BJUI

BAUS Annual Meeting, 23–26 June 2014

Paper Sessions

Tuesday 24th June
Paper Session A
13:30–15:00 Room 3A/B
PROSTATE CANCER TREATMENT
Chairs: Dr Prasanna Sooriakumaran and Professor Jay Smith
Papers A1–A9

Wednesday 25th June
Paper Session B
13:30–14:30 Room 3A/B
AUDIT OUTCOMES
Chairs: Mr Adrian Joyce and Professor John Denstedt
Papers B1–B7

BJUI

Tuesday 24th June
Paper Session A
13:30–15:00 Room 3A/B
PROSTATE CANCER TREATMENT
Chairs: Dr Prasanna Sooriakumaran and Professor Jay Smith
Papers A1–A9

A1

Comparison of radical treatment and mortality in patients with non-metastatic prostate cancer in England and USA

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Introduction: Prostate-cancer mortality (PCM) in the USA is amongst the lowest globally, whereas PCM in England is amongst the highest in Europe. Given historical differences in management of prostate cancer patients, we compare risk-adjusted PCM in England and the USA.
Methods: Patients diagnosed with non-metastatic prostate-cancer between 2004 and 2008 were identified using English national cancer registry-linked hospital records, and the American Surveillance, Epidemiology and End Results programme. Complete data were available for 222 163 patients. Patients were risk-stratified according to disease characteristics.
Competing-risks survival analyses were used to estimate hazard ratios (HR) adjusted for age, ethnicity, and year of diagnosis, Gleason score and tumour stage.
Results: In comparison to patients in the USA, English patients were more likely to present at an older age (70–79 years: England 44.2%, USA 29.3%, $P < 0.001$), with higher clinical tumour stage (cT3-4: England 25.1%, USA 8.6%, $P < 0.001$) and higher Gleason score (GS 8–10: England 20.7%, USA 11.2%, $P < 0.001$). They were also less likely to receive radical therapy, with greatest difference amongst patients with high-risk disease (England 30%, USA 83%, $P < 0.001$).
English patients were more likely to die of prostate-cancer (HR 1.9, 95% CI 1.7–2.0, $P < 0.001$). However, this difference was no longer statistically significant on adjustment for radical therapy (HR 1.0, 95% CI 1.0–1.1, $P = 0.3$).
Conclusions: After risk-adjustment, prostate-cancer mortality is significantly higher in England compared to the USA for men with intermediate and high-risk disease. This difference may be explained by less frequent use of radical therapy in England.

A2

MAPPED: Magnetic resonance imaging in Primary Prostate cancer after Exposure to Dutasteride: Reduction in tumour volume at 6 months in men on active surveillance for prostate cancer

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Background: Dutasteride, a 5 alpha-reductase inhibitor licensed for lower urinary tract symptoms, causes a 25% reduction in prostate volume at 6 months. REDEEM reported that dutasteride reduced progression in men on active surveillance for low grade, low volume prostate cancer. MAPPED was designed to assess whether this reduction could be attributed to prostate cancer volume reduction as assessed by T2 weighted MRI.
Methods: Men with prostate cancer suitable for active surveillance (low-intermediate risk prostate cancer on biopsy), and a T2-weighted MRI lesion of 0.2 cc were eligible for consideration. Men were randomized to 0.5 mg dutasteride or placebo daily for 6 months. Tumour volume was assessed using multiparametric MRI at baseline, 3 and 6 months. Targeted biopsy was performed after the 6 month MRI.
Results: 42 men were randomised with 21 men in each group. The mean PSA was 6.9 in the dutasteride group, and 6.0 in the placebo group, with mean tumour volumes of 0.55 and 0.57 cc at baseline respectively. The percentage change in mean tumour volume on T2-weighted imaging at 6 months was a 35% reduction in the dutasteride group (0.55 cc to 0.38 cc), and a 6 % increase in the placebo group (0.67 cc to 0.77 cc), (mean difference 42%, $P < 0.0001$). Similar effects were seen on DCE and DWI sequences.
Conclusions: Dutasteride has been shown to reduce the volume of MRI defined prostate cancer lesions in men on active surveillance for localized prostate cancer. Longer term studies are required to assess whether this effect is maintained over a longer time.

A3

A retrospective cohort comparison study of the LRP and RARP learning curve

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Introduction: There is equipoise with reference to the length of the RARP and LRP learning curve, and a paucity of learning curve data that demonstrates plateauing of outcome parameters.
Methods: The outcomes of two surgeons with similar experience of minimal access radical prostatectomy, who have completed the learning curve for LRP and RARP were analysed. Patient demographics, peri-operative parameters and post-op outcomes were collected. Mann Whitney U, Chi-squared tests and LOESS best fit curves were used.
Results: 1370 patients were included in the study (LRP n = 839 and RARP n = 531). Mean age and PSA was 62 years old and 7.5 μg/l for LRP vs 55 years old and 9 μg/l for RARP. pT2 disease accounted for 70% for LRP and 66% for RARP respectively.
Blood loss and operative time were similar in both groups; complications were lower in the LRP group. The pT2 PSM rates were significantly higher for LRP than RARP (16.3% vs 12.4%, $P = 0.02$). The majority of this difference was accounted for by a significantly higher incidence of an apical PSM with LRP than RARP (53% vs 32%, $P = <0.0001$). Table 1 shows length of learning curve for LRP and RARP.
Conclusion: The data shows a significant learning curve exists for both LRP and RARP. After taking into account similar surgeon experience, RARP appears to facilitate apical dissection, which is associated with a lower PSM rate compared with LRP and seems likely to contribute to an earlier return to continence.

Table 1 (A3).

Outcome parameter	Cases to achieve plateau LRP	Cases to achieve plateau RARP
Blood Loss	150	200
Operative time	250	150
Complications	150	200
Positive surgical margin	200	200

A4

A competing-risks analysis of clinical outcomes in a fourteen-year cohort of patients treated with prostate LDR brachytherapy at a single centre

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Introduction: We present mature data on overall survival and biochemical relapse free survival (bRFS) on cohort of men with localised prostate cancer treated with LDR-based regimens. We have employed competing-risks methodology in view of the risks of other cause mortality and therapeutic interventions among this group.
Patients and Methods: 2257 patients were treated with prostate LDR brachytherapy based regimens from 1999 to 2013. We selected 1320 patients from our prospectively collected database who had documented initial PSA, biopsy Gleason score sum, clinical T-stage and brachytherapy dosimetric parameters including prostate D90, V100 and V150. Patients were stratified according to MSKCC risk group, treatment modality (monotherapy versus combined radiotherapy plus brachytherapy boost), PSA nadir, brachytherapy technique (2-stage versus 1-stage), dosimetric parameters and percentage biopsy core involvement.
Results: Median duration of PSA follow up was 71.8 months (range 36.0–169.1), overall survival 97.8% and prostate-cancer specific mortality 0.4%. Other cause mortality was 1.8%. Overall bRFS was 89%. 100 month bRFS were 91%, 86% and 86% for low, intermediate and high MSKCC risk groups ($P = 0.03$). Factors which appeared to have no influence on bRFS include: neoadjuvant androgen therapy use ($P = 0.62$), Gleason score ($P = 0.19$), prostate D90 > 100% ($P = 0.87$), >50% biopsy core involvement ($P = 0.66$) and 1-stage technique ($P = 0.9$).
Conclusions: All MSKCC risk groups achieved a durable relapse-free survival. Use of low dose rate brachytherapy with or without external beam radiotherapy may achieve excellent biochemical disease control.

A5

Laparoscopic radical prostatectomy for high-risk prostate cancer

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Objectives: To investigate the results of performing laparoscopic radical prostatectomy (LRP) in patients with high-risk PCa (HRPC).
Methods: 446 patients with HRPC underwent LRP between 2000–2013. Median patient age = 64.0 (36–79) yr; BMI = 27.0 (18–43) kg/m2; PSA = 8.1 (0.1–93) ng/mL and Gleason = 8 (6–10). All patients had a PLND with an extended template after April 2008 (53.3%). NVB preservation was done in 41.5% (bilateral = 26.3%; unilateral = 15.2%) of patients. An incremental or partial technique was used in 99 of the 302 (32.8%) NVBs preserved.
Results: Median gland weight = 58.5 (20–161)g; operating time = 180 (92–330) minutes; blood loss = 200 (10–1400)mL; post-op. hospital stay = 3.0 (2–7)nights; catheterisation time = 14 (2–35)days; complication rate = 7.6%; node count = 16 (2–51); lymph node positivity = 16.2%; node involvement = 2(1–8); margin positivity = 26.0%; up-grading = 2.5%; down-grading = 4.3%; up-staging from T1/2 to T3 = 24.7%; down-staging from T3 to T1/2 = 6.1%. No cases were converted to open surgery and 3 patients were transfused (0.7%). At a mean follow-up of 24.9 (3–120) months 79.2% of patients were free of biochemical recurrence, 91.8% were continent and 64.4% of previously-potent non-diabetic men <70 years were potent after bilateral nerve preservation.
Conclusions: Blood loss, transfusion, complication rates and post-op. hospitalisation were low. Additionally, the 79.2% BDFS, 91.8% continence rate and 64.4% potency rate at 35.2 months should serve to encourage experienced urologists to offer radical prostatectomy to patients with HRPC.

A6

Is outcome following radical prostatectomy determined by race?

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Introduction: Racial variations in outcomes following radical prostatectomy (RP) have been attributed to socio-economic deprivation and genetic factors in Afro-Caribbean men from North America. We aim to evaluate disease outcomes in specific racial groups within a metropolitan UK population treated within the National Health Service.
Patients and Methods: A prospective single-centre study of 565 patients undergoing RP for localised prostate cancer was performed over 125 months. Men were divided into three ethnic groups: Asian (AS), Caucasian (CA) and Afro-Caribbean (AC), and clinical and pathological variables compared. Biochemical-recurrence free survival (BCR) (PSA > 0.1 ng/mL) rates and predictors of BCR were calculated.
Results: A total of 565 men underwent RP (CA: n = 367, AC: n = 142 and AS: n = 56). There was no significant difference between patient age (mean, 62.3 years), follow-up (median, 49 months) or preoperative PSA (mean, 8.3 ng/mL). AC-patients had a longer operative time ($P = 0.0038$) and narrow measurable pelvic-inlets ($P < 0.0001$). There were no significant differences in blood loss, tumour stage, histology, and volume or margin status between groups. AC-men had significantly lower 5-year BCR-free survival (56.7%) than CA-men (73.1%) or AS-men (80.8%, $P = 0.005$). On multivariate analysis, AC-race was an independent predictor of BCR.
Conclusion: In a national healthcare system, despite advances in prostate cancer detection, surveillance and treatment, being Afro-Caribbean is a significant predictor of BCR. This does not appear to be explained by histopathological factors. There remains an imperative need to map mechanisms accounting for different outcomes in this population.

A7

The Predictive Value of 2-Year Post-Treatment Biopsy After Prostate Cancer Conformal Radiotherapy For Future Overall Survival and Biochemical Failure. The results of the UK MRC T01 Trial

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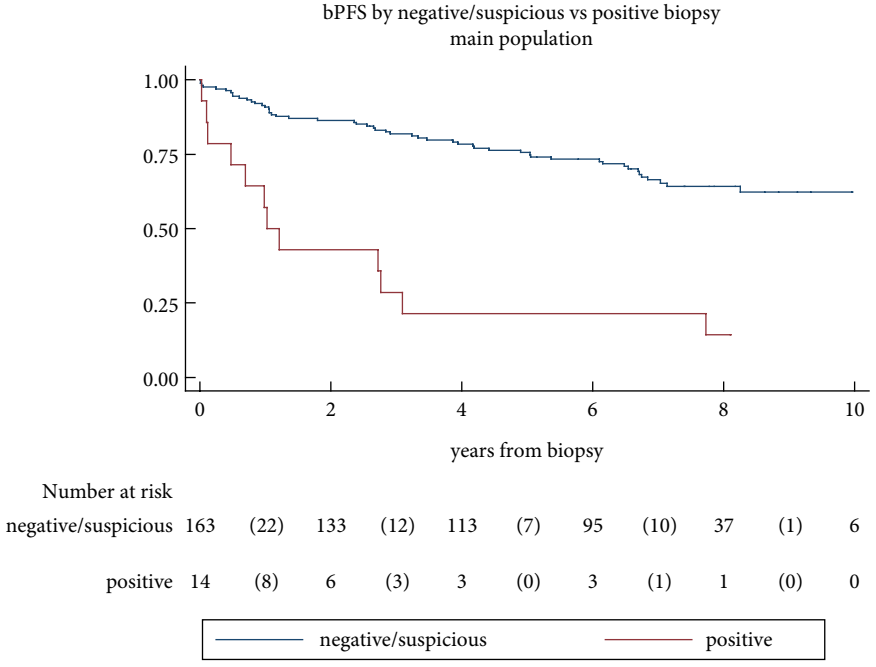
Introduction and Objective: There is still an uncertainty regarding the significance of prostate biopsy status performed at 2 years after conformal radiotherapy (CFRT) used for treatment of localized prostate cancer. The objective of this analysis is to determine whether prostate biopsy status at around 2 years is predictive of overall survival (OS) and long-term biochemical progression free survival (bPFS).
Methods: Between January 1998 and December 2001, 843 consenting men with localized prostate cancer were randomized in to the MRC RT01 trial to receive either Control-64 Gy or Escalated-74 Gy of CFRT. Patients were stratified according to the risk of seminal vesicles (SV) involvement. As part of the trial's protocol, post-CFRT prostate biopsies were requested at two years from the start of RT. Exclusion criteria for this analysis included biopsies performed before 18 months or after 36 months of starting radiotherapy and any evidence of biochemical failure or progression before or on the date of the biopsy. Analyses were performed using standard survival analysis methods with a landmark approach; hazard ratios (HR) are presented.
Results: 223 patient biopsies were taken and reviewed by a central pathologist. 46 of these patients met the exclusion criteria, leaving 177 patients for the main analysis. Baseline and patients characteristics were comparable in both groups. Median follow up was 7.8 years.
In total, 64 bPFS events occurred: 46/145 in patients with negative biopsies, 6/18 in suspicious and 12/14 in positive. P: < 0.001. HR: 4.69 (95%CI 2.44–9.01) Fig. 1.
Four deaths secondary to prostate cancer occurred: 1 (0.7%) in patient with negative biopsy and 3 (21.4%) in patients with positive biopsies. Twenty-seven deaths from any cause occurred: 21/145 (14%) in patients with negative biopsies, 2/18 (11%) in suspicious and 4/14 (29%) in positive. P: 0.410. HR: 1.58 (95%CI 0.53–4.71),
Conclusions: The risk of biochemical failure in patients with positive biopsies at 2 years is almost five times higher than in patients with negative or suspicious biopsies and the risk of death from any cause is about 1.6 times higher. Post-treatment prostate biopsies are a strong predictor of future biochemical failure.

Fig. 1 (A7) Outcome measures: main population biochemical Progression-Free Survival (bPFS), by (negative and suspicious) vs positive biopsies.



A8

Focal Salvage HIFU for Radiorecurrent Prostate Cancer: Disease control outcomes

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Introduction: One third of men who have localised prostate cancer treated with radiotherapy will experience biochemical failure by 8 years. Our aim was to assess the early disease control rates, complication and re-treatment rates of focal salvage therapy targeted to the index radiorecurrent lesion.
Methods: Independent academic HIFU registry analysis identified 97 men who underwent focal salvage HIFU between November 2006 and May 2013. Treatment was either unifocal ablation, hemiablation, bilateral bifocal ablation or index lesion ablation. Overall failure was defined as a composite of Phoenix-ASTRO (nadir+2 ng/mL) and/or whole-gland salvage therapy and/or systemic therapy.
Results: Mean age was 70.3 years (SD 6.4 years) with median PSA 3.01 (SD 5.39). The majority of men had Gleason 7 disease (either Gleason 3 + 4 or 4 + 3) $n = 79$. 47 men underwent hemiablation and 50 wide-local-ablation to the lesion ('focal'). Post-focal PSA at 12 months was 1.1 ng/mL (SD 3.43). 45% (45/97) achieved a nadir of <0.5 ng/mL and 60% (60/97) achieved a nadir of <1 ng/mL. Complications included: infection ($n = 11$), cystoscopy with or without bladder neck incision ($n = 20$), recto-urethral fistula ($n = 4$); 2 were surgically repaired, one spontaneously resolved and one is currently being managed with urinary diversion using an SPC. Overall failure by the composite outcome was 33% (33/97). 10 had further treatment including radical prostatectomy $n = 2$, re-do HIFU $n = 7$ and nanoknife $n = 1$. 87% of men (20/23) remained pad-free at twelve months.
Conclusion: Focal salvage HIFU may have a role in treating radiorecurrent prostate cancer with low complication and side effect rates and with encouraging disease control.

A9

Radical therapy may reduce mortality in men with metastatic prostate cancer

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Introduction: Standard management for men with advanced prostate cancer is Androgen Deprivation Therapy (ADT) alone. We investigated whether radical treatment of the primary tumor in men with advanced prostate cancer improved survival over those managed with ADT alone.
Patients and Methods: The PCBaSe dataset provides >98% complete information on virtually all patient and tumor covariates of all prostate cancer cases in Sweden diagnosed from 1996. We abstracted data on men with PSA > 50 or M + or T4 disease, and matched them exactly for grade, T-stage, M-stage, and Charlson comorbidity index (CCI). We compared prostate cancer mortality (PCM) and other cause mortality (OCM) in those men treated with ADT as primary therapy versus those treated initially with radical therapy (surgery or radiotherapy).
Results: The matched sample was 699 cases per group. Propensity score-adjusted subdistribution hazard ratios (sHR) for ADT versus radical treatment were 2.89 (95% CI, 2.25–3.71) for PCM and 1.41 (95% CI, 1.01–1.98) for OCM. A post-hoc sensitivity analysis found that residual confounding is highly unlikely to account for these findings.
Conclusion: This large, observational study from a comprehensive dataset suggests that men with advanced prostate cancer might benefit in survival terms from being managed with radical therapy as their primary treatment rather than ADT alone. Confounding is highly unlikely to account for these results, and this study provides an epidemiologic rationale to consider a future RCT in this setting. Were these findings to be corroborated, this would represent a ground-breaking and paradigm shift in the management of prostate cancer.

BJUI Wednesday 25th June Paper Session B 13:30–14:30 Room 3A/B AUDIT OUTCOMES Chairs: Mr Adrian Joyce and Professor John Denstedt Papers B1–B7

B1

Changing Trends in Radical Prostatectomy (RP) practice across England over 5 years

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Introduction: There has been increasing centralisation of services for RP. We identified trends in volume and surgical approach for RP as well as number performed per surgeon/per centre.
Patients and Methods: Data was extracted from Hospital Episode Statistics (HES) between 2008–2013. Data uploaded to the BAUS Cancer Registry (BCR) during the same period was also examined.
Result: Number of RPs is increasing annually (3700 in 2008/09 to 5336 in 2011/12), with a decreasing number of centre's performing RP. The average number of procedures per centre has steadily increased (23 per year, BCR 2012).
Increasing centralisation was observed, with 50% of cases performed in 13 cancer centres by 2013. However, there is a significant minority of RPs performed by low volume centres and low volume surgeons. Data from the BCR in 2012 demonstrates the median number of RPs per surgeon was 9, however less than 40% cases were uploaded to the BCR.
There has been a decrease in open procedures, with robot-assisted laparoscopic surgery now the predominant approach.
Process outcomes have steadily improved over a 5 year period (length of stay decreased from 5 to 2.9 days (mean) and same day admission for surgery increased from 45 to 85%).
Conclusion: Although centralisation and encouraging trends in case volume (per surgeon and per centre) have been observed, the BCR dataset remains incomplete and will need to be addressed in preparation for public-facing surgeon level outcome data for RP.

B2

Comparative cancer mortality outcomes of primary radical therapy for localised prostate cancer in a UK unscreened population

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Introduction: The optimal primary radical treatment for localised prostate cancer remains unclear and there is a paucity of UK data on this subject. Here we used registry based mortality data to compare outcomes from radical prostatectomy (RP) and external beam radiotherapy (EBRT).
Patients and Method: Prostate cancers (2000–2010) registered by the Eastern Office of the National Cancer Registration Service were interrogated for this study. 4755 localised non-metastatic tumours with known NICE risk categories and treated by RP or EBRT were identified for analysis.
Results: At median follow up of 5.4 years the cancer specific mortality (CSM) was 2.7% for EBRT and 1.1% for RP (HR 2.3 [1.5–3.5], $P = 0.001$). In men followed to cancer death or with 10 years survival these rates were 15.2% and 8.1% respectively (HR 1.9 [1.2–2.9], $P = 0.01$). In sub-analysis by age, RP demonstrated benefit over EBRT in men aged ≤69 years (HR 2.6 [1.6–4.3], $P = 0.001$) but not in men aged ≥70 y (HR 0.7 [0.18–2.8], $P = 0.5$). Amongst younger men the benefit of RP was linked to cancer risk type. In particular, there was no advantage of either modality in low or intermediate-risk disease (HR 3.1 [0.9–10.1], $P = 0.11$). This was also evident in men with 10 year follow up from initial treatment (HR 2.9 [1.0–7.8], $P = 0.13$).
Conclusion: These data suggest low cancer specific mortality from radical therapy for localised prostate cancer. RP and EBRT outcomes appear similar for low and intermediate-risk disease. RP may however confer better outcomes in younger men with high-risk disease.

B3

Surgeon-reported perioperative nephrectomy outcomes: Results from 6042 operations recorded on the BAUS nephrectomy database

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Introduction: BAUS has collected nephrectomy outcomes through a central database since 2001. Collection has been on a voluntary basis with approximately 30% uptake. Guidance was issued in 2012 mandating the publication of surgeon-specific outcomes by the following year. The capture rate increased to approximately 80% and this data is presented.
Materials and Methods: All patients treated with nephrectomy in 2012 were identified. Incorrectly coded data was removed or reassigned. Operations were categorised as simple nephrectomy (SN), partial nephrectomy (PN), radical nephrectomy (RN) and nephroureterectomy (NU).
Results: Data for 5954 patients was retrieved (male 59%, female 40%, not specified 1%). The mean age at operation was 62 (SN 50.0; PN 58.5; RN 63.8; NU 70.6). The 30-day mortality was 0.55% (SN 0.53%; PN 0.10%; RN 0.52%; NU 1.27%). Clavien-Dindo ≥Grade III complications occurred in 3.9% (SN 4.3%; PN 5.4%; RN 3.1%; NU 4.5%). Conversion to open was required in 5.5% of minimally invasive procedures. The median length of stay was shorter with minimally invasive (median 4 days) than with open procedures (median 6 days). The transfusion rate was 8.4% (SN 5.2%; PN 3.4%; RN 11.1%; NU 8.4%).
Conclusion: This data shows nephrectomy in the UK in 2012 was performed safely with outcomes comparable or better than published series. Self-reported data has the possibility of under reporting complications. Risk-stratification was performed but further refinement is required to reflect case-mix. The large number of cases provides a useful research tool and baseline for comparison of future years.

B4

Matched pair analysis of open and laparoscopic techniques for the management of renal cell carcinoma

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Introduction: Despite the lack of prospective series, there has been growing support for (a) laparoscopic radical nephrectomy (LRN) in the management of selected T3 RCC and (b) laparoscopic partial nephrectomy (LPN) in localised disease in preference to open techniques. As such we used a matched pair analysis (MPA), which allows directed comparison of groups by comparing like-for-like tumours, to compare LRN and open radical nephrectomy (ORN) for the management of cT3 disease and LPN and open partial nephrectomy (OPN) for the management of localised disease.
Methods: 1044 PNs for cT1/cT2 RCC and 383 RNs for cT3 RCC were undertaken and entered into a national database during 2012. Nephrectomies with IVC-exploration were excluded. Open and laparoscopic matched pairs were based on identical histological subtype, pTNM (6) stage, grade, maximal tumour diameter and patient age. Comparisons were made for surgical outcomes.
Results: 89 PN pairs and 28 RN pairs were matched. For PN the mean operation time (OT) was longer for LPN (LPN = 162 min, OPN = 110 min; $P < 0.001$), as was ischemia time (LPN = 18.0 min, OPN = 15.6 min; $P = 0.006$). There is no significant difference in estimated blood loss (EBL) or intra-operative complication rate. There is a non-significant difference in post-operative complication rates (22.5% = OPN, 12.4% = LPN; $P = 0.06$). There is no difference in positive margin rate between techniques ($P = 0.21$) or mean length of stay (LOS; $P = 0.34$). Mean follow-up time was 145 days with no significant difference in the mean difference in pre- and post-operative eGFR between groups ($P = 0.85$).
For RN there was no significant difference in OT or post-operative complication rate between the two groups. There was a significant difference in mean EBL (ORN = 244 mL, LRN = 305 mL; $P = 0.02$), intra-operative complication rate (ORN = 18.5%, LRN = 0%; $P = 0.02$) and LOS (ORN = 10 days, LRN = 5.5 days; $P = 0.03$) between groups.
Conclusion: Surgeon experience and appropriate case selection is important when considering laparoscopic techniques. However, we show LPN is a safe alternative to OPN. LPN has a longer OT but trends towards a lower post-operative complication rate. LPN has a significantly longer ischemia time however; this does not appear to have a functional consequence. We show that LRN is operatively safe with improved blood loss, intra-operative complication rate and reduced hospital stay compared to ORN for the treatment of cT3a/b RCC.

B5

The contemporary UK practice of benign nephrectomy: results from the BAUS nephrectomy audit

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Introduction and Objectives: This study summarises contemporary UK practice with regards 'simple' or benign nephrectomy and provides the largest known dataset documenting the indications, procedural techniques, outcomes and complications of cases performed for histologically confirmed benign disease.
Materials and Methods: Since 2001, all BAUS members undertaking nephrectomy have been invited to submit their data to a nationally established database. The 2012 dataset provided an extensive and unique series for interrogation as it was used to inform UK surgeon-outcome statistics.
Results: A total of 6042 nephrectomies were submitted, of which 948 were for benign disease. 59.1% of patients were female and 31.4% were ≤40 years of age. The commonest presenting symptom was pain (25.1%) and the commonest diagnosis was non-functioning kidney (52.7%). The majority of cases were performed laparoscopically (LN) (81.8%), followed by open (ON) (16.9%) and hand-assisted (HA) (1.3%) approaches. 95.9% of LN, 89.8% of ON and 91.7% of HA required no blood transfusion. 5.9% of LN cases were

converted to ON. The commonest reason for conversion was failure to progress (32.6%). The intra-operative complication rate was 8.2% (ON) and 4.5% (LN). The post-operative complication rates were 20.3% (ON) and 8.9% (LN). Median length of stay was 3 days (0–62) for LN, 7 days (2–72) for ON and 6 days (1–15) for HA.
Conclusion: This is the largest known operative series of nephrectomies for benign disease. It is therefore hugely informative for counselling patients pre-operatively. Furthermore, despite the term 'simple nephrectomy' is still associated with a significant complication and conversion rates.

B6

Partial versus Radical Nephrectomy for T1 renal tumours: an analysis from the British Association of Urological Surgeons Nephrectomy Audit

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Introduction: The increasing incidence of small renal tumours has changed practice towards nephron-sparing and minimally invasive techniques (MIT). We compared data from the BAUS Nephrectomy Audit for outcomes of partial and radical nephrectomy for T1 renal tumours.
Materials and Methods: UK consultants submitted data prospectively on all patients undergoing nephrectomy in 2012 to a national database. Analysis was made on patient demographics, operative technique and perioperative data.
Results: A total of 1768 nephrectomies were performed for T1 renal tumours. 1082 (61.2%) were radical nephrectomies (RN) and 686 (38.8%) were partial nephrectomies (PN). The mean age of PN patients was lower (PN59 vs RN64; $P < 0.0001$).
PN for T1a (≤4 cm) tumours accounted for 55.6% of which 44% were performed using MIT. For T1b (4–7 cm) tumours, only 19% underwent PN, in 33.3% of which MIT was adopted. Of the laparoscopic PNs, 30.5% were robot-assisted. MIT was used for the majority of RNs (90.3%).
Intraoperative complication rate between the RN and PN was similar (4% vs 4.3%; $P = 0.79$), however PN accounted for a higher postoperative complication rate (RN11.3% vs PN17.6%; $P = 0.0002$).
RN was associated with decreased blood loss (RN165 mL vs PN323 mL; $P < 0.0001$) and a shorter length of stay (median 4 vs 5 days; $P = 0.0004$). There were no significant differences in operation time, blood loss, warm-ischaemia time or complications between robot-assisted and laparoscopic PN.
Conclusions: PN was the modality of choice for T1a but not for T1b renal tumours. MIT have been widely adopted for RN. Despite advances in surgical technique, a substantial postoperative complication risk remains with PN.

B7

Indicative operative numbers in urology training – can operative competency be achieved by CCT?

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Introduction: In 2011 the JCST issued guidelines for the award of a CCT in urology, including a list of 15 operative procedure groups, for which a trainee must have achieved a minimum level of exposure. This study aimed to establish if the expected level of exposure correlated with that achieved by trainees.
Methods: The operative logbooks of trainees who applied for a CCT in urology in 2010–2012 were reviewed. All exposure for each operative group, irrespective of the degree of supervision, was combined to give total experience.
Results: Logbook data on 154 trainees was available. Flexible cystoscopy was recorded in only 65 logbooks, ESWL in 8 and urodynamics in 39. These groups were therefore excluded from further analysis. The minimum requirement was reached by >75% of trainees in 5 of the remaining 12 operation groups. The highest number reaching the minimum was recorded for ureteroscopy and inguino-scrotal surgery at 95% and 98%. Only 64% and 68% achieved the required level for TURP and TURBT and even fewer for andrology, female and paediatric groin surgery at 25%, 21% and 8%. There was a significant difference in exposure between deaneries for all operative groups (ANOVA, $P < 0.05$) other than for cystectomy and female.
Conclusions: There is a disparity between the operative exposure expected by the JCST and that achieved by urology trainees. To prevent large numbers of current and future trainees failing to meet JCST requirements an urgent and significant change to urology training, or modification of the current guidelines, is required.