

British Association of Urological Surgeons Oncology meeting 2018 abstracts

Paper abstracts

1. Pathological upgrading and upstaging in prostate cancer treated with surgery between 2011 and 2016: national and regional trends

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Background: Radical prostatectomy (RP) specimen analysis remains the most sensitive way to assess the accuracy of preoperative diagnostic tests in localized prostate cancer (PCa), with up to 40% upgrading/staging rates reported in the literature. Variation in the regional availability of these diagnostic tests (e.g. magnetic resonance imaging and biopsy type/technique) and rates of pathological upgrading/staging may influence patient management, and potentially lead to overtreatment of low-risk disease and undertreatment of high-risk disease.

Aims: Examine the British Association of Urological Surgeons (BAUS) RP data set to:

1. Assess rates of pathological upgrading/staging:
 - a. UK-wide
 - b. Regionally
2. Explore whether any observed variations correlate with overtreatment of low-risk disease and undertreatment of high-risk disease.

Methods: All RP entries on the BAUS database undertaken between January 2011 and December 2016 were extracted. Those patients with full PSA, preoperative, and pathological grade and stage information were included. Upgrade and upstage were defined as any increase in Gleason grade or T stage (excluding cT1 to pT2), respectively, following pathological assessment of the surgical specimen. Statistical analysis and multivariate logistic regression were undertaken using R version 3.5 (R Foundation for Statistical Computing, Vienna, Austria).

Results: A total of 17,598 patients met full inclusion criteria. Overall, 4489 (25.5%) cases were upgraded and 5389 (30.6%) were upstaged. Rates varied between regions, as demonstrated in Table 1 ($P < 0.001$).

Conclusions: Upgrading and upstaging rates vary significantly across the UK, and so do treatment rates for low- and high-risk PCa. Whilst causality is difficult to establish, there appears to be correlation between the two. Further investigation is required to explore this correlation and identify ways of standardizing practice throughout the UK.

Limitations: Data completeness, case ascertainment and the surgeon-reported nature of the BAUS data set are the major limitations of this study.

Table 1. Proportion of patients with low and high risk prostate cancer together with upgrade and upstage rates as stratified by anonymised region.

Region	Cases in the database	Cases with complete data	Low risk (%)	High risk (%)	Upgrade rate (%)	Upstage rate (%)
A	133	79	1.3	65.8	13.9	17.7
B	1181	701	5.0	48.2	22.4	27.2
C	2432	1653	6.0	64.4	25.0	25.2
D	3226	2081	7.4	44.7	21.0	28.8

(Continued)

Table 1. (Continued)

Region	Cases in the database	Cases with complete data	Low risk (%)	High risk (%)	Upgrade rate (%)	Upstage rate (%)
E	2095	706	7.4	58.1	21.8	22.4
F	3647	2084	7.5	59.9	26.3	36.1
G	2402	1315	7.7	57.9	22.4	30.0
H	92	29	10.3	44.8	37.9	24.1
I	70	67	10.4	38.8	26.9	26.9
J	3118	2093	11.5	48.8	25.8	28.4
K	2555	1885	12.8	56.6	26.7	33.6
L	2784	1736	13.4	46.9	25.1	31.7
M	1511	745	13.7	55.8	32.2	32.5
N	2954	1798	13.8	43.0	30.7	34.5
O	1614	324	14.2	61.4	30.2	22.5
P	352	302	15.9	44.7	24.8	41.1

2. Percutaneous nephrostomy in obstructing pelvic malignancy: does it facilitate further oncological treatment and what is the associated morbidity?

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Background: Urologists are commonly responsible for the decision to decompress obstructed renal units due to pelvic malignancy. Quality of life analyses have identified tube changes as a significant negative factor following percutaneous nephrostomy. A recent study estimated that 29% of remaining lifetime is spent in hospital following nephrostomy insertion.

Methods: We identified patients who had a nephrostomy inserted for ureteric obstruction due to a pelvic malignancy at our institution from August 2017 to July 2018. We obtained data retrospectively from our electronic patient record system and picture archiving and communication system (PACS) on subsequent interventions.

Aims: We aimed to initially identify the primary malignancy causing the ureteric obstruction. Our primary outcome measures were THE number of renal unit nephrostomy reinsertions and nephrostograms completed. We also aimed to determine how many patients had further oncological treatment following nephrostomy insertion.

Results: Twenty-one patients had nephrostomies inserted for ureteric obstruction. Nine (43%) were inserted for relief of an obstruction secondary to a urological primary; eight (38%) gynaecological; three (14%) colorectal; and

one (5%) lymphoma. Mean follow-up to date was 130 days. Every patient had at least one nephrostomy reinsertion. The average number of renal unit nephrostomy reinsertions over this timeframe were 2.83 per patient (range 1–11; 2.43 reinsertion events). Seven patients required nephrostograms (mean 0.76 per person). Twelve out of 21 (57%) patients had no further oncological treatment in the follow-up period. Nine patients died in the follow-up period with an average lifespan of 38 days post nephrostomy insertion for those who died.

Conclusions: Nephrostomy insertion is associated with the need for regular replacement of nephrostomy tubes. The majority of patients had no further oncological treatment following insertion. Given the associated morbidity, we advocate multidisciplinary approaches to decision-making, ideally with fully informed advanced planning with our patients before ureteric obstruction occurs.

3. Understanding the impact of clinical review in 2-week wait referrals for non-visible haematuria: a pilot study

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Introduction: Referrals to haematuria clinics have increased annually. Campaigns such as 'Be Clear on Cancer' have led to escalating demand. The National Institute for Health and Care Excellence (NICE) has offered clarification

on parameters for referral of patients with haematuria, although the operational/clinical impact remains unclear. Our aim was to assess the outcome of consultant triage upon non-visible haematuria (NVH) referrals utilizing NICE guidance. Little is understood regarding underlying pathology in patients with NVH who do not fulfil NICE referral guidance.

Materials and methods: We conducted two separate studies where a consultant urological surgeon reviewed each 2-week wait (2ww) NVH referral against NICE referral guidance. Patients who did not meet NICE referral criteria were downgraded from their 2ww pathway to an 'urgent' referral. This was subject to approval by the referring general practitioner (GP). In Phase 1, the consultant contacted the referring GP by telephone. In Phase 2, all correspondence was via fax.

Results: Overall, 363 2ww referrals were reviewed. Phase 1 assessed 227 referrals; 79 (35%) were downgraded. Phase 2 included 136 referrals; 58 (43%) were downgraded. In only four cases was the proposed downgrade rejected. No downgraded patient waited more than 6 weeks to be seen. Following assessment, 120 (92%) patients were discharged, 1 patient refused investigation and 11 underwent further investigations. Within the downgrade group, 5 (3.8%) were found to have bladder cancer G1pTa (3) or G3 pTa (1), or were unfit for further intervention (1).

Conclusions: We identified that > 90% of NVH referrals who do not fulfil NICE criteria can be downgraded and discharged. A small number of these patients will harbour urological malignancy. Our data support that these patients should still receive full assessment.

4. Robotic-assisted radical prostatectomy after focal therapy: analysis of functional and oncological outcomes

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Introduction and objectives: Focal therapy (FT) is an emerging treatment strategy to minimize the toxicity of prostate cancer care. However, a proportion of patients will develop recurrent disease following focal ablation treatment and managing this poses a new challenge. Robotic-assisted radical prostatectomy (RARP) is one such option, and here we present the oncological and functional outcomes from the largest international series of RARP after FT.

Methods: We conducted a multicentre cohort study including all consecutive patients undergoing RARP after

FT by a single surgeon. We analysed functional outcomes (urinary continence defined as no pad usage and erectile function defined as sufficient for penetration) and oncological outcomes (biochemical recurrence post-RARP). Multivariable Cox regression analysis was performed to evaluate predictive factors for biochemical recurrence. Surgical complications were also assessed using the Clavien–Dindo classification.

Results: Between August 2014 and March 2018, 54 patients underwent RARP following FT. Mean age at surgery was 66 years (y) (54–77 y). Pre-RARP mean prostate-specific antigen was 6.75 ng/ml (1.8–13.0 ng/ml). Unilateral nerve spare (NS), bilateral NS and non-NS was performed in 50, 13.4 and 36.6% of patients, respectively. After a mean follow-up of 14 months (mo) (3–43 mo), 93% of the patients were fully continent. Overall, 21.1% of patients were potent after surgery. There were no intra-operative complications. Median blood loss was 200 ml (150–250). All patients were discharged in the first 24 h postoperation. There was a single 30-day postoperative complication (Grade II). The positive margin and biochemical failure rate were 13.7 and 27.5%, respectively. Biochemical failure following RARP was predicted by location of recurrence, with 'in-field' conferring a significantly higher risk ($p = 0.04$).

Conclusions: Post-FT RARP is a safe intervention with excellent oncological and continence outcomes. This procedure has several technical intricacies in relation to primary RARP, which stresses the importance of a high-volume team to optimize functional results.

5. A comparison of the perioperative outcomes of open radical cystectomy and robotic extracorporeal and intracorporeal cystectomy techniques

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Introduction: Robotic radical cystectomy (RARC) has been adopted by several centres to improve the recovery of patients from radical cystectomy. Several centres have assessed the impact of introduction of the extracorporeal technique with limited studies comparing the intracorporeal technique.

Method: We studied the early outcomes of patients who underwent open radical cystectomy (ORC) and RARC at our institution. Univariate analyses of operative time, blood loss, length of stay, margin positivity and complication rates were compared between the two cohorts. The RARC cohort was further divided into extracorporeal (e-RARC) and intracorporeal (i-RARC) groups, and the same parameters were analysed.

Results: There was no statistical difference between the demographics and the pathological characteristics. The results of the analysed parameters are attached in the table. There was a significant reduction in the postoperative length of stay (12 to 7 days, $p < 0.01$) and blood loss (600 ml to 275 ml, $p < 0.01$) in the RARC group compared to the ORC group, albeit with a higher 30-day mortality rate (0 vs 3%). The mortalities were noted in the e-RARC cohort. The causes of death included two patients with urosepsis and one with bowel obstruction. Clavien–Dindo 1–3 were lower in the RARC group. There was a further reduction in blood loss (200 ml, $p < 0.01$) and complications in the i-RARC cohort.

Conclusions: There was a positive impact on blood loss and length of stay with the introduction of RARC, with further gains with i-RARC. The higher perioperative mortality is concerning and needs investigation. Further studies of the long-term outcomes of RARC are warranted.

Poster abstracts

1. Should we only biopsy the multiparametric MRI abnormal areas by cognitive targeted biopsy rather than continue with systematic biopsy?

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Introduction: The recent ‘PRECISION’ trial has shown that targeted biopsy (TB) can detect more clinically significant (Cs) cancers and fewer clinically insignificant (Ci) cancers than systematic biopsy (SB). There is ongoing uncertainty about missing Cs cancer (Gleason $\geq 3+4$) on the normal multiparametric magnetic resonance imaging (mpMRI) areas of the prostate. Therefore, we compared the normal and abnormal areas from mpMRI at the same prostate biopsy, using simultaneous SB and TB techniques.

Materials and methods: From 131 patients initially referred for primary transrectal ultrasound-guided biopsy, 100 men were selected, mean age 68, with median prostate-specific antigen of 7.6, with average prostate volume of 52 cc (patients with clinically or radiologically assessed T3 disease and a Prostate Imaging Reporting and Data System (PIRADS) score < 3 were excluded). All underwent six core TBs (median), from an average of two lesions on mpMRI and also eight core SBs (median) from normal mpMRI areas of the prostate after informed consent. A urology trainee performed all of the procedures.

Results: The combined cancer detection rate was 67%, with 51% having Cs disease. TB detected cancer in 54 patients (47 Cs and 7 Ci) and SB detected cancer in 55 patients (39 Cs and 16 Ci). For Cs cancer, 35 patients were detected by both techniques. TB missed 4 (on > 65 cc) but SB missed 12 Cs cancers. (95% confidence interval (CI), $P < 0.0001$). Fewer men in the TB group than in the SB group were found to have Ci cancer (95% CI, $P < 0.0001$). The mpMRI detected 20, 35 and 88% of Cs cancers in PIRADS 3, 4 and 5 lesions, respectively. A total of 173/533 and 124/849 cores were positive for Cs cancer on TB and SB, respectively.

Conclusion: Overall, very few Cs cancers were missed with TB. Only biopsying abnormal mpMRI areas would save time and reduce workload both for urology and pathology. If there is ongoing suspicion in those patients with normal mpMRI or negative biopsies, they should be considered for transperineal template biopsy.

2. Radiofrequency ablation versus partial nephrectomy for cT1 small renal masses: a comparison of clinical and oncological outcomes

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Introduction: Nephron-sparing treatment is the preferred option for management of clinical T1 (cT1) renal

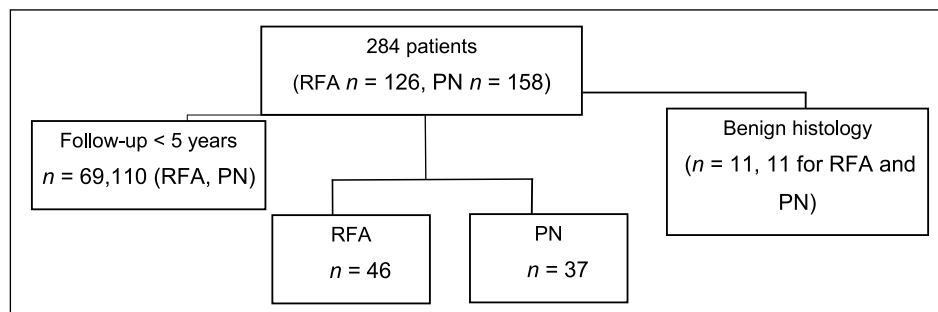


Figure 1. Flow chart of the study patients.

PN: partial nephrectomy; RFA: radiofrequency ablation.

masses. Partial nephrectomy (PN) has lower recurrence rates in comparison to radiofrequency ablation (RFA). We aimed to compare the safety profiles and oncological outcomes of PN and RFA for cT1 renal masses.

Methods and materials: We retrospectively analysed 83 patients with cT1 renal masses treated with PN or RFA at our regional centre between 2003–2016. Patients demographics and RENAL nephrometry scores were analysed. The follow-up protocol consisted of a tri-phasic renal computed tomography scan at 3–6 months and yearly thereafter. Magnetic resonance imaging was used for those with poor renal function.

Local recurrence (LR) for PN was defined as an abnormally enhancing new lesion at the site of previous resection. For RFA, LR was defined as interval growth or new enhancement of a successfully treated lesion on subsequent imaging. StatsDirect was used for the statistical analysis. A p -value ≤ 0.05 was considered statistically significant.

Results: There was no significant difference in patients' demographics nor the RENAL scoring system ($p = 0.7$ and 0.3 , respectively). Perioperative complications were significantly higher in the PN group ($p = 0.047$). At 5-year follow-up, there were six failed RFA cases and one PN local recurrence ($p < 0.0001$). The 5-year cancer-specific survival was 98 and 100% for RFA and PN, respectively (95% confidence interval (CI) 0.7–1.7, $p = 0.31$); 5-year overall survival for RFA and PN were 89 and 92% (95% CI 0.7–1.8, $p = 0.29$), respectively.

Conclusion: Perioperative complications were predictably higher with the PN group. However, oncological outcome was better in this group compared with RFA. Long-term follow-up is important given the disparity in complication rate and severity.

3. The impact of prostate size on the outcomes of Retzius-sparing robotic radical prostatectomy

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Introduction: Removal of a large prostate can be challenging during radical prostatectomy (RP) whatever the surgical modality used, but the additional physical constraints imposed by Retzius-sparing (RS) surgery have the potential to further increase the level of difficulty. The aim of this study was to test whether this potentially increased difficulty translated into measurable differences in patient outcomes.

Patients and methods: In total, 320 cases of RS robot-assisted (RA) RP were performed by a single surgeon from July 2016 to August 2018, of which 235 (73.4%) patients had a prostate weight ≤ 70 g (range 11–70 g) on final pathology and 85 (26.6%) patients had a prostate weight > 70 g (72–150). All patients had a preoperative magnetic resonance imaging \pm bone scan according to European Association of Urology guidelines.

Result: Patients' age, body mass index, Gleason sum and clinical stage were similar. Men with larger prostates had a higher PSA (11.7 vs 7.5; $p < 0.0001$) and a lower rate of pelvic lymph node dissection (PLND): 45 vs 63% ($p = 0.003$). There were no Clavien 4–5 complications. See Table 1.

Conclusion: Larger prostates were associated with a better cancer outcome (lower Process Safety Management (PSM)), which was not statistically significant, and although

Table 1.

	<i>n</i>	Gland weight (g) ^a	Operation time (min) ^a	tx (<i>n</i> + (no. units)) ^a	Hospital stay (days) ^a	Clavien 1/2/3 complications (<i>n</i>) ^b	+ Margins pT2/pT3 ^b	Pad-free at 4 weeks ^b
Prostate < 70 g	235	36.0	179	3 (2)	1.9	8/3/7	18.7%/38.8%	94.0%
Prostate > 70 g	85	87.0	177	1 (2)	1.8	5/1/2	11.8%/29.4%	77.6%
<i>p</i> -value		< 0.0001	1.00	0.94	1.00	0.98/0.94/0.76	0.98/0.13	< 0.0001

Values are means.

^aIndependent samples test.

^bChi-square test.

they also had a significantly worse ($p < 0.0001$) pad-free rate at 4 weeks, in keeping with other UK series of non-RS-RARP, the pad-free rate in this group was still high at 77.6%. Operating time, hospitalization, and transfusion and complication rates were similar in the two groups. Prostate size need not be a factor determining a patient's suitability for RS-RARP in experienced hands. Longer follow-up is needed to assess the effect of prostate size on functional and oncological results in men having RS-RARP.

4. Does selective prophylactic urethrectomy eliminate the need for urethral surveillance in patients post radical cystoprostatectomy?

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Introduction: Urethral recurrence (UR) following radical cystoprostatectomy (RC) in patients with urothelial cancer

is reported between 4–17%. Indications for prophylactic urethrectomy (PU) include prostatic urethral carcinoma in situ (CIS) and/or stromal involvement. Surveillance of patients with a residual urethra includes annual urethroscopies or urethral cytology.

Patients and methods: Data were collected retrospectively for patients between 2001 and 2017. We noted the date of RC, histology, stage, urethral management and follow-up. Only male patients and those with urothelial cancer were included.

Results: Of 374 radical cystectomies performed, 186 were men with urothelial cancer. Four patients underwent a simultaneous urethrectomy due to known prostatic involvement, and a further 13 had a prophylactic urethrectomy within 4 months, if CIS or the urothelial cancer was extending into the prostate. Four patients with N2 disease at RC did not undergo urethrectomy. Five patients (3%) developed UR within a median time of 18 months. All of these patients were diagnosed following urethral discharge and/or bleeding, and one with priapism. No asymptomatic patients were detected with UR at the time of routine urethroscopy or urethral wash.

Conclusion: When the indications for PU are applied, very few patients remain at risk of developing UR. Clinical symptoms correlate with UR and are a simple cost-effective tool when monitoring such patients, obviating the need for surveillance urethroscopies or cytology.

5. Intracorporeal robotic-assisted radical cystectomy: Bricker versus Wallace uretero-ileal anastomotic technique, Wallace wins

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Introduction: Since 2014 at our cancer centre, a single surgeon has performed 207 consecutive intracorporeal robotic-assisted radical cystectomies (iRARC). Initial reconstruction was via an intracorporeal Bricker uretero-ileal anastomotic technique. In June 2016, transition was made to an intracorporeal Wallace 66 technique. We have performed an audit to assess uretero-ileal anastomotic-related complication rates for both techniques in patients who have had iRARC.

Patients and methods: The electronic and paper records of patients who had iRARC for bladder cancer were reviewed. Statistical analysis was performed on patient demographic, operative, perioperative, complication and follow-up data.

Results: Between April 2014 and September 2018, 207 iRARC were performed by a single surgeon (although this series includes the training of three other consultant surgeons and two fellows), 64% Bricker (group A) and 46% Wallace (group B). There was no difference between the two groups in age, body mass index, cancer pathology, estimated blood loss or length-of-stay. Op tie decreased progressively over time to a medical console time (Cystectomy + Ext

BPLND + intracorporeal reconstruction) of 2 hours 5 minutes. In group A: 3 patients had an anastomotic leak and 26 had anastomotic stricture (stricture rate of 21%). In group B: three patients had an anastomotic leak and three had anastomotic stricture (stricture rate of 3%).

Conclusion: Uretero-ileal anastomotic stricture rate is lower in Wallace iRARC versus Bricker iRARC at our cancer centre with our technique.

6. Pre-biopsy rectal swab culture and targeted antibiotic prophylaxis reduces the incidence of urosepsis post-transrectal ultrasound-guided biopsy of the prostate

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Introduction: Urosepsis post-transrectal ultrasound (TRUS)-guided biopsy of the prostate is an uncommon and potentially fatal complication. It is preventable with antibiotic prophylaxis. Ciprofloxacin and gentamicin are commonly used. However, antibiotic resistance is increasing. At our institution, we have implemented a policy of pre-biopsy rectal swab culture and targeted antibiotic prophylaxis to reduce the incidence of urosepsis post-procedure. An initial audit/re-audit between May 2015 and December 2015 suggested that pre-biopsy rectal swab culture and targeted antibiotic prophylaxis was associated with a reduction in the incidence of urosepsis. Statistical analysis revealed that the study should be expanded to include 183 patients in each arm to determine statistical significance. A re-audit was performed.

Patients and methods: A retrospective review of the electronic medical notes of patients from January 2015 to August 2015 was performed to determine our incidence of urosepsis post-TRUS-guided biopsy of the prostate. An absolute policy of pre-biopsy rectal swab culture for all patients booked for prostate biopsy has been implemented since January 2016. A re-audit was performed between October 2017 and April 2018.

Results: Between May 2015 and August 2015, 194 patients had TRUS-guided biopsy of the prostate. Nine (4.9%) patients were admitted to hospital with urosepsis post-procedure (two patients had severe sepsis requiring intensive therapy unit admission). A re-audit was performed: 196 patients had TRUS-guided prostate biopsy between October 2017 and April 2018. All patients had pre-biopsy rectal swabs done. Seven patients' rectal swabs grew extended-spectrum beta-lactamase organisms (resistant to ciprofloxacin and/or gentamicin) and targeted antibiotic prophylaxis was given. Two patients (1%) were admitted to hospital with urosepsis post-procedure. The Z-score was 2.25. The *p*-value was 0.02. The result was significant at *p* < 0.05.

Conclusion: We recommend pre-biopsy rectal swab culture and targeted antibiotic prophylaxis to reduce the incidence of urosepsis post-TRUS-guided biopsy of the prostate.

7. Pathological and oncological short term outcomes of robotic assisted laparoscopic radical prostatectomy for patients with high risk localized prostate cancer

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Objectives: High-risk prostate cancer patients are being offered radical treatments, which are often multimodal. We studied the short- and medium-term pathological and oncological outcomes of patients undergoing robotic-assisted laparoscopic radical prostatectomy (RALP) at our institution, as well as the need for salvage treatment.

Design and method: Between January 2015 and June 2018, we performed 525 RALPs. We retrospectively collected data of all the cases that fulfilled the criteria of high-risk disease as per D'Amico classification (prostate-specific antigen (PSA) \geq 20, Gleason score (GS) \geq 8 or clinical stage \geq cT2c).

Results: Based on the D'Amico classification, 128 out of 525 (24.38%) were clinically high-risk patients. Of these, 28 (21.87%) had PSA \geq 20, 50 (39.06%) had GS \geq 8 and 98 (76.56%) had clinical stage \geq cT2c. Five patients had all three features, 30 had two and 93 had only one high-risk feature. Lymph node dissection was performed in 109 (85.15%) patients. Pathological T3a was noted in 68 (53.12%) patients and a further 35 (27.34%) had pT3b. Overall lymph node-positive disease was noted in 22 patients (17.19%); 9 of them related to pathology stage pT3a and 13 to pT3b. Positive margins were noted in 55 (42.97%) patients. The median first postoperative PSA was 0.05 (range 0.01–16 ng/ml). The median follow-up time for this cohort was 17.2 months (range 3–44 months). Salvage radiotherapy and hormones were offered to 33 (25.78%) patients due to a rising PSA. Four patients were involved in the RADICALS trial and six of them in ADD ASPIRIN.

Conclusion: RALP prostatectomy is an effective treatment option in the management of high-risk prostate cancer, with one-quarter of patients requiring salvage treatment with radiotherapy and hormones.

8. Examining the use of urinary cytology in the surveillance and management of high-risk non-muscle invasive bladder cancer

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Introduction and aim: Nearly three-quarters of patients with transitional cell cancer (TCC) of the bladder

present with non-muscle invasive disease: confined to the mucosa with a stage of Ta or carcinoma in situ (CIS), or the submucosa stage (T1). According to the European Association of Urology (EAU) guidelines, urinary cytology has high sensitivity in high-grade tumours (G3) as well as CIS. We aimed to examine if the presence of a positive urinary cytology sample indicated the presence of ongoing or recurrent disease at biopsy.

Methods: All data collection took place on-site at St George's Hospital and data were stored in a password-protected spreadsheet. Patient data were accessed from a haematuria clinic appointment book. Inclusion criteria: patients with high-risk non-muscle invasive tumours according to EAU guidelines. The data included patients who attended the haematuria follow-up clinic between February 2018 and August 2018.

Results: Fifty-one patients were included in this subject group: 9 female (17.6%) and 42 male (82.4%). The mean age was 73 years (range 42–92 years). Thirty-three patients had G3 disease (65%), 17 of which had stage pTa (52% of G3 disease) and 16 had stage pT1 (48% of G3 disease). Sixteen patients had CIS, 15 of which had G3 disease (94% of CIS disease). Twelve patients (24%) in total had positive urinary cytology as part of their follow-up pathway. Six of these patients (50%) had a biopsy, which showed the presence of high-risk non-muscle invasive disease.

Discussion: Although the EAU guidelines state that urinary cytology has high sensitivity in detecting high-grade tumours, the data from this initial audit loop show a small proportion of positive urinary results equating to a presence of high-risk disease recurrence. This suggests that urinary cytology may not be as sensitive as previously thought in detecting recurrence.

9. Sepsis following transrectal ultrasound-guided biopsy of the prostate: can we identify those at increased risk?

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Aims: Transrectal ultrasound (TRUS)-guided biopsy of the prostate remains an important diagnostic test for prostate cancer, but is associated with complications including sepsis. Antibiotic prophylaxis is routinely used to reduce the risk of sepsis. Augmented antibiotic regimes have been advocated in patients at high risk of developing sepsis; however, no consensus exists as to which factors should be assessed. In this study, we report on the association of potential risk factors with sepsis.

Materials and methods: Potential risk factors and sepsis rates were prospectively recorded in 1250 consecutive men at a single institution (using a

standardized questionnaire and computer records, respectively) over a 34-month period (September 2015 to June 2018). Our standard antibiotic protocol is to give ciprofloxacin 500 mg 1 hour before and 11 hours after biopsy. The risk factors: international travel, antibiotic use, urinary tract infections, hospital admissions, diabetes, immunosuppression, and indwelling catheter or intermittent self-catheterization were recorded. Fisher's exact t-test was used to assess the independent significance of each factor with the development of sepsis.

Results: Of the 1250 men, 27 (2.16%) developed sepsis. None of the risk factors were identified in 714 (57.12%) patients; while 347 (27.70%) had one, 161 (12.80%) had two and 41 (3.28%) had three risk factors, respectively. No independent risk factor significantly increased the risk of developing TRUS-guided biopsy-related sepsis. Of the patients who developed sepsis, only three patients had ciprofloxacin-resistant organisms.

Conclusion: In our population, none of the measured risk factors correlated with an increased risk of post-biopsy sepsis. This suggests that altering the antibiotic prophylaxis regimen is not required if these risk factors are present. Other departments may wish to study their own populations to allow risk stratification for sepsis from TRUS-guided biopsy.

10. Outcomes in urinary diversion for radical pelvic exenteration in advanced pelvic malignancy

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Introduction: Extensive primary and locally recurrent tumours of the pelvis or perineum are difficult to manage. Radical pelvic exenteration is a demanding yet potentially curative operation for this cohort of patients. A multidisciplinary approach remains the cornerstone of optimum patient treatment and outcomes. Urinary diversion following pelvic exenterative surgery represents a crucial aspect of long-term patient morbidity. Whenever the common diversion option, such as ileal conduit, is not feasible or the preferred option, a double-barrel wet colostomy using a Carter stoma is used. The aim of this study was to review our experience with urinary diversion in these patients.

Methods: We describe our experience with 91 consecutive patients who underwent pelvic exenterative surgery for primary or recurrent locally advanced pelvic malignancies from 2013 to 2018.

Results: Median age was 63 (26–84) years; 51/91 (56.0%) were male and 40/91 (44.0%) were female. The tumour origin most frequently encountered was advanced primary rectal tumor

with 48/91 cases (52.7%); gynaecological malignancy was found in 23/91 cases (25.3%), squamous cell carcinoma of the anus in 12/91 (13.2%) and pelvic sarcoma in 8/91 (8.8%). In total, 42/91 (46%) patients had recurrence after prior surgery or radiotherapy. Ileal conduit was performed in 60/91 (65.9%) cases. Of these, 44/60 had Bricker anastomosis, 14/60 had a Wallace 66 anastomosis and 2/60 had a Wallace 69 anastomosis. Double-barrelled wet colostomy was reported in 31/91 (34.1%) cases. Functional limitations arose in 22/91 (24.2%) patients as a result of their urinary diversion; 13/91 patients had radiologically confirmed hydronephrosis, 23/91 patients had recurrent symptomatic urinary tract infections and 5/91 patients required treatment for symptomatic parastomal herniae. No difference in morbidity was noted amongst different anastomotic selections ($p = 0.52$). There was no postoperative mortality.

Conclusion: Urological outcomes in patients following radical pelvic exenteration are reasonable regardless of the choice of diversion.

11. Treatment regret after robotic prostatectomy

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Introduction and objective: Information regarding treatment satisfaction and decision regret following robot-assisted radical prostatectomy (RARP) is scarce in the UK. We aimed to assess these parameters and correlate overall satisfaction, disease-specific quality of life, sexual function and urinary incontinence at a high-volume centre

Methods: Patients who had chosen to undergo RARP between June 2011 and January 2016 were invited to participate through mailed questionnaires. Only patients who were suitable for active surveillance but had chosen RARP were included. A total of 104 patients formed our cohort for this study. The questionnaires included the European Organization for Research and Treatment of Cancer (EORTC) quality of life questionnaire (QLQ30), the accompanying prostate cancer-specific module (PR25), the Sexual Health Inventory in Men score and a self-reported Likert scale for decision regret. A low threshold value of $\geq 15/100$ was used to define an outcome of decision regret.

Results: The mean patient age was 68 years and the mean duration of follow-up was 22 months. Fifty-one patients (49%) were fully satisfied with their decision. In 18 patients (17%), the regret scores were < 15 and in 35 patients the scores were > 15 (34%). Of those who experienced regret, this was low order with a mean score of 20 (out of 100). Multivariate analysis showed statistical significance with the EORTC PR25 score.

Conclusions: Regret was seen in one-third of patients, which was associated with treatment choice and quality

of life. To minimize regret, extensive discussion regarding disease-specific quality of life and complications should be included when counselling patients about treatment options.

12. Robotic-assisted radical cystectomy combined with enhanced recovery limits the negative impact of sarcopenia on perioperative outcomes

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Objectives: Recent studies have shown that sarcopenia is associated with longer hospital stay post-surgery and poor prognosis due to the correlation of frailty with low muscle mass (MM). Our aim was to evaluate whether MM can predict the length of hospital stay (LoS) or readmission to hospital within 90 days (D90) post-robotic-assisted radical cystectomy (RARC) with an enhanced recovery protocol (ERP).

Materials and methods: MM was assessed by measurement of the psoas muscle area in cm^2 at the level of lumbar L3 vertebrae on the pre-operative cross-sectional computed tomography scan using DICOM and sliceOmatic software. Logistic regression was used to estimate psoas MM as a predictor of LoS or readmission to hospital within D90 post-surgery.

Results: A total of 165 patients, operated on between 2013 and 2018, had complete radiological data available for analysis. The median (range) LoS was 5 (3–24) days and a D90 readmission rate of 15%. The median (range) psoas MM was 21.2 (10.9–32.2) and 19.7 (4.6–39.6) cm^2 in patients with a LoS ≤ 5 and ≥ 6 days, respectively. This represented a borderline significant increase of 5% in the odds of a LoS ≤ 5 days per unit increase in psoas MM ($p = 0.08$). Psoas MM was not predictive of D90 readmission ($p = 0.8$).

Conclusions: Our data suggest that psoas MM is not a strong predictor of LoS or hospital readmission rates after RARC with ERP. Further research is required to clarify if pre-operatively identified sarcopenic patients could benefit from a pre-habilitation programme and nutritional interventions as part of an individualized ERP.