapy-resistant BNS.

Materials & Methods
Patients treated with RAYV for BNS between 2016 and 2022 were retrospectively analyzed, with a minimum follow-up duration of two years. Primary endpoints included the incidence of re-stricture and overall treatment failure — defined as the occurrence of re-stricture or the need for further therapeutic intervention, including permanent catheterization. Secondary outcomes assessed changes in functional parameters, including peak urinary flow rate (Qmax), post-void residual volume (PVR), and patient-reported outcomes via the International Prostate Symptom Score (IPSS) and the Short-form Health Survey (SF-8). Data are presented as medians with interquartile ranges.

Results
A total of 31 patients were included, with a median age of 68.7 years (63.3 – 77.5) and a median follow-up of 49 months (33 – 71). Treatment failure occurred in 6 cases (19.4%), including 2 patients (6.5%) with cystoscopically confirmed re-stenosis. Of the remaining failures, two had elevated PVR due to detrusor hypocontractility, and two required long-term catheterization owed to therapy-refractory detrusor overactivity and stress urinary incontinence, respectively. Significant postoperative improvements were noted in Qmax, rising from 7.6 (3.9 – 12) to 13.4 (9.8 – 25.8) ml/s ($p = 0.01$), and in PVR, decreasing from 190 (10 – 488) to 15 (0 – 60) ml ($p = 0.01$). IPSS scores improved in both symptom severity and quality of life domains, declining from 18.5 to 8 points and from 4 to 1 point, respectively ($p < 0.001$). SF-8 scores remained statistically unchanged.

Conclusion
Robot-assisted YV-plasty offers a durable solution for patients with recurrent BNS, showing a low incidence of anatomical recurrence and sustained functional improvement over time. Incorporating preoperative urodynamic studies may aid in identifying pre-existing bladder dysfunction, potentially reducing treatment failure rates.

P114
Mastering En-bloc HoLEP: Insights from a Generational Training Survey

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Background
Historically, the en-bloc approach to Holmium Laser Enucleation of the Prostate (HoLEP) was considered the most technically demanding variant of an already challenging procedure. As a result, initial training often favored the 2- or 3-lobe techniques. In recent years, the en-bloc method has become increasingly standardized. This survey aimed to explore challenges in en-bloc HoLEP by gathering insights from urologists trained within a single educational lineage to identify key difficulties and improve surgical training.

Materials and Methods
Urologists trained directly by a single surgeon in en-bloc HoLEP, as well as those further down the teaching line, were surveyed. The online questionnaire covered demographics, prior experience, learning curve, surgical technique, and experiences with proctoring others.

Results
Eighteen urologists responded, 76.5% had successfully completed formal proctoring at the time of the survey, and 66.7% began training between ages 30–40, with the majority having completed more than 100 other transurethral prostate procedures beforehand. Prostate volumes of 50–90 ml were considered ideal for learning. 66.7% performed 11–20 cases under supervision, and most felt confident after fewer than 20 additional solo procedures. All participants continued using the en-bloc technique. Key benefits reported included single-plane identification, better orientation and visibility, and shorter operative time. Common challenges included apical release (especially connecting at 12 o'clock), maintaining plane continuity, and final detachment into the bladder. In total, 2,159 procedures were performed (median 60, range 12–950). Five participants now act as proctors, spreading the technique to a fourth generation.

Conclusion
En-bloc HoLEP can be effectively taught through one-on-one training. Surgeons demonstrated a 100% adherence to the technique. Learning curve perceptions align with published data from other approaches. Several key procedural steps were identified that warrant focused attention in structured proctoring programs.

P115
Assessing the Positive Predictive Value of the Stockholm3 Test in Prostate Cancer Diagnosis: Insights from a Single-Center, Retrospective Analysis

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Background:
Reliable biomarkers for the early detection of clinically significant prostate cancer (PCa) remain lacking [1], [2]. Blood-based tests such as the Stockholm3 Test (STHLM3T) were developed to improve the predictive ability [3], [4].

Objective:
To determine the positive predictive value (PPV) of the STHLM3T at our institution and to assess how many Gleason score (GS) ≥ 7 PCas were additionally diagnosed by the STHLM3T which might have been missed or diagnosed at a later stage based on PSA density, PI-RADS score and digital rectal examination alone.

Material & Methods:
We performed a retrospective analysis of clinical data from 154 patients with a positive STHLM3T result who subsequently underwent prostate MRI, followed by MRI/TRUS-fusion targeted biopsy (117 transrectal, 37 transperineal), between November 2023 and March 2025 at our institution. First, we calculated the PPV of the STHLM3T. Next, we assessed whether an indication for biopsy would have been present based on conventional clinical criteria alone, including PSA density ≥ 0.15 ng/ml/g, PI-RADS score ≥ 4/5, and/or suspicious DRE. Patients with positive biopsy results who did not meet these clinical criteria for biopsy eligibility were further stratified by histopathological findings and classified GS 6 or GS ≥ 7.

Results:
Among the 154 patients with a positive STHLM3T (mean age: 65.8 years; median PSA: 5.1 ng/ml; median PSA density: 0.11 ng/ml/g; median STHLM3T score: 18), PCa was detected in the subsequent prostate biopsy in 82 patients. The PPV of the STHLM3T in our cohort was 53.25%.
In 16 of the 82 patients with a positive biopsy, the predefined clinical criteria for biopsy eligibility were not met. Among these 16 patients, histological analysis revealed 10 cases of GS 6 PCa and 6 cases of GS ≥ 7 PCa.

Conclusions:
The STHLM3T demonstrated a PPV of 53.3% in our cohort, consistent with prior studies (53.2%) [6]. Six out of 154 positive STHLMT results led to the diagnosis of GS ≥ 7 PCa, which might have been missed or diagnosed at a later stage based on conventional clinical criteria alone.

P116
ROBOT-ASSISTED RADICAL PROSTATECTOMY WITH CONCOMITANT DIVERTICULECTOMY AND REDUCTION CYSTOPLASTY: A CASE REPORT

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Context and Objectives
Robot-assisted radical prostatectomy (RARP) represents a standardized treatment option for patients affected by localized prostate cancer. In these surgical candidates, bladder outlet obstruction may be present, causing morphological alterations such as significant bladder diverticula and high capacity bladder. In this context, we present the case of a RARP combined with bladder diverticulectomy and reduction cystoplasty.

Materials and methods
A 62-year-old man with no major comorbidities developed acute urinary retention and required the placement of an indwelling bladder catheter (1.9 L urine drained). Abdominal CT scan and cystoscopy showed a considerably distended bladder with a large right-sided diverticulum adjacent to the right ureteral orifice. Urodynamic test confirmed bladder outlet obstruction. Multi-parametric MRI of the prostate was negative for suspected lesions. Patient was initially scheduled for TURP plus preventive right ureteral stent placement, followed by subsequent robotic diverticulectomy and reduction cystoplasty. However, histology revealed incidental adenocarcinoma of the prostate (ISUP Grade Group 2). After multi-disciplinary evaluation, RARP combined with synchronous diverticulectomy and reduction cystoplasty was performed using the Da Vinci Xi system in June 2024. The patient was positioned in 35º Trendelenburg with four 8-mm robotic trocars and two assistant ports. The diverticulum was carefully dissected and excised via an extravesical approach with double-layer bladder closure. Due to significant bladder distension, a dome resection was performed to reduce the bladder volume.

Results
Operative time was 4.5 hours. Estimated blood loss was 200 ml. No intra- nor post-operative complications occurred. Final pathology confirmed pT2c acinar adenocarcinoma, ISUP Grade Group 2, with negative surgical margins (R0). At one-month follow-up, the patient reported complete urinary continence and spontaneous voiding. Uroflowmetry showed a peak flow of 9 ml/s, with no post-void residual. PSA was undetectable at 1, 3, and 6 months postoperatively.

Conclusion
This case highlights the feasibility and safety of a comprehensive robot-assisted approach combining radical prostatectomy, bladder diverticulectomy, and reduction cystoplasty in a patient with localized prostate cancer and chronic urinary retention. At 6-m follow-up, the patient achieved complete urinary continence with no post-void residual and undetectable PSA.

P117
Enhancing Postoperative Patient Education: Comparing Written Leaflets and Video-Assisted Instructions

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Background and objective
Effective communication of post-operative instructions is essential for patient recovery and adherence. Traditionally, patients rely on written leaflets for guidance, yet comprehension can vary. The aim of this study is to determine if video-assisted instruction improves patient comprehension compared to conventional leaflets alone.

Materials and Methods
This prospective study included adult patients undergoing urological surgery between July 2024 and December 2024. The study was conducted in two phases:
- Phase 1 written content only: Patients received a written leaflet containing standardized information about the surgical procedure, potential complications, postoperative care, and follow-up, along with a questionnaire shortly before discharge.
- Phase 2 written content and video access: Patients received the same leaflet supplemented with a QR code linking to a pre-recorded video delivering identical content, as well as the questionnaire.

Patients undergoing robotic-assisted surgery received an extended questionnaire. The primary outcome was knowledge assessment, measured using a combination of multiple-choice and open-ended questions, with scores reported on a scale from 0 to 100%. Secondary outcomes included subjective comprehension of specific content areas, clarity of information, and visual satisfaction, all assessed using a 5-point Likert scale.

Results
124 patients were included, 62 in each group. Transurethral and robotic-assisted surgery was performed in 59% and 41%, respectively. There was no significant difference in knowledge scores between groups in the intention-to-treat (76.6% vs. 77.2%, p = 0.876) or per-protocol analysis (76.9% vs. 77.8%, p = 0.805). In the subgroup analysis, patients undergoing robotic surgery had higher scores in the video group, although this difference was not statistically significant (77.3% vs. 71%, p=0.371). Perceived clarity (4.5 vs. 4.1, p = 0.017), visual satisfaction (4.6 vs. 4.4, p = 0.019), and understanding of complications (4.7 vs. 4.5, p = 0.029) were significantly higher in the video group. Limitations include the non-randomized design, possible baseline imbalance between groups and reliance on a non-validated questionnaire.

Conclusion
We could not observe a significant difference in patient knowledge with the addition of video-assisted instructions. However, subjective clarity, satisfaction, and perceived understanding of potential complications were improved.

P118
Is Less More? Evaluating the Slim Approach for Enhanced Efficiency in HoLEP - The St. Gallen Experience

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Background:
Slim HoLEP is a refinement of conventional Holmium Laser Enucleation of the Prostate (HoLEP), using smaller instruments (22 Charr. vs. 26 Charr.) to reduce access-related and urethral trauma and improve handling. Limited data are available comparing Slim and standard HoLEP in routine settings. This study compares both techniques in terms of efficiency and surgical experience.

Material and Methods:
As of today, we retrospectively analyzed 144 patients who underwent HoLEP (n=81) or Slim HoLEP (n=63) at a tertiary center. Primary endpoints included enucleation time, morcellation time, total operative time, and enucleated tissue weight.

Results:
Overall, Slim HoLEP was associated with slightly shorter median enucleation time (73.0 vs. 82.0 min) and operative time (105.0 vs. 119.0 min) compared to standard HoLEP, with similar enucleated tissue weights (52.0 g vs. 55.0 g). In a subgroup performed by the same experienced surgeon, Slim HoLEP showed shorter enucleation (47.0 vs. 80.0 min) and operative times (77.0 vs. 114.0 min), along with a slightly higher tissue yield (61.0 g vs. 50.0 g). When comparing Slim HoLEP performed by an experienced vs. inexperienced surgeon, the less experienced surgeon had markedly longer enucleation (118.0 vs. 47.0 min) and operative times (164.0 vs. 77.0 min), lower enucleated weight (37.0 g vs. 61.0 g), and reduced enucleation efficiency (0.31 vs. 1.30 g/min).

Conclusion:
Slim HoLEP was associated with shorter procedure times compared to standard HoLEP, particularly when performed by an experienced surgeon. Surgical experience correlated with higher enucleation efficiency and shorter operative duration. The data illustrate a clear learning curve in HoLEP, emphasizing the importance of structured training during early adoption

P119
Efficiency of Slim vs. Ultra Slim HoLEP in Small Prostates: A Single-Center Retrospective Analysis

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Background:
Holmium Laser Enucleation of the Prostate (HoLEP) is an established surgical option for benign prostatic hyperplasia (BPH). Slim (22 Charr.) and Ultra Slim (18.5 Charr.) HoLEP are recent modifications using smaller sheaths compared to the standard 26 Charr. resectoscope, aiming to reduce urethral trauma while maintaining efficiency. This study compares both techniques regarding enucleation efficiency and reductions in PSA and prostate volume.

Materials and Methods:
We retrospectively analyzed 44 patients who underwent HoLEP for BPH at Spital Grabs (HOCH) with prostate volumes < 50 mL. Patients were divided into two groups: Slim HoLEP (n = 29) and Ultra Slim HoLEP (n = 15). Median patient age was 72.3 years in the Slim group and 70.5 years in the Ultra Slim group. Evaluated parameters included total operative time, laser time/laser energy applied, enucleation time and tissue weight, coagulation and morcellation times, as well as pre- and postoperative PSA levels and prostate volumes.

Results:
Baseline characteristics were comparable. Median enucleation time was 33 min (Slim) vs. 41 min (Ultra Slim), with enucleated tissue weights of 21 g and 28 g, respectively. PSA levels dropped from 1.49 to 0.44 ng/mL in the Slim group and from 1.46 to 0.35 ng/mL in the Ultra Slim group. Prostate volume decreased from 45 mL to 8 mL (Slim) and from 40 mL to 7.5 mL (Ultra Slim).

Conclusions:
Slim and Ultra Slim HoLEP are effective modifications of standard HoLEP for prostates < 50 mL, enabling efficient enucleation and significant reductions in PSA and prostate volume. Although enucleation efficiency appeared slightly higher in the Slim group, the Ultra Slim group showed a comparable outcome due to the removal of a slightly greater tissue volume over a marginally longer time. These results suggest that both techniques offer similar efficiency, and the choice of sheath diameter can be tailored to anatomical or procedural considerations.

P120
Prognostic value of preoperative hemoglobin in patients undergoing radical prostatectomy for localized prostate cancer

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Introduction
Preoperative hemoglobin (pHb) values have been identified to be an independent prognostic marker for oncological outcomes in several malignancies. However, the impact of pHb levels before radical prostatectomy (RP) in localized prostate cancer remains unclear. The aim of this study was to investigate serum pHb levels before RP and their association with oncological outcomes.

Methods
pHb levels were retrospectively collected from patients who underwent RP from 2016 – 2022. Follow-up data was collected until January 2025.
Serum hemoglobin (Hb) levels were analysed as a continuous and a binary variable. For binary analysis, the cohort was divided into high-Hb (≥ 150 g/l) and low-Hb (< 150 g/l) groups using the median as a cutoff. Univariate logistic regression or Spearman rank correlation was used to examine potential associations between Hb levels and pathological outcomes, prostate specific antigen (PSA) and age. To assess the impact of pHb on recurrence-free survival (RFS), adjuvant treatment free survival (TFS) and metastasis free survival (MFS) uni- and multivariable cox regression analyses were performed. Kaplan-Meier analysis was performed to compare RFS between high-Hb and low-Hb patients, the log-rank test was used to compared survival curves. Recurrence was defined as a rise in PSA over 0.1 µg/l after previously undetectable levels.

Results
567 patients were included in the analysis. Higher pHb levels, both when analyzed as a continuous variable and when divided in high and low groups, were inversely correlated with age ($p < 0.001$) and ISUP grade ($p = 0.005$ or $p= 0.028$ respectively). The high-Hb group showed a decreased risk of extraprostatic disease (≥pT3) (odds ratio [OR] 0.71, 95%-CI: 0.50–0.99, $p = 0.047$). In univariable cox regression analysis, patients in the high-Hb group had a significantly longer RFS compared to those with lower pHb levels (hazard ratio [HR] 0.60, 95%-CI: 0.44–0.92, $p = 0.015$). When adjusting for age, ISUP grade, PSA, positive surgical margin, pN1 and ≥pT3 in multivariable analysis, this effect was no longer statistically significant (HR 0.83, 95%-CI: 0.56 – 1.22, $p = 0.336$). No significant prognostic impact of pHb could be detected for TFS or MFS in uni- or multivariable analysis.

Conclusion
In this large retrospective cohort, lower pHb values were associated with a more aggressive tumor grading and shorter RFS. However, we were unable to identify pHb as an independent predictor for oncological outcomes.

P121
Fallbericht: Primär metastasiertes Prostatakarzinom bei Colitis Ulcerosa

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Bei Diagnosestellung 56-jähriger Patient. Präsentierte sich mit Makrohämaturie. Bis auf eine colitis ulcerosa, welche unter Imurek und Salofalk therapiert ist gesunf. In der notfallmässigen Abklärung wurde ein PSA von 629ug/l gemessen. Ein PSMA-PET-CT zeigte eine fortgeschrittene lymphogene sowie ossäre Metastasierung. Eine systematische Prostatabiopsie zeigte wieder erwarten kein Karzinomnachweis. Eine erneute Biospie konnte ein Gleason 4 + 4 = 8 Prostatakarzinom nachweisen. Somit Stadium pT2 cN1 cM1b. Eine Androgendeprivationstherapie mit Firmagon wurde eingeleitet, welche im Verlauf auf Lucrin umgestellt werden konnte sowie Osteoprotektion mit Denosumab nach zahnärztlicher Abklärung.
Im weiteren Verlauf wurden die symptomatischen Skeletmetastasen perkutan bestrahlt. Eine paliative Chemotherapie mit Doxetacel wurde eingeleitet in Kombination mit sekundärer Androgendeprivationstherapie mit Nubeqa. Eine genetische Analyse wurde durchgeführt und konnte keine pathogene Variante der gängigen Prostatakarzinom assoziierten Gene nachweisen.
Bei diesem Patienten scheint ein hoch-aggressives Prostatakarzinom vorzuliegen bei jungem Patientenalter sowie primärer lymphogen und ossärer Metastasierung. Ein zusammenhang mit Colitis ulcerosa oder der Immunsupprimierenden Therapie scheint nahezuliegen.
Es gibt aktuell wenig Forschung, welche den Zusammenhang von Chronisch Entzündlichen Darmerkrankungen oder deren Therapie mit Prostatakarzinom zeigt. Es scheint jedoch eine erhöhte Prävalenz zu geben. Dabei scheint insbesondere Colitis Ulcerosa das Prostatakarzinom Risiko zu erhöhen, wobei es bei Morbus Crohn dem Risiko der Normalpopulation entspricht.

P122
Invasive Keratinizing Squamous Cell Carcinoma of the Bulbar Urethra: A Rare Clinical Presentation

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Introduction: Primary keratinizing squamous cell carcinoma (SCC) of the urethra is a rare and aggressive malignancy, comprising less than 1% of genitourinary cancers. Its rarity and severity pose diagnostic and therapeutic challenges. This report presents a case of primary keratinizing SCC of the bulbar urethra in a 53-year-old man, initially suspected to have a benign condition.

Case Description: The patient had a history of bulbar urethral stricture treated at age 39 via internal urethrotomy. He presented with a weak urinary stream, pollakisuria, perineal pain, and recurrent UTIs over the past year, sometimes with hematuria. His medical history was unremarkable, with no regular medications or allergies. He quit smoking in adolescence after a 3 pack-year history.

Physical exam showed no genital abnormalities. Uroflowmetry indicated a maximum flow of 4 ml/s, and ultrasound revealed a post-void residual of 200 ml. Urethroscopy identified a tumor in the bulbar urethra causing critical narrowing, impassable by standard cystoscopy. Intraoperative ureterorenoscopy partially passed the 3–4 cm tumor. A suprapubic catheter was inserted.

Urinary cytology revealed abnormal squamous cells. Transurethral biopsy confirmed a well-differentiated, invasive, keratinizing SCC. Pelvic MRI showed a 9.5 cm mass extending from the mid-prostate to the bulbar urethra, invading the corpus spongiosum and right crus of the corpus cavernosum. The tumor also involved the right neurovascular bundle and Retzius space, with rectal wall contact but no clear infiltration. Suspicious pelvic and left inguinal lymph nodes were identified. Chest and abdominal CT scans showed no distant metastasis. Lymph node biopsy confirmed metastasis.

The diagnosis was clinical stage cT3cN1cM0 urethral SCC. A multidisciplinary tumor board recommended chemoradiotherapy.

Treatment and Outcome: The patient received concurrent chemotherapy and radiotherapy targeting the primary tumor and lymph nodes. Post-treatment imaging showed marked tumor reduction and no distant metastasis.

Conclusion: This case illustrates the diagnostic complexity and aggressive nature of primary urethral SCC. The patient's favorable response to chemoradiotherapy emphasizes its potential as an effective option, especially for locally advanced disease. Further clinical experience is needed to refine treatment approaches for this rare malignancy.

P123
Case report: penis fracture without adequate trauma in atypical location

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A 46-year-old male presented at our institution as emergency with discomfort because of a penile hematoma since roundabout 36 hours. There was no adequate trauma prior to the event of first sensation of light pain within a morning micturition. The cognitive fully aware and authentic patient did not have any other erection since first signs of the hematoma. At time of presentation in our institution (USZ), the patient was free of voiding problems.
Magnetic resonance imaging (MRI) was performed, which showed a possible rupture in the Tunica albuginea caudal of the corpus cavernosum. Therefore indication for an operative exploration was given. Intraoperative a perineal exploration was performed, which showed a 1cm lesion of the Tunica albuginea (fig. 1). Clinical follow-up after 4 weeks showed an unchanged quality of erection (measures by IIEF: 24 (before rupture; reduced points because of psychological stress due to separation process) vs 30 (after intervention).

P124
Case Report: Complex Urethral and Meatal Stenosis Due to Lichen Sclerosus

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Background
Lichen sclerosus is an inflammatory dermatosis that, in men, is associated with an uncircumcised status, local trauma, or anatomical abnormalities, possibly exacerbated by chronic irritation caused by urine trapping between mucosal surfaces. It is known to cause phimosis, balanitis, urethral strictures, and, if undiagnosed or untreated, penile cancer or penile melanoma. It is a clinical diagnosis and found in 60% of males undergoing circumcision for acquired phimosis.

Case
We report the case of a 56-year-old male patient with a meatal stenosis likely caused by lichen sclerosus, initially presenting with postoperative urinary retention. The patient had undergone a circumcision as a child and experienced recurrent episodes of balanitis thereafter. During the past year, he had poor urinary flow with urgency and burning localized to the distal urethra. After an indwelling catheterisation due to urinary retention, the urine flow improved with a post-void residual of 60 ml. Nonetheless, his symptoms recurred within weeks. Physical examination revealed whitish, partially reddened skin of the glans and a severely stenotic external meatus, permitting passage of only a small 10 Ch catheter. Retrograde urethrogaphy showed a 3 cm distal and a 3.5 cm proximal stenosis. Our treatment protocol with a conservative approach was initiated. We instructed the patient for a daily self-catheterization with a Nelaton catheter coated in corticosteroid ointment for 4 weeks, followed by 2 weeks of self-dilatation every other day with simple lubrication (using a hydrophilic catheter) and no steroid. This cycle was repeated once. Concurrently, balanitis was treated with topical corticosteroids and chamomile. After 10 weeks, the reddish and whitish areas regressed clinically. The retrograde urethrography showed a more open urethra due to regression of the meatal and urethral stenosis. The patient reported significantly better voiding and no residual urine.

Conclusion
Lichen sclerosus is a progressive condition that can lead to clinically relevant complications, including meatal stenosis and complex urethral strictures. Early diagnosis and initial medical treatment with corticosteroids are essential to avoid a disease progression.

P125
Bilaterale skrotale extratestikuläre Leiomyome - eine differenzialdiagnostische Rarität

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Introduction:
Leiomyome sind gutartige Tumoren, die aus glatter Muskulatur hervorgehen und vor allem im Uterus vorkommen. Im männlichen Urogenitaltrakt sind sie selten und betreffen meist die Nierenkapsel, den Samenstrang oder die Skrotalhaut. Extratestikuläre Leiomyome des Skrotums stellen eine Rarität dar, eine bilaterale Manifestation ist außergewöhnlich selten und stellt eine differenzialdiagnostisch Herausforderung dar.

Case Report:
Ein 69-jähriger Patient stellte sich mit Miktionsbeschwerden und Phimose in unserer urologischen Sprechstunde vor. Klinisch tasteten sich beidseits derbe, nicht schmerzhafte Raumforderungen beider Hoden als Zufallsbefund. Die Sonographie zeigte beidseits kaudale, hyperperfundierte, echoarme Tumoren (rechts 31×34×40 mm, links 39×23 mm). Die Tumormarker (AFP, ß-HCG) lagen im Referenzbereich. Es erfolgte eine beidseitige skrotale Hodenfreilegung mit vollständiger Tumorresektion unter beidseitigem Hoden¬erhalt sowie Zirkumzision. Die histologische Untersuchung zeigte beidseitige gutartige Leiomyome ohne Atypien oder Mitosen. Der postoperative Verlauf verlief komplikationslos.

Discussion:
Beidseitige extratestikuläre skrotale Leiomyome sind extrem selten – in der Literatur sind nur etwa sechs Fälle sicher dokumentiert. Die Unterscheidung zu malignen Tumoren ist klinisch und sonographisch limitiert; die Diagnose gelingt sicher nur histologisch. Trotz ihrer Benignität können sie bei langer Persistenz zu testikulärer Hypoplasie führen. Eine hoden-erhaltende Resektion ist bei klarer extratestikulärer Lage gerechtfertigt. Aufgrund vereinzelter atypischer histologischer Varianten wird eine strukturierte Nachsorge empfohlen.

P126
Distal urethral calculus causing persistent LUTS: A case report

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Introduction
Urethral calculi are a rare but often overlooked cause of persistent lower urinary tract symptoms (LUTS). We report a case of a distal urethral stone successfully treated by endoscopic intervention.

Case Description
A 64-year-old male reported a one-year history of irritative (dysuria, urgency, penile pain) and obstructive LUTS (weakened stream, post-void dribbling). He had undergone unsuccessful treatment for presumed prostatic obstruction and urinary tract infection.
He was referred for urological evaluation following the onset of gross hematuria. Flow study revealed a significantly reduced urinary flow rate and flexible urethroscopy revealed a 13 mm impacted distal urethral calculus lodged in the fossa navicularis. Additional CT imaging demonstrated an additional stone in the right kidney. Management included transurethral laser fragmentation of the urethral calculus and placement of a right-sided ureteral stent, followed by an ureterorenoscopy with laser lithotripsy. Both calculi were successfully removed.

Results
Stone analysis indicated the urethral calculus to be of secondary origin. The patient experienced complete symptom resolution following treatment. At six weeks post-intervention, he reported no urinary complaints, with excellent urinary flow and low residual volume.

Conclusion
Urethral calculi are rare, accounting for under 1 % of all urinary stones. Even large calculi, such as this 13 mm stone, may not cause retention, thereby complicating timely diagnosis.
Prolonged symptoms despite multiple therapies underscore that urethral calculi are often overlooked and cause LUTS. The coexisting renal stone was managed by staged, guideline-based endoscopic intervention. The similarity in stone composition suggests secondary migration of the urethral stone from the upper urinary tract. This aligns with findings in previous studies, which report that distal urethral stones are often of secondary origin, particularly in male patients with nephrolithiasis.
This case highlights the importance of considering alternative causes like distal urethral stones in patients with refractory LUTS and demonstrates that effective treatment is possible using targeted endoscopic intervention.

P127
Multistage Surgical Management of a Complex Bulbar Urethral Stricture in a High-Risk Patient with Comorbidities, a case report

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Background & Aims
Bulbar urethral strictures present significant reconstructive challenges, especially in patients with multiple comorbidities. We report a complex case of a 69-year-old male with a 4 cm bulbar urethral stricture following iatrogenic injury, emphasizing the surgical strategy, complications, and importance of multidisciplinary care in high-risk patients.

Materials & Methods
The patient had a history of mitral valve replacement (biological prosthesis), autoimmune nephritis, and prior urethral interventions. After developing a complete bulbar stricture post-iatrogenic injury (October 2023), initial endoscopic management (June 2024) failed due to dense fibrosis. He underwent staged reconstruction:
1. Open urethroplasty with buccal mucosa graft (August 2024), complicated by restenosis after UTI.
2. First-stage Johansson reconstruction (inner prepuce graft) with removal of a retained Terumo wire (February 2025).
3. Second-stage Johansson reconstruction with buccal mucosa graft

Results
- First-stage urethroplasty failed due to anastomotic stricture (1 cm) and infection.
- Second-stage reconstruction achieved urethral patency with no intraoperative complications, despite high cardiac risk.
- Foreign body discovery: Retrospective review identified a retained wire from prior instrumentation, probably contributing to stricture recurrence.

Conclusions
1. Surgical staging is critical for long-segment bulbar strictures, especially in comorbid patients.
2. Retained instruments (e.g., wires) must be ruled out in recurrent strictures.
3. Multidisciplinary coordination (urology/cardiology) is essential for perioperative safety.

P128
How Can We Quantitatively Evaluate Catheter Performance?

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Background and aims
Indwelling Foley catheters are widely used but frequently associated with complications. Performance is often assessed qualitatively, highlighting the need for objective, quantifiable evaluation methods. This study introduces a computational approach to assess key aspects of catheter performance, aiming to better understand design limitations, support catheter selection, and guide future improvements to enhance patient safety and comfort.

Materials and methods
A female lower urinary tract (LUT) model was developed to evaluate a Foley catheter using geometrical analysis, computational fluid dynamics (CFD), and finite element analysis (FEA). The LUT was modelled with standard dimensions (6 mm urethral diameter, 30 mm length, 26.1° bladder neck angle)(1), with the bladder simplified to a cylindrical body and conical neck. A Foley catheter model (Teleflex Inc., USA) was positioned within the LUT. Geometric parameters assessed included catheter height (tip above bladder outlet), residual volume (urine below lowest side hole), and immersed surface area (external area submerged in residual volume). For CFD, boundary conditions were set at 20 cmH_2O bladder pressure and 0 cmH_2O urethral outlet, with flow rate and minimum inner wall shear stress measured. For FEA, a 20 × 20 × 1.5 mm bladder strip was placed above the catheter tip, subjected to 4cmH_2O pressure, and maximum von Mises stress was recorded to assess trauma risk.

Results
The geometrical model yielded a residual volume of 196.2 mL, catheter height of 52.9 mm, and an indwelling surface area of 340.7 mm². CFD analysis showed a flow rate of 8 ml/s and a minimum wall shear stress of 1.7 mPa, located just above the catheter side hole. FEA simulation indicated a maximum von Mises stress of 28 kPa at the contact point between the catheter tip and bladder wall.

Conclusion
Computational modelling quantified Foley catheter performance across key metrics. High residual volume, low outlet velocity, and minimal wall shear stress near side holes were identified, increasing the risk of biofilm and crystal formation (2). Elevated catheter height and a pointed tip also led to greater bladder wall contact and higher von Mises stress, raising the risk of trauma (3). These findings highlight the value of this modelling framework in linking catheter design to patient outcomes.

P129
Urethral Duplication in a 35-year-old Male: A Case Report

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Introduction
Urethral duplication is characterised by the presence of two urethral channels. Differentiation is based on the Effmann classification, which describes localisation and extension of the anomaly. Early diagnosis can be difficult due to variable clinical presentations. Common symptoms include incontinence, irritative and obstructive voiding symptoms, and recurrent urinary tract infections.

Case description
We report the case of a 36-year-old male patient who was referred to our clinic due to recurrent urinary tract infections. Symptoms had been occurring once annually since age 16, with one episode progressing to pyelonephritis. Since childhood, the patient had a known fistulous opening at the glans penis, through which urine partially leaked during micturition. Retrograde urethrography confirmed fistulation of the distal urethra. The patient refused further urodynamic evaluation. An attempted total fistula excision at the glans penis revealed intraoperative evidence of a urethral duplex type IIA 1 with a fistula tract extending from the bladder neck (12 o'clock position) to the dorsal aspect of the glans penis. Additional magnetic resonance imaging of the pelvis and penis was inconclusive due to postoperative changes and motion artefacts. Nevertheless, surgical treatment was indicated. The patient underwent open exposure of the penile urethral duplication and laparoscopic extraperitoneal robot-assisted excision of the fistula at the bladder neck. A pedicled fat flap was interposed, and the distal fistula was closed at the glans. Postoperative cystography after one week showed a tight anastomosis without leakage. At follow-up visits at 6 and 12 weeks, the patient showed a favorable clinical course free of urinary tract infections, reported no voiding complaints, and preserved erectile function and urinary continence.

Conclusion / Discussion
In this case, urethral duplication was identified as the most likely cause of recurrent urinary tract infections. Patients with urethral duplication need to be evaluated on a case-by-case basis and surgical management should be guided by anatomical findings.

P130
A Retroperitoneal "Lymphocele" masking Teratoma as Late Metastatic Recurrence of Testicular Germ Cell Tumor : A Diagnostic Pitfall (A case report)

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Background
Retroperitoneal lymphoceles are a known complication of lymphadenectomy, often considered benign postoperative findings. However, in oncologic patients, particularly those with a history of germ cell tumor, persistent or increasing mass, atypical fluid collections on aspiration, normal post-operative tumoral markers and no hypermetabolic focus on nuclear imaging must prompt thorough evaluation. We present a case of a presumed lymphocele that ultimately revealed a metastatic recurrence of a teratoma of a mixed testicular germ cell tumor.

Case Presentation
We present the case of a male caucasian patient in his thirties at the time of diagnosis with a complex oncologic history of mixed germ cell tumor of the left testis operated of an orchidectomy in 2005. He presented a retroperitoneal recurrence in 2006, treated with chemotherapy (3 BEP cycles) followed by lymph node dissection in 2011 finding mature teratoma. In 2012 the patient underwent mediastinal lymph node dissection for a teratomatous recurrence. He subsequently underwent CT and biological follow-up with tumor marker assays which revealed a slow progression in size of a retroperitoneal mass adjacent to a surgical clip from the first surgery with negative tumor marker and no hypercapation focus on FDG PET scan. It was then accepted that this mass corresponded to a cystic lesion consistent with a lymphocele and the follow-up was spaced-out. Finally, he was admitted to hospital in July 2024 due to left-sided colicky pain. Imaging revealed progression of the retroperitoneal mass, measuring 15 x 12 cm, causing left-sided ureteral compression and hydronephrosis. Initial cytological analyses of drained fluid in 2021 and July 2024 revealed necrotic material without viable tumor cells, supporting the diagnosis of a sterile postoperative lymphocele.
Despite drainage the mass persisted and evolved. A repeat histopathological evaluation following retroperitoneal lymphadenectomy in December 2024 confirmed the presence of mature teratomatous elements consistent with metastatic recurrence.

Conclusion
This case underscore the need for a high index of suspicion in oncology patients with persistent or atypical fluid collections. Even in the absence of malignant cytology, elevated tumor marker or hypercaptation on nuclear imaging, what appears to be a benign lymphocele may conceal teratoma as a late metastatic recurrence. Surgical excision and histological confirmation remain crucial in this ambiguous case.

P131
Urethral and Intravesical Foreign Body Insertion in Autorethoric Intent – A Case Report

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A 41-year-old male patient was transferred as an emergency from a secondary hospital after inserting an electrical wire into his urethra and urinary bladder. Based on the patient's medical history, it is assumed that he had repeatedly inserted foreign objects into the urethra in the past. The patient presented with macroscopic hematuria, along with urethral and bladder pain. There were no laboratory or clinical signs of infection. A cystography revealed a 3-meter-long, coiled electrical wire, prompting us to consider a removal attempt under local anesthesia. However, due to the high likelihood of significant pain and the low probability of successfully evacuating the foreign body in its entirety, this approach was deemed too risky. As a result, we decided to delay the evacuation and planned for a transurethral removal attempt the following day under general anesthesia, with the readiness to switch to open surgery if necessary. The patient was hospitalized and received prophylactic broad-spectrum antibiotic treatment (Ceftriaxone 2g IV every 12 hours). To avoid further manipulation of the urethra with the electrical wire still in situ, we opted not to apply a transurethral catheter, as spontaneous voiding remained possible. The patient underwent surgery the following day in an emergency setting under general anesthesia. During the procedure, only partial removal of the electrical wire was achieved via the transurethral approach. Given the coiled nature of the wire, we decided to proceed with open surgery for better access. After performing a median laparotomy, we opened the bladder and successfully evacuated the foreign body in its entirety. The patient was discharged the next day with a foley catheter. Uroflowmetry, residual volume evaluation, and a follow-up cystography were conducted 7 days after discharge and showed a physiological result. The management of foreign body insertions into the urethra and bladder typically involves flexible or rigid cystoscopy, with the choice of local or general anesthesia depending on the size and shape of the foreign body. In cases where these methods fail, open surgery, such as sectio alta, may be necessary. While such incidents are rare, they present significant urological challenges and are often associated with psychiatric disorders or sexual paraphilias. Early diagnosis, prompt and appropriate removal, and comprehensive psychiatric evaluation are critical to preventing long-term urological complications.

P132
Case Report: A Rare Case and Surgical Treatment of Elephantiasis Scroti in Switzerland

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Scrotal elephantiasis is a rare but debilitating condition typically caused by lymphatic obstruction. While most commonly seen in regions endemic for lymphatic filariasis, non-filarial cases can occur elsewhere, often associated with obesity, chronic lymphedema, or idiopathic factors.

We report a rare case of advanced elephantiasis scroti in a 36-year-old male in Switzerland, in whom massive scrotal swelling (estimated at 10 kg) persisted despite significant weight loss, hindering further weight reduction due to difficulties during movement. At the time of initial evaluation, his weight was 173 kg (BMI ≈ 52.5) at a height of 180 cm. He had previously lost 50 kg through dietary and lifestyle changes. The patient reported no lower urinary tract symptoms, infections, or pain. Micturition was unproblematic, although the penis was completely buried within the scrotal mass.

Scrotal ultrasound revealed both testes to be present with preserved vascularization and no evidence of hydrocele or testicular masses. Magnetic resonance imaging (MRI) showed the scrotum to have a volume of 9.24 liters with no indication of a malignant process. The imaging demonstrated diffuse edema and markedly hyperplastic connective and adipose tissue within the scrotum, especially caudally (position-dependent), with significant edematous thickening of the skin. Additionally, right inguinal lymphadenopathy was noted, which was considered likely to be habitual in nature. The penile structures and testes appeared normal.

Laboratory investigations showed a weakly positive serology for lymphatic filariasis, while the Wuchereria bancrofti antigen test and a peripheral blood smear for microfilariae were both negative. The eosinophil count was within normal limits, and screening tests for HIV and other sexually transmitted infections were also negative. These findings excluded an active filarial infection and supported the diagnosis of non-filarial (most likely obesity-related or idiopathic) elephantiasis.

Definitive treatment involved surgical debulking of the suprapubic and scrotal tissues and soft tissue reconstruction using a 40 x 50 cm local fasciocutaneous flap, performed in collaboration with plastic surgery.

In the most recent follow-up, the wound situation was favorable. However, the buried penis remains a problem and will require further intervention after additional weight loss by the patient.

P133
The hidden cost of postoperative ileus: Impact on hospital length of stay and healthcare expenses in abdominal surgery patients

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Background:
Postoperative ileus is a common complication following abdominal surgery, affecting 20-30% of patients and contributing significantly to postoperative morbidity. The aim of this study was to analyze the incidence of postoperative ileus and to evaluate its impact on length of stay and healthcare costs.

Methods:
We conducted a retrospective analysis of inpatient surgeries at a tertiary referral center using data from the EPIC electronic health system. The primary endpoint was the inci-dence of postoperative ileus, defined as the insertion or reinsertion of a nasogastric tube be-tween 1 and 10 days after surgery. Differences in length of stay and costs between patients with and without postoperative ileus were analyzed using propensity score matching, adjust-ing for age, gender, type of surgery, surgery duration and ASA classification.

Results:
Among 101'676 patients undergoing surgery between January 2020 and June 2024, 869 (0.9%) developed postoperative ileus. Postoperative ileus was most common in patients undergoing radical cystectomy (42.6%, n = 52), hemi- and proctocolectomy (26.3%, n = 59) and rectal resection (25.2%, n = 37). Matched patients with postoperative ileus showed a sta-tistically significant increase in mean length of stay by 8 days (95% CI 5–10 days, $p < 0.00001$) and incurred higher hospital costs by $23'917 (95% CI $13'923 - $33'922, $p < 0.00001$). Among patients undergoing radical cystectomy, postoperative ileus increased the mean length of stay by 8 days (95% CI 4–12, $p < 0.001$) and costs by $33'202 (95% CI $19'358 – $47'045, $p < 0.0001$).

Conclusion:
Postoperative ileus is a significant complication in patients undergoing ab-dominal surgery, including radical cystectomy, and is associated with a prolonged length of stay by one week and an increase in healthcare costs by over $20'000. These findings under-score the need for improved postoperative care strategies to enhance gastrointestinal recovery in patients undergoing radical cystectomy.

P134
Molecular signature of persistent detrusor overactivity after transurethral resection of the prostate (TURP)

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Background / aims of study:
Elderly males with benign prostatic obstruction (BPO) frequently present with detrusor overactivity (DO), which often persists after de-obstruction despite other functional improvements. We investigated the molecular origin of persistent DO in BPO patients with DO before and after TURP.

Materials and methods:
Bladder dome biopsies were collected from controls (n = 5, urolithiasis patients), and patients with BPO (n = 10) during and 3 months after de-obstruction surgery (TURP). Bladder function was assessed by urodynamics. Total RNA and proteins were isolated from the biopsies, and transcriptomes and proteomes analyzed before and after TURP. Differentially expressed genes and proteins were identified by comparing each group with controls.

Results:
Age-matched patients with BPO and DO had similar urodynamic parameters before TURP. The DO group was subdivided into "DO-disappeared (DOD)" (n = 5), and "DO-persisted (DOP)" (n = 5) sub-groups. The DOD group was characterized by an up-regulation of genes involved in contractility, proliferation and immune pathways, whereas in the DOP group the pathways related to DNA repair were dysregulated. Specific for DOD were high smooth muscle proliferation and differentiation processes, STAT and ERK signalling. The bladder contractility index (BCI) was higher in the DOP group before de-obstruction. In the DOP group dysregulation of gene expression relevant for DNA repair persisted after TURP, and there was no normalization of the related pathways. We observed a significant decrease of poly(ADP-ribose) polymerase 1 (PARP1) protein levels correlated with the resolution of DO after de-obstruction. Similarly, previously elevated CHRNA10, CACNA2D1 genes, encoding regulators of acetylcholine-gated cation-selective channel and calcium current density, potentially relevant for contractility, normalised in DOD group, concomitant with resolution of DO.

Conclusions:
Significant dysregulation of contractility markers and their normalization when DO resolves indicates a strong myogenic component in the DOD group. Strong and specific dysregulation of proliferative and DNA repair pathways, and chromatin-binding proteins (PRDM11, MSX1, EGFR, ING4) in DOP group indicates advanced organ remodelling when DO persists. Activation and subsequent normalization of muscle contractility and persistent dysregulation of DNA repair pathways may discern between resolution and persistence of DO after de-obstruction.

P135
Impact of Ureteral Stent Design on Vesicoureteral Reflux: A Computational Study

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Background and aims
Ureteral stents are hollow tubes inserted into the ureter to maintain urinary drainage from the kidney to the bladder in cases of ureteral obstruction. Stent placement disrupts normal ureteral peristalsis and compromises closure of the ureterovesical junction (UVJ). During micturition, elevated intravesical pressure can lead to vesicoureteral reflux (VUR). VUR can transport bacteria retrogradely along the ureter, increasing the risk of bacterial infection and subsequent pyelonephritis [1]. It may also raise renal pelvic pressure, potentially causing pain and kidney damage [2]. On the other hand, VUR has also been associated with reduced stent encrustation, particularly in the distal lumen and side holes [3]. This computational study evaluates the impact of adding side holes at both extremities of a ureteral stent on urine flow dynamics during VUR.

Materials and methods
A two-dimensional stented ureter model was developed using COMSOL Multiphysics (v6.1). The base stent design featured eight evenly spaced side holes (diameter: 1 mm) along a 300 mm length [4]. Simulations were performed with and without two additional side holes (ASHS) at each stent extremity. To simulate micturition, bladder pressure was set 20 Pa, resulting into VUR. Flow rates and wall shear stress (WSS) in the stent lumen and side holes were computed.

Results
The inclusion of ASHS significantly altered urine flow during VUR. Specifically, the flow entering and exiting the stent through the end openings (tubular section) decreased, while flow through the ASHS increased. This redistribution slightly alleviated renal pressure, reduced localised irrigation, and increased wall shear stress along the stent wall.

Conclusion
The addition of side holes at the stent extremities of ureteral stents alters fluid dynamics in a beneficial manner, promoting a higher flow through the side holes, potentially reducing adverse effects associated with VUR. These findings suggest that tailored modification of stent design can help mitigate complications in patients with indwelling ureteral stents.

P136
Early Post-Traumatic Events Define Bladder Fate After Spinal Cord Injury

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Hypothesis / Aims of Study
We hypothesize that early post-traumatic events in the bladder following spinal cord injury (SCI) critically determine long-term bladder function and structure. This study aims to characterize immediate molecular and functional changes post-SCI and identify early therapeutic windows before irreversible damage occurs.

Study Design, Materials and Methods
Using a mouse SCI model, we conducted an 8-week longitudinal study, focusing on the early phase (within 72 hours) and its progression. DNA damage was assessed via Comet assay; reactive oxygen species (ROS) levels by flow cytometry; and vascular/lymphatic leakage by immunofluorescence staining of Pi16, CD31, LIVE/DEAD, and podoplanin markers. H&E staining evaluated tissue architecture. Edema was quantified using the bladder wet-to-dry weight ratio. Urodynamics assessed bladder function.

Results
Within 72 hours post-SCI, we observed a surge in pro-inflammatory cytokines, severe bladder edema, and structural disorganization. ROS levels were elevated in fibroblast and podoplanin-positive cells, likely due to impaired contractility. The Comet assay confirmed early DNA damage. Pi16 expression was markedly reduced, consistent with vascular/lymphatic leakage, alongside increased bladder-to-body weight ratios.
By one week post-SCI, Pi16 expression and edema resolved, but immune cell infiltration and bladder wall remodeling intensified, as shown by histology and immunofluorescence. Urodynamics revealed progressive bladder dysfunction, including detrusor overactivity and impaired voiding coordination.

Interpretation of Results
SCI induces a biphasic bladder response: an acute oxidative stress and vascular leakage phase, followed by immune-driven remodeling. Pi16 is an early biomarker of vascular integrity and recovery. Early interventions targeting oxidative stress and vascular leakage could prevent chronic bladder dysfunction.

Concluding Message
Early bladder events within 72 hours after SCI are pivotal for long-term outcomes. Targeting oxidative stress and vascular instability during this window may prevent chronic dysfunction and improve bladder preservation strategies after SCI.

P137
A Multicenter Randomized Controlled Trial Assessing the Efficacy of Antimicrobial Prophylaxis for Extracorporeal Shock Wave Lithotripsy on Reducing Urinary Tract Infection (APPEAL)

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Background:
Shock wave lithotripsy (SWL), a widely used treatment for urolithiasis, carries a risk of post-procedural infections. Clinicians use antibiotic prophylaxis variably, and international guidelines provide conflicting recommendation; both reflect current low-certainty evidence. We studied whether single-dose prophylaxis reduces bacteriuria and post-SWL urinary tract infections (UTIs).

Methods:
APPEAL, a multicentre, blinded trial across 12 centres in nine countries, randomised adults undergoing SWL for urolithiasis to a single dose of ciprofloxacin or placebo. The primary outcome was bacteriuria or symptomatic UTI (symptomatic UTI defined as symptomatic cystitis, pyelonephritis, or urosepsis) within 7-14 days post-SWL. Other outcomes included pyelonephritis or urosepsis, and serious adverse events.

Results:
Of the 1,722 randomised patients, 28 underwent post-randomisation exclusions (mostly due to non-visualisable stones). Among the analysis population (n=1,694; mean age 50 years; 29·8% female; 73·8% with kidney and 25·6% with ureteral stones; 11·0% with ureteral stent), 67 (4·0 %) patients were lost to follow-up. Bacteriuria or symptomatic UTI occurred in 20 (2·5%) in the ciprofloxacin, and 30 (3·7 %) in the placebo group (RR 0·68, 95% CI 0·41 to 1·13). Symptomatic UTI occurred in 10 (1·2%) in the ciprofloxacin and 21 (2·6 %) in the placebo group (RR 0·48; 95% CI 0·20-1·19). No (0·0%) patients in the ciprofloxacin group and 9 (1·1 %) in the placebo group developed pyelonephritis or urosepsis (RR 0·05; 95% CI 0·003-0·91). Serious adverse events occurred in two (0·2%) patients in the ciprofloxacin, and in none (0·0%) in the placebo group.

Conclusions:
A single dose of ciprofloxacin likely reduces post-SWL infections. The patient-importance of this reduction depends on individual preferences, weighing small absolute risk reductions against potential harms and wider implications of antibiotic use. The APPEAL trial will inform global practice and support evidence-based decision-making for SWL patients.

P138
Improving the proficiency of patient-side assistants during robot-assisted radical prostatectomy using proficiency-based progression methodology

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Introduction
The patient-side assistants (PA) role during is multifaceted, involving laparoscopic skills such as tissue traction and manipulation, suction and flushing, needle maneuvering, and cutting threads. Furthermore, the PA must possess theoretical knowledge about the robotic system's function, correct setup, and troubleshooting. Inadequate knowledge or errors from the PA can significantly impact perioperative outcomes. We aimed to identify performance metrics relevant to PA roles and selected robot-assisted radical prostatectomy (RARP) as the reference procedure.

Methods
In the first step, face and content validity was established by an international expert Delphi-based consensus, which provides a clear list of metrics, including common and critical errors to avoid during patient-side assistance for RARP. These metrics were designed to be part of a proficiency-based progression training curriculum. Construct validation will be assessed in novice PA's and expert PA's, by assessing proficiency using the established list, in Lucerne (Luzerner Kantonsspital), Frankfurt (University Hospital Frankfurt), Hamburg (Martini-Klinik) and Aalst (OLV).

Results
The project group identified three distinct phases: “docking and setup,” “intraoperative,” and “undocking,” each including technical and non-technical skills. Full agreement was reached on the following objective for these metrics: “The aim of the patient-side metrics is to learn how to safely assist the console surgeon at the bedside. This includes the movement, docking, and undocking of the robot, as well as the patient-side handling of robotic and laparoscopic instruments. Furthermore, basic applications of the most relevant laparoscopic instruments in cooperation with the console surgeon will be assessed. Results of construct validation are currently in the final steps of acquisition.

Conclusion
This Delphi-based consensus offers a structured summary of performance metrics for PA training programs, aiming to improve institutional exchangeability and enhance the safety and quality of robotic surgery. These metrics aim to elevate PA training, improve safety in robotic procedures, and establish an international standard for novice PAs and console surgeons.

P139
Inzidentelle Befunde bei asymptomatischen Personen in Low-Dose-Non-Contrast-Abdomen-CTs: Psychologische und ökonomische Auswirkungen in der SKSC-Kontrollkohorte

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Hintergrund & Ziele
Low-Dose-Abdomen-CTs gewinnen an Bedeutung in der klinischen Forschung. Dabei treten häufig inzidentelle Befunde auf, deren gesundheitlicher, psychologischer und ökonomischer Einfluss bisher unzureichend untersucht ist. Ziel dieser Studie war es, Prävalenz, Kostenfolgen und psychische Belastung durch inzidentelle CT-Befunde bei asymptomatischen Personen zu erfassen.

Material und Methoden
Retrospektive multizentrische Analyse von 229 asymptomatischen Teilnehmenden der Swiss Kidney Stone Cohort (SKSC), die im Rahmen der Studienrekrutierung ein Low-Dose-Abdomen-CT ohne Kontrastmittel erhielten. Inzidentelle Befunde wurden gemäß American College of Radiology (ACR)-Klassifikation eingeordnet. Die psychologische Belastung wurde mithilfe der Brief Resilience Scale (BRS) und modifizierter Illness-Perception-Fragen auf einer Skala von 1–10 beurteilt. Zusätzlich erfolgte eine Kostenanalyse der daraus resultierenden Folgeuntersuchungen und Behandlungen.

Resultate
Bei 47.2 % (n = 108) wurden inzidentelle Befunde festgestellt, 15.7 % (n = 36) hatten laut radiologischem Bericht einen Nachsorgebedarf. Drei Personen erhielten operative Eingriffe, darunter eine Leberteilresektion mit benignem Resultat. Die Gesamtkosten der Folgeabklärungen betrugen 44’988 CHF, entsprechend 2’999 CHF pro Fall mit Nachsorge. Emotionaler Stress ($p < 0.001$) und Besorgnis ($p = 0.03$) waren signifikant erhöht bei Teilnehmenden mit Nachsorgebedarf. Personen mit hoher Resilienz zeigten signifikant niedrigere Werte für emotionale Belastung ($p = 0.006$) und Besorgnis ($p = 0.016$) als jene mit niedriger Resilienz.

Schlussfolgerungen
Inzidentelle Befunde in Low-Dose-CTs bei asymptomatischen Personen sind häufig und führen zu substanziellen psychologischen und ökonomischen Folgen. Der Resilienzgrad der Betroffenen beeinflusst maßgeblich die emotionale Belastung. Für Forschungsvorhaben mit Bildgebung bei Gesunden sind umfassende Aufklärung und ein differenziertes Nachsorgekonzept essenziell.

P140
SGLT2-Inhibitoren verzögern die Progression atherosklerotischer Plaques: Ein möglicher Mechanismus kardiovaskulärer Protektion

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Hintergrund & Ziele
SGLT2-Inhibitoren senken nicht nur den Blutzucker, sondern auch die kardiovaskuläre Mortalität. Die zugrunde liegenden Mechanismen sind jedoch unklar. Ziel dieser Studie war es, den Einfluss von SGLT2i auf das Fortschreiten atherosklerotischer Plaques im Vergleich zu Statinen oder keiner lipidsenkenden Therapie zu untersuchen.

Material und Methoden
Im Rahmen der NOSTONE-Studie wurden 416 Patienten mit zwei abdominalen Low-Dose-CTs (Baseline und nach median 2.9 Jahren) untersucht. 11 Patienten waren unter lipidsenkender Therapie (Statine), 5 erhielten SGLT2i. Diese wurden mit 16 vergleichbaren Patienten ohne lipidsenkende Therapie verglichen. Die Differenz der atherosklerotischen Plaques der 2 zeitlich getrennten CTs der abdominellen Aorta wurden von zwei Radiologen mittels Agatston-Score und Plaquevolumen quantifiziert. Der Plaque-Fortschritt wurde pro Behandlungstag berechnet. Statistische Vergleiche erfolgten mittels Mann-Whitney-U-Test.

Resultate
Die Zunahme des Agatston-Scores war in der SGLT2i-Gruppe signifikant geringer als in der Kontrollgruppe (52.8 ± 138.7 vs. 507.2 ± 793.6, $p = 0.03$), und tendenziell geringer als in der Statin-Gruppe (445.8 ± 690.1, $p = 0.14$). Der Plaquevolumenzuwachs zeigte denselben Trend, war jedoch nicht signifikant. Die Plaqueprogression pro Behandlungstag war in der SGLT2i-Gruppe ebenfalls geringer als unter Statinen oder ohne Therapie, erreichte jedoch keine Signifikanz ($p > 0.05$). Eine logistische Regressionsanalyse ergab eine signifikante inverse Assoziation zwischen Hypertonie und Plaqueprogression ($p = 0.03$).

Schlussfolgerungen
SGLT2-Inhibitoren könnten das Fortschreiten atherosklerotischer Plaques verlangsamen und dadurch zur kardiovaskulären Protektion beitragen – unabhängig von Lipidsenkung. Diese Effekte müssen in grösseren, prospektiven Studien weiter untersucht werden.

P141
Fallbericht: Idiopathische partielle unilaterale Schwellkörperthrombose

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Hintergrund: Ein 61-jähriger Patient ohne somatische Vorerkrankungen wurde uns wegen penilen Schmerzen von der Notfallstation zugewiesen.
Die Beschwerden haben akut in der Penis Basis begonnen und strahlen bis ins Perineum aus.
Es bestand kein vorhergehendes peniles oder perineales Trauma. Die Schmerzen sind unabhängig einer Erektion entstanden. Ein Priapismus in der Vergangenheit wurde verneint. Eine hämatologische Erkrankung ist nicht bekannt. Es wurde keine vasodilatorische Medikation eingenommen.

Abklärungen: Klinisch zeigte sich partiell ein rigider Schwellkörper rechts mit ausgeprägter Druckdolenz. Der distale Schaft und die Glans waren weich und durchblutet. Die DRU und der PSA ergaben keinen Hinweis für ein Prostatakarzinom oder einen Infekt der Prostata. Im Labor und in der Urindiagnostik zeigten sich kein Hinweis für einen Infekt.
Im MR des Beckens zeigte sich eine fokale Thrombose im proximalen Corpus cavernosum rechts mit einer Ausdehnung von 7 cm in der Länge.
CT graphisch konnten weitere Thrombosen im Abdomen und Becken ausgeschlossen werden.
Durch Ausschluss eines Tumors, weiterer Thrombosen, eines Infektes, eines Traumas und unabhängig einer Medikation entstandenen Schwellkörper Thrombose bleibt die Genese ungeklärt.

Therapeutisch wurde die Schwellkörperthrombose äquivalent einer Beinvenenthrombose mit initial 2x täglich 15mg Rivaroxaban für 3 Wochen und anschließend 20mg Rivaroxaban 1x behandelt. Die Behandlung dauert bis heute an da es noch nicht zu einer vollständigen Auflösung der Thrombose gekommen ist. Der Behandlungsverlauf wurde MR graphisch dokumentiert.
Die Schmerzen waren nach wenigen Tagen bereits deutlich reduziert und sind heute vollständig Regredient. Seit dem Auftreten besteht eine erektile Dysfunktion.

Diskussion: Eine Multi Center retrospektive Studie analysierte die Daten von 18 Patienten welche in den meisten Fällen die gleiche Klinik wie unser Patient hatten. Als Risikofaktoren wurde das Radfahren als provokativer Faktor bei 61% der Patienten hervorgehoben. In 15 Patienten wurde wie bei uns eine konservative Therapie allerdings mit NMH und Plättchen Hemmung durchgeführt. In einem Zentrum wurde alle drei Fälle operativ versorgt. Eine postinterventionelle bzw. posttherapeutische komplette Beschwerdefreiheit bestanden in 50% der Fälle.

Schlussfolgerungen: Die Schwellkörperthrombose ist eine sehr seltene Erkrankung. Die Literatur und Erfahrungen sind begrenzt. Eine standardisierte Behandlung gibt es nicht.

P142
Intraoperative Spontaneous Fragmentation of a Double-J-Stent During a Urinary Tract Infection Caused by a Multidrug-Resistant Pathogen: A Case Report

L Angehrn

KSBL - Kantonsspital Baselland

Background:
Long-term double-J stenting is frequently required in patients with ureteral obstruction, particularly when secondary to pelvic radiation. This approach, however, is associated with an elevated risk for urinary tract infections and the emergence of multidrug-resistant organisms.(1) Repeated stent exchanges may further predispose to mechanical complications, including material degradation and structural failure. We report a case of spontaneous intraoperative fragmentation of an indwelling double-J-stent during a urinary tract infection caused by a multidrug-resistant pathogen.

Patient:
A 71-year-old female with bilateral ureteral obstruction secondary to pelvic radiation therapy (1997, gynecologic malignancy) has been managed with long-term bilateral double-J stenting since February 2022. In October 2023, urine cultures revealed a multidrug-resistant, carbapenemase-producing Klebsiella pneumoniae. In the presence of a known vesicovaginal fistula (with no desire for treatment), the patient experiences recurrent urinary tract infections. In March 2025, she re-presented with signs of infection and stent dysfunction, prompting bilateral stent exchange.

Results:
Preoperative urine cultures confirmed growth of the previously mentioned pathogen. Radiologic imaging verified correct stent positioning bilaterally at the beginning of the procedure. During guidewire advancement, a fractured proximal loop of the right ureteral stent was identified radiologically in the renal pelvis. The distal segment of the catheter also fragmented spontaneously during removal. Due to a ureteral stricture likely secondary to post-radiation fibrosis, complete extraction of the proximal fragment required a combined approach using flexible and semirigid ureterorenoscopy. On the left side, the stent was occluded. The replacement was only possible with a second guidewire.

Conclusion:
Spontaneous intraoperative fragmentation of a double-J stent constitutes a technically challenging complication, particularly in the presence of preexisting ureteral strictures. While concurrent bacterial colonization is acknowledged as a risk factor in stent encrustation,(2) the role of multidrug-resistant uropathogens in promoting material degradation and structural failure remains unclear. Further research is needed.

P143
Lichen sclerosus mimicking penile carcinoma in an elderly patient: a case report

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Background:
An 84-year-old uncircumcised male patient was referred by general practitioner for evaluation of a suspicious lesion on the glans penis. The primary symptom reported was localized pruritus, without associated pain, dysuria or systemic symptoms. The lesion had gradually evolved over ca. two months. Following an initial dermatological evaluation, a second opinion was sought from our department for further diagnostic assessment and therapeutic management.

Material and Methods:
Clinical examination revealed a necrotic lesion characterized by purplish-black discoloration, yellowish areas, ulceration, hemorrhage, blistering, and tissue breakdown. Additionally, an indurated area raised the suspicion of penile carcinoma (Pic.1). Inguinal lymph nodes were evaluated and found to be normal. Due to the lesion's concerning macroscopic appearance, punch biopsies were performed under local anesthesia at two distinct areas of the affected mucosa. Samples were subsequently sent for histopathological analysis.

Results:
Despite strong clinical suspicion of penile carcinoma, histopathological examination revealed no malignancy. The findings were consistent with lichen sclerosus, characterized by epidermal atrophy, dermal sclerosis and a band-like lymphocytic infiltration.

Discussion:
Lichen sclerosus is a chronic inflammatory disease that can mimic early-stage penile carcinoma, particularly in elderly patients. Typical manifestations include pruritus, erythema, or whitish atrophic patches affecting the glans and prepuce. Accurate differentiation from malignant lesions is crucial, as delayed carcinoma diagnosis negatively impacts prognosis. Treatment was initiated with topical clobetasol propionate according to a three-week regimen (1st week twice daily, 2nd week once daily, 3rd week every other day) (Pic.2). The patient demonstrated a good clinical response, achieving significant lesion regression and mucosal normalization (Pic.3). This case emphasizes that histology even for highly suspicious lesion is mandatory.

Conclusion:
Penile lesions, especially in elderly patients, require comprehensive clinical and histological assessment due to overlapping presentations of benign and malignant conditions. Lichen sclerosus can closely mimic penile carcinoma, highlighting the crucial role of biopsy and histology for accurate diagnosis. Prompt recognition and targeted topical therapy can lead to complete symptom resolution, preventing unnecessary surgical interventions.

P144
Bacteriophage therapy plus fecal microbiota transplantation to treat recurrent urinary tract infection (rUTI): a case series

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Introduction: Recurrent urinary tract infections (rUTIs) are a chronic and debilitating condition often characterized by repeated treatment failures with antibiotics. This case series explores a novel approach aimed at decolonizing intestinal and urinary reservoirs of the causative pathogen, Escherichia coli, using a combined strategy of bacteriophage (phage) therapy followed by fecal microbiota transplantation (FMT).

Methods: This case series involved three female patients with rUTIs attributed to a stable E. coli strain. The intervention consisted of oral and intravesical administration of a two-phage cocktail, administered twice daily for 8 and 6 days, respectively. Following this, two patients received oral antibiotics in preparation for FMT. The efficacy of the treatments was evaluated through microbiological assessments, including changes in urine E. coli titers and phylogeny, as well as detection of phage in urine and stool. The safety and tolerability of the phage therapy and FMT were also assessed, alongside patient-reported outcomes.

Results: Among the treated patients, two exhibited a significant reduction in urine E. coli levels, with titers decreasing to low or undetectable levels after intravesical phage administration. However, in one patient a replacement of the initially phage sensitive E. coli strain to a resistant one was observed within five days. Phage was detected in the urine and stool of patients only transiently following administration. Despite this, all patients well tolerated the phage and FMT treatments without any related adverse events. Within 12 months post intervention, a significant reduction in UTI episodes and consecutive antibiotic consumption was observed in two of the three patients and all reported subjective clinical improvement. E. coli was detected in the urine of all patients within 30d post-treatment.

Conclusions: The initial application of phage therapy demonstrated a rapid reduction in bacteriuria in patients with rUTIs. Although the combined treatment of phage therapy and FMT was well tolerated with no adverse events and patients reported subjective improvement, eradication of E. coli was not achieved. This case series highlights the potential of phage therapy and FMT as a novel treatment modality for rUTIs, suggesting the need for further research into its long-term efficacy and impact on microbial and immune responses.

P145
Innovation in der Endourologie? Erste roboter-assistierte URS in der Schweiz (Fallvorstellung)

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Hintergrund
Die flexible Ureterorenoskopie (URS) ist eine etablierte Technik zur minimalinvasiven Diagnostik und Therapie der Urolithiasis sowie von low-grade Urothelkarzinomen des oberen Harntrakts. Die Einführung roboter-assistierter Systeme in die URS bietet potenzielle Vorteile hinsichtlich Präzision, Ergonomie und Visualisierung des Situs. Im Jahr 2024 wurden in der Schweiz erstmals roboter-assistierte URS durchgeführt, deren Ergebnisse hier präsentiert werden.

Methode
In einer retrospektiven Analyse wurden vier Patienten (drei mit Urolithiasis, einer mit Verdacht auf ein Urothelkarzinom) untersucht, die zwischen November und Dezember 2024 im Kantonsspital Münsterlingen eine roboter-assistierte URS erhielten. Das ILY-Robotersystem wurde zur Steuerung des flexiblen Ureteroskops eingesetzt. Die Indikationen umfassten Nephro- und Ureterolithiasis (Steingröße von 2,5–12 mm) sowie zwei suspekte Urothelläsionen (bis 13 mm). Die Eingriffe beinhalteten eine Zystoskopie, retrograde Pyelographie, roboter-assistierte flexible URS, Laserlithotripsie bzw. Tumorvaporisation sowie die Platzierung von Doppel-J-Kathetern.

Ergebnisse
Alle Eingriffe verliefen erfolgreich und ohne intraoperative Komplikationen. Die mittlere Operationszeit betrug 58 Minuten. Bei zwei Patienten mit Urolithiasis konnte eine vollständige oder nahezu vollständige Steinentfernung erreicht werden, wobei lediglich kleinste, spontan abgangsfähige Fragmente verblieben. In einem Fall war aufgrund der hohen Steinlast von ca. 10,8 cm³ eine Second-Look-URS erforderlich. Beim Patienten mit Verdacht auf ein Urothelkarzinom bestätigte die Histologie ein nicht-invasives, papilläres low-grade Urothelkarzinom. Die durchschnittliche Hospitalisationsdauer betrug drei Tage. Postoperative Komplikationen, die über Grad I nach der Clavien-Dindo-Klassifikation hinausgingen, traten nicht auf.

Schlussfolgerung
Die ersten roboter-assistierten URS in der Schweiz zeigen, dass diese Technik sicher und effektiv zur Behandlung komplexer Steine sowie von Urothelläsionen eingesetzt werden kann. Die robotische Assistenz erleichtert die Steuerung des Endoskops und optimiert die Ergonomie für den Operateur. Trotz dieser Vorteile stellen die hohen Kosten und die verlängerte Vorbereitungszeit derzeit limitierende Faktoren für eine breite Anwendung dar.

P146
Sarkomatoid und plattenepithelial differenziertes Urothelkarzinom der prostatischen Urethra – ein Fallbericht

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Hintergrund und Ziele:
Sarkomatoide Urothelkarzinome (SUK) bezeichnen biphasische maligne Neoplasien, welche eine mesenchymale und epitheliale Differenzierung zeigen. Unter den Blasentumoren machen SUK lediglich 0.3% aller Tumoren aus(1). Plattenepitheliale Anteile finden sich in bis zu 40% der Fälle(2). Wir beschreiben Diagnostik, Therapie und Verlauf nach inzidenteller Diagnose eines sarkomatoid sowie plattenepithelial differenzierten Urothelkarzinoms bei einem 77j. Patienten.

Fallbericht:
Bei diesem 77j. Mann zeigte die Histopathologie des Prostataresektats nach HoLEP ein ausgedehntes sarkomatoid (spindelzellig und chondroid) sowie plattenepithelial differenziertes Urothelkarzinom, sowie ein Adenokarzinom der Prostata. Ein MRI und ein FDG-PET/CT nach HoLEP zeigten eine lokale Tumorinfiltration der Samenbläschen und Rektumwand mit Lymphknotenmetastasen (LKM) iliakal, gluteal, pararektal und möglicherweise peritoneal. Es wurde eine palliative Systemtherapie mit Pembrolizumab/Enfortumab-Vedotin gestartet, worauf der Patient nach 2 Zyklen mit Haut- und Lebertoxizität reagierte, sodass die Therapie abgebrochen werden musste. Bei lokalem Tumorprogress wurde zur Symptomkontrolle eine Zystoprostatovesikulektomie mit Ureterokutaneostomie durchgeführt. Zwei Monate später zeigte sich im CT ein abdominaler und pulmonaler Tumorprogress. Die Zweitlinien-Chemotherapie mit Carboplatin/Gemcitabin wurde nach 2 Zyklen bei schlechtem Allgemeinzustand abgebrochen und, ca. 7 Monate nach Erstdiagnose, auf Best Supportive Care umgestellt.

Conclusio:
SUK sind in der Klinik selten anzutreffen und die Literatur dazu ist begrenzt, umso mehr bei einem Ursprung in der prostatischen Urethra. SUK zeigen meist eine spindelzellige Morphologie, während eine chondroide Differenzierung seltener ist (3). Im hier beschriebenen Tumor zeigte sich zudem ein hoher Proliferationsindex (Ki67-Index bis 50 %). Die gewählte Erstlinientherapie zeigt in fortgeschrittenen Urothelkarzinomen einen Überlebensvorteil gegenüber Carboplatin/Gemcitabin, unabhängig von der Marker-Expression(4). SUK sind bei Diagnosestellung oft lokal fortgeschrittener (94% ≥T2) und zeigen in 21% der Fälle LKM, was zu einem schlechteren Überleben führt(5). Im präsentierten Fall, bei initialem Stadium T4b cN2 cMx mit fraglicher peritonealer Metastasierung, wäre eine operative Therapie mit Ziel einer R0-Resektion nur bei äusserst gutem neoadjuvanten Therapieansprechen geplant gewesen.

P147
Single-cell cross-modality prediction & automated cell type annotation

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With the advent of single-cell RNA sequencing (scRNA-seq), it has become possible to characterize thousands of single cells in a high-throughput manner. Nevertheless, cell type annotation still takes place by tedious manual curation based on a select few marker genes identified from the RNA expression, which is neither efficient nor accurate. To address this issue, there is a need for tools that accurately summarize cell states and precisely predict cell type labels in an unbiased manner.
We developed a machine learning-based framework that predicts surface protein expression profiles and cell-type annotations from scRNA-seq data, named scProtAn (Single-cell Protein-based Annotation). ScProtAn combines state-of-the-art R and Python scRNA-seq analysis workflows, dimensionality reduction, and machine learning algorithms trained on single-cell atlases to enable the wide applicability of cell-type annotation for multiple tissues.
We previously developed an approach for protein abundance prediction and tested it in peripheral blood mononuclear cells (PBMCs) generating state-of-the-art prediction accuracy with improvements in terms of speed, interpretability, and ease of use. To explore the robustness of our approach in more complex tissues, we applied our method to cancer cells (kidney, lung and breast) and observed comparable performance. We then developed a method to annotate single cells utilizing the predicted protein abundance and cell labels generated as part of the Tabula Sapiens cohort. Protein prediction and cell type annotation modules were combined in a single end-to-end tool, named scProtAn. We then applied a pan-cancer prediction model generated by scProtAn to scRNA-seq data from Bladder Cancer patients. The predicted labels were validated by exploring the most significant marker genes and pathways for each cell type.
We present an efficient and accurate method for the prediction of protein abundance and the automated annotation of single cells, named scProtAn. We showcase scProtAn in different contexts and highlight the quality of the predicted cell labels. We plan to further improve our approach by expanding the protein domains used, i.e. by including intracellular proteins, and tissues tested. Finally, we aim to further optimize both the protein abundance and the cell annotation module by exploring more complex machine learning approaches.

P148
Allium-Stent Einlage nach iatrogener Harnleiterverletzung bei einer 68 jährigen Frau. Ein Fallbericht.

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Hintergrund und Ziele:
Iatrogene Harnleiterverletzungen im Rahmen gynäkologischer Beckenoperationen sind eine seltene, aber oft schwer zu behandelnde Komplikation. In diesem Fallbericht stellen wir eine 68 jährige Frau vor, die sich 15 Tage nach laparoskopischer Adnexektomie und Hysterektomie mit einer distalen Harnleiterleckage links bei uns vorgestellt hat. Zur akuten Harnableitung und Harnleiterschienung wurde zunächst ein konventioneller DJ Katheter eingelegt, wodurch kein Verschluss der Leckage erreicht werden konnte. Harnleiterleckagen persistieren häufig, sodass im Verlauf meist eine offen chirurgische oder laparoskopische Sanierung notwendig ist. Daher stellt sich die Frage nach endourologischen Alternativen, um die Heilungschancen zu verbessern.

Material und Methoden:
Zur Harnleiterschienung wurde ein selbstexpandierender Allium-Stent (Charr. 8/20cm) verwendet, welcher anstelle des zuvor eingelegten DJ Katheters endourologisch platziert wurde. Der Stent wurde für 6 Monate belassen und es erfolgte eine Kontrolle des Harnabflusses mittels CT-Urografie.

Resultate:
Der Allium-Stent wurde durch die Patientin gut toleriert. 6 Monate nach Einlage zeigte sich in der CT-Urografie kein Kontrastmittelextravasat, sodass der Stent wieder entfernt wurde. Auch in der intraoperativen retrograden Ureteropyelografie und der erneuten postoperativen CT-Urografie fand sich keine Leckage mehr und es zeigte sich ein regelrechter Abfluss. Im kurzfristigen Follow-up ist die Patientin beschwerdefrei.

Schlussfolgerungen:
Allium-Stents finden in der Behandlung von Harnleiterstrikturen bereits eine Anwendung. Der Einsatz nach iatrogener Harnleiterverletzung ist in der Literatur mit einem Fallbericht und einem Multicenter Erfahrungsbericht bisher wenig beschrieben. In dem vorgestellten Fall konnte hierdurch eine Heilung der Harnleiterleckage erreicht werden, sodass ein grösserer Eingriff im Sinne einer Harnleiterneuimplantation vermieden werden konnte. Die Therapie wurde zudem gut vertragen. Daher kann ein Allium-Stent eine Alternative zur konventionellen Harnleiterschienung mittels DJ Katheter darstellen, sofern eine direkte Reparatur während des initialen Eingriffs nicht möglich war.

P149
Primary Mediastinal Yolk Sac Tumor in a Female Patient: A Case Report

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Primary mediastinal germ cell tumors are rare neoplasms that typically occur in young male patients. Yolk sac tumors in the mediastinum of female patients are exceedingly uncommon and pose significant diagnostic and therapeutic challenges. We present the case of a 33-year-old woman who presented with palpitations and a persistent cough. Thoracic CT revealed a large, heterogeneous mass in the anterior mediastinum; PET-CT showed high metabolic activity with central necrosis. First clinical suspicion was a mediastinal lymphoma, however serum tumor markers demonstrated markedly elevated alpha-fetoprotein (AFP) levels (40,400 µg/L), normal beta-hCG, and mildly increased LDH. Transthoracic biopsy indicated a malignant non-small cell neoplasm, and immunohistochemistry confirmed a non-seminomatous germ cell tumor consistent with a yolk sac tumor.
Treatment according to the IGCCCG "poor prognosis" (stage S3) classification for non-seminomatous germ cell tumors was initiated: an initial induction phase with low-dose cisplatin and etoposide to stabilize the patient clinically, followed by four cycles of VIP (PEI) chemotherapy. Autologous stem cells were collected after cycle one to allow for potential treatment escalation with high-dose chemotherapy. However, marker decline was favourable according to half-life and therefore conventionally-dosed VIP was continued. By the end of the fourth cycle, imaging showed substantial tumor regression. Surgical resection of the residual mass is planned.

P150
Congenital Fistula between the Prostatic urethra and Anal Sphincter in a Patient with Tetralogy of Fallot: A Case Report

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Background
A 26-year-old male patient with Tetralogy of Fallot was referred to our outpatient clinic for evaluation of recurrent urinary tract infections since the age of two. Despite extensive diagnostic work-up including cystoscopies, MRI, voiding cystourethrography, rectoscopy and urodynamic studies no cause was identified. Due to his congenital heart condition, he had undergone several cardiac surgeries, including treatment for sepsis and endocarditis and he exhibited short stature and microcephaly, although he demonstrated normal cognitive function and independence. The patient repeatedly reported the passage of a small amount of fluid per anus following ejaculation, which suggested a communication between the urinary and gastrointestinal tracts.

Case Report
We performed simultaneously urethroscopy with ductography and rectoscopy, which revealed a small orifice in the anal sphincter through which a communication between the anal sphincter and the prostatic urethra was identified. Surcigal repair was performed via a transperineal approach in collaboration with visceral surgeons, utilizing a fistula repair technique analogous to LIFT (Ligation of the Intersphincteric Fistula Tract) with a full-thickness advancement flap.
The postoperative course was complicated by hematuria requiring cystoscopic catheter replacement, an infected hematoseroma with revision surgery revealing a bulbar urethral injury, and ultimately the development of a bulbar stricture and recurrence of the fistula. A secondary surgical intervention is planned.

Conclusion
In this case, the source of recurrent urinary tract infections was only identified in adulthood. Rectourethral fistulas may result from congenital, traumatic, or iatrogenic causes, with congenital cases being extremely rare. Although congenital anomalies of the genitourinary tract are known to coexist with Tetralogy of Fallot, the association with urethroanal fistulas is rarely reported. The location of the fistula, involving both the anal sphincter and the prostatic urethra, is particularly uncommon and complicated the surgical approach due to the high risk of anal and urinary incontinence.

P151
Barriers to Pregnancy and Parenthood During Urology Residency Across Europe

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Background: Numerous studies documented the challenges faced by surgeons in the United States in starting a family. In contrast, less is known about pregnancy and parenthood among European surgeons. The aim of this study was to examine pregnancy and parenting experiences and policies during urology residency, identify regulatory gaps, and provide recommendations for standardized European guidelines.

Methods: A cross-sectional English-language electronic survey targeted urology residents and young urologists across Europe. The 44-item, self-administered survey was pilot-tested and iteratively revised with European Society of Residents in Urology (ESRU) board members. Data were collected between August and October 2024 from ESRU, the European Association of Urology (EAU), and the European School of Urology (ESU) via mailing lists and social media platforms.

Results: From 387 respondents, 237 (61%) were females, 255 (66%) were residents, and 193 (50%) were from Western Europe. Among 157 childbearing participants, 38 (24%) took a break of training during pregnancy and 51 (32%) reduced their work schedules. Written policies on pregnancy and parenthood management were reported by 112 (29%) respondents. Formal discussions on pregnancy and parenting were reported to be absent from 319 (82%) respondents, though 228 (59%) agreed about their importance. Among non-childbearing participants, parenthood was postponed due to fears of missing training opportunities in 206 (92%), of missing career opportunities in 184 (82%), of insufficient time for childcare 191 (85%), and of falling behind peers in training in 177 (79%) respondents. Across all participants, 283 (87%) and 277 (85%) supported adjusting residency working and training schedules, respectively, upon return to work to ensure the completion of residency requirements. Both male and female respondents strongly endorsed standardized European guidelines on pregnancy and parenting in urology residency.

Conclusions: This survey highlights the significant barriers to family planning in European urology residency. Fear of career setbacks and training disruptions drive parenthood delays. Standardized policies are needed to support residents while maintaining training requirements and career progression during pregnancy and parenthood.

P152
Optimierung der Bettenkapazität in der Urologie: Analyse und Herausforderungen

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Hintergrund & Ziele
Die Planung und Steuerung der Bettenkapazität sowie die Optimierung des Patientenflusses stellt eine zentrale Herausforderung für die urologische Versorgung dar. Ziel dieser Analyse war es, den Kapazitätsbedarf für eine neue Bettenstation zu bestimmen und potenzielle Optimierungsstrategien zu identifizieren.

Material und Methoden
Die Analyse basiert auf einer Simulation mit dem Tool SimBox / Digital Twin unter Verwendung historischer Belegungsdaten aus dem Jahr 2024. Untersucht wurden stationäre und ambulante Fälle in der Urologie (inkl. Tagesklinik), wobei Wochenganglinien, Verweildauern und Belegungsmuster im Wochenverlauf berücksichtigt wurden. Es wurden unterschiedliche Szenarien hinsichtlich Variabilität und Sperrwahrscheinlichkeit (5 %) simuliert.

Resultate
Der notwendige stationäre Bettenbedarf, um mit 95 % Wahrscheinlichkeit alle Fälle aufzunehmen, liegt zwischen 15 und 19 Betten. Der Medianbedarf bewegt sich zwischen 9 und 13 Betten. Eine ausgeprägte Spitze zeigt sich jeweils mittwochs mit 10 (P25) und 15 (P75) Betten. Eine Reduktion der Variabilität würde den Bedarf um 2–3 Betten senken. In der Tagesklinik zeigte sich ebenfalls eine hohe Variabilität; hier könnten Kontingente sowie eine gezielte OP-Planung zu mehr Glättung von Belegungsspitzen und zu mehr Stabilität beitragen.

Schlussfolgerung
Die Ergebnisse zeigen, dass durch gezielte organisatorische Maßnahmen und datenbasierte Planung mittels Simulationstools die Produktivität verbessert und Engpässe durch Belastungsspitzen (aufgrund unnatürlicher Variabilität) vermieden werden können.