

Tuesday 23 June, 1400–1600
 BLADDER CANCER

Chairmen: Professor John Kelly &
 Mr Tim O'Brien

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The incidence of bladder tumour at cystoscopy for investigation of non-visible haematuria is too low to merit high prioritisation

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Introduction: Guidelines for investigation of haematuria vary in the priority allocated to non-visible haematuria (NVH). We examine the incidence of urological tumour diagnoses for visible haematuria (VH) and NVH using one such protocol.

Patients and Methods: There were 3336 consecutive referrals involving haematuria (1966 VH, 1370 NVH), without previous bladder tumour history, over a 21 month period. 135 were referred with lesions being seen on imaging already. Their presenting features and investigation plan were recorded prospectively.

Result: Of those with VH, 456 patients were symptomatic and bladder tumours were found in 35 (7.7%). Of 1510 patients with asymptomatic VH, 207 (13.7%) had bladder tumours. Ten who were referred with NVH and had tumour actually gave a VH history at their first attendance and are included in these figures. In comparison, 2.0% (15/740) of asymptomatic NVH and 3.1% (13/426) of symptomatic NVH over 40 years of age without previous bladder tumour had bladder malignancy. The degree of dipstick was highly variable. Of the 135 with lesions queried prior to referral, only in 2 cases was NVH the stated reason for investigation.

Conclusion: Advice to primary care about prioritising NVH should also indicate the low incidence of cystoscopically revealed malignancy.

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No role for urine cytology in the frank haematuria clinic; a review of 503 patients with 3y follow-up

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Introduction: We reviewed the investigations, diagnoses, treatments and outcomes of all patients presenting in our frank haematuria clinic in 2005.

Methods: Clinical letters, admission summaries and investigation results were captured from the hospital IT system during 3-years of follow-up (of all specialities) and reviewed retrospectively.

Results: Five hundred and three consecutive cases were analysed. No abnormalities were diagnosed in 261 (52%); benign diseases in 137 (27%) and malignant disease in 105 (21%). Renal cancer was identified in 13 (3%) prostate cancer in 19 (4%) and bladder cancer in 66 (13%). Urothelial cancer was identified in 32/37 urine cytology reported as "frankly malignant" or "suspicious" and 10/47 "atypical" samples. Cytology had a sensitivity of 66%, and specificity 90%, however all bladder tumours were diagnosed with flexible cystoscopy and all upper-tract tumours by ultrasound. Abnormal cytology without apparent cause underwent IVU, cystoscopy and biopsy with no tumours identified, after 3 years follow-up from urology and other specialities.

Conclusions: Urine cytology diagnosed urothelial cancer within acceptable parameters, but generated 42 (11%) false positives. Further investigations proved normal, with 3 years follow-up. Urine cytology does not appear to add significant information in the assessment of frank haematuria at the expense of significant additional investigation. Its role should be reviewed.

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Economic evaluation of photodynamic diagnosis and urinary biomarkers for detection and follow-up of bladder cancer

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Introduction: The aim of this study was to evaluate the most cost-effective strategy amongst photodynamic diagnosis (PDD), rigid white light cystoscopy (WLC), flexible cystoscopy, urine cytology and the leading contemporary urinary biomarkers (fluorescence *in situ* hybridisation [FISH], ImmunoCyt, nuclear matrix protein 22 [NMP22]) for detection and follow-up of bladder cancer.

Materials and Methods: An economic model was constructed to assess the cost-effectiveness of alternative diagnostic and follow-up strategies. The model described care pathways from initial presentation, through diagnosis and treatment over a 20-year time horizon. Strategies were compared over a range of willingness to pay values per life year gained.

Results: Flexible cystoscopy and ImmunoCyt followed by PDD at initial diagnosis and flexible cystoscopy followed by WLC in follow-up was the most effective (15.23 life years) strategy but also the most costly. Cytology followed by WLC in initial diagnosis and follow-up was the least effective (15.13 life years) strategy and least costly. Compared with WLC in each strategy, PDD was more likely to be cost-effective.

Conclusions: Pre-test probability of disease and society's willingness to pay for additional gain are key determinants in deciding which strategy to adopt.

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Minimising tumour scatter in Trans-urethral Resection of Bladder Tumour (TURBT): the evolution of a new technique and instrument for resection of superficial bladder tumour

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Introduction: Bladder tumour recurrence post TURBT can be due to implantation of tumour cells shed during the surgery. Best oncological practice dictates that any tumour should be removed en-bloc, with a margin of normal tissue. We demonstrate a number of techniques and a new instrument designed to minimise tumour scatter during resection.

Methods: Patients with suitable bladder tumours were identified at presentation and at follow up cystoscopy. En-bloc resection was carried out using the loop, Collins knife or a prototype instrument designed in conjunction with STORZ (Germany). The procedures were digitally recorded and a video library maintained. Patient demographics were recorded and a prospective database set up.

Results: Thirteen patients underwent en-bloc resection, mean age 55 (range 29–79). All tumours were non muscle invasive, 4 PUNLMP, 5 low grade pTa, 3 high grade pTa and one G2 pT1. Only one patient had a recurrence at 3 months, distant to site of original resection. There were no complications.

Conclusions: En-bloc resection of non-muscle invasive tumours is feasible. The use of specifically designed instruments should increase the number of tumours amenable to this technique. Further modifications of the new instrument are planned, as is a formal clinical trial.

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Detrusor muscle in the first, apparently complete, transurethral resection of bladder tumour (TURBT) specimen is a surrogate marker of resection quality and is dependent on operator experience – a validation study

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Introduction: The quality of TURBT in non-muscle invasive bladder tumours (NMIBT) determines the risk of recurrence at first follow-up cystoscopy (RRFFC). We previously demonstrated that presence of detrusor muscle (DM) in the first TURBT specimen (deemed complete by the surgeon) is both a surrogate marker of resection quality by independently predicting RRFFC and surgeon experience dependent (Eur Urol 7(3):914,2008). This study attempted to validate the previous observations.

Patients and Methods: Patients with new NMIBTs, deemed to have complete first resections were recruited from a prospectively maintained cohort from the 1980s and a contemporary cohort from another centre. Investigators reviewing tumour/surgeon characteristics and RRFFC were blinded to previous results. RRFFC included findings from first check cystoscopy and early re-TURBT. Logistic regression analysis was carried out.

Results: A total of 533 patients were included. The ability to resect DM appeared better in the 1980's cohort (71.6% vs 59.6%, $p = 0.005$). Absence of DM was associated with a higher RRFFC (OR = 2.2, 95% CI = 1–4.8, $p = 0.04$). Senior surgeons (consultants and trainees > year 5) were more likely to resect DM (OR = 5.8, 95% CI = 2.9–11.8, $p < 0.001$) and carried a lower RRFFC (OR = 2.8, 95% CI = 1.2–7, $p = 0.01$).

Conclusions: DM status at the first, apparently complete, TURBT is a surrogate marker of resection quality and is surgeon experience dependent.

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A comparison of re-resection rates for new G3PT1 bladder cancer, in patients randomized to initial blue light or white light resection

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Introduction: Guidelines recommend early re-resection of high grade non-muscle invasive bladder tumours both to improve staging and maximize tumour clearance. However PDD-assisted initial resection may be more complete making re-resection less necessary.

Methods: A prospective analysis of the results of white-light re-resections of newly presenting T1G3 tumours identified in 200 patients managed in a randomised trial of PDD versus white light TURBT since April 2005. Re-resection was offered on a case-by-case basis and was considered mandatory when muscle was not present.

Results: Thirty-nine out of two hundred (19.5%) tumours were initially staged T1G3. In the PDD arm 4/21 (19%) patients underwent re-resection: no patient had residual disease. In the white-light arm 12/18 (66%) underwent re-resection: 3/12 (25%) had residual disease (2 × T1G3; 1 × upstaged to G3T2). At 6/12 one patient in the PDD arm progressed to muscle invasive disease, in the white-light group 5 patients developed muscle invasive disease.

Conclusions: This pilot study suggests that a PDD-assisted first resection of new G3pT1 tumour may be so complete as to have the potential to reduce the need for early re-resection, for the purposes of maximal tumour clearance. Re-resection clearly remains mandatory if there is doubt about tumour stage.

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Combination bladder wall hyperthermia and intravesical mitomycin-C for BCG resistant bladder cancer – the initial UK experience

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Introduction: Standard treatment of high risk non muscle-invasive bladder cancer (HRNMIBC) is intravesical BCG. We report the initial UK experience of bladder hyperthermia and intravesical mitomycin-C (Synergo™ technique) as an alternative to cystectomy for BCG failure.

Patients and Methods: Twenty-five patients with bladder TCC were treated with the Synergo technique. 20 had HRNMIBC, and had either failed (14) or could not receive BCG (6). 5 had frequent recurrences in spite of intravesical therapy. Pre-treatment assessment was cystoscopy, urine cytology (VUC) and CTU. Follow-up was 3- monthly cystoscopy, biopsies, and VUC.

Results: Mean follow-up was 13 months (range 5–28). All patients had at least one post-treatment cystoscopy.

Table. Response rate by patient category (78).

Patient group	Number	Complete response	Partial response	No response	Progression	Stopped treatment
Total	25	19	3	3	0	6 (3 no response, 2 side effects, 1 died NED)
Primary CIS	6	4	1	1	0	1
G3 + /– CIS	13	11	0	2	0	2
Frequent recurrences	5	4	1	0	0	0

Conclusion: Synergo™ treatment offers an alternative for patients with HRNMIBC failing BCG. Longer follow-up is needed to assess response duration.

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Immediate versus delayed cystectomy for high-grade pT1 Transitional Cell Carcinoma of the bladder

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Introduction: High-grade pT1 TCC of the bladder can behave aggressively. For optimal oncological outcome early cystectomy is advocated. We report our experience with

radical cystectomy for high-grade pT1 bladder TCC.

Patients and Methods: Seventy-seven patients underwent radical cystectomy between January 1998–December 2007 for high-grade pT1 TCC. The mean age was 67.23 ± 8.31 years. Histopathological outcome and survival were analyzed retrospectively.

Results: Thirty-six patients underwent immediate cystectomy while 41 patients had a delayed cystectomy following BCG failure. For the immediate group 9/26 (25%) cases were pT0, 14 (39%) were pTis, 4 (11%) were pTa, 5 (14%) were pT1 and 4 (11%) cases were pT2 + . For the delayed group, 5/41 (12%) cases were pT0, 10 (24%) were pTis, 4 (10%) were pTa, 4 (10%) were pT1 and 18 (44%) cases were pT2 + . The median follow-up was 53 months. There was no difference in overall 5-year survival between the 2 groups (72.2% vs 73.2%; $p = 0.75$).

Conclusion: Despite the higher incidence of upstaging to muscle-invasion, the delayed cystectomy group had equivalent survival compared to patients undergoing immediate cystectomy. Bladder conservation with BCG is a reasonable option for high-grade pT1 TCC but large prospective randomised studies

are required to determine the optimal approach.

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The use of rectus Sheath catheters during radical cystectomy

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Introduction: Despite advances in intra- and peri-operative care for patients undergoing radical cystectomy (RC), there is significant scope to further improve post-operative recovery. Bowel problems, including paralytic ileus, increase patient morbidity and prolong hospital stay. Emerging evidence suggests

epidural anaesthesia may increase bowel complications. We therefore introduced the technique of bilateral rectus sheath catheter (RSC) insertion for patients undergoing RC.

Patients and Methods: Between March and December 2008, 20 patients underwent RC by a single surgeon/anaesthetist. 10 patients had RSC sited using ultrasound-guidance and 10 had epidural catheters (EC). Data were analysed retrospectively. Primary outcome measures included pain scores, ileus rates, bowel opening and length of stay.

Results: The demographics of the two groups showed no significant difference. Analgesic effect was equivalent between the groups. Median length of stay was significantly shorter in the RSC group (13 vs 15 days). Ileus rate was reduced by one-third in the RSC group.

Discussion: RSCs produce equivalent analgesia to ECs whilst avoiding the complications of epidural placement. Ileus rates and length of stay are reduced. The demand for nursing expertise and procedural cost is also reduced. The authors present a video of the technique and discuss possible mechanisms for the findings.

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Optimisation of intra-operative haemodynamics using trans-oesophageal Doppler monitoring in radical cystectomy: reduced physiological stress and accelerated bowel recovery

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Introduction: Cystectomy is a major operative procedure generating significant pro-inflammatory responses, demanding an increased need for tissue perfusion. Trans-oesophageal Doppler is a minimally invasive technique for continuous circulatory monitoring, aiming at goal directed intra-operative fluid optimisation.

Patient and Methods: Forty-eight patients undergoing cystectomy were recruited for a single-centred, double-blinded, prospective, randomised, controlled trial. Both trial and control groups had standard anaesthesia and Doppler monitoring ($n = 24$ in each group). The trial group received protocolised fluid boluses based on Doppler measurements of stroke-volume and corrected-flow time. Changes in haemodynamics, fluid requirements and bowel recovery were noted. Interl-6 measurements, indicative of physiological stress, were taken.

Results: (81).

<u>Haemodynamic Parameters</u>	Mean SV	Mean FTc	MeanFluids(ml/kg/hr)
Trial	94.5	383.1	15.2
Control	85.9	370.4	11.8

*Trial patients had early fluid loading during surgery

<u>Interleukin-6 Levels</u>	Pre-op	6 hrs post-op	24 hrs post-op
Trial	32.5	659	335.5
Control	32.2	892	447.8

<u>Bowel Recovery</u>	Ileus	Oral-diet	TPN	Flatus	Bowel-open	Hosp-Stay
Trial	17%	57 hrs	8%	3.5 day	7 day	18 day
Control	63%	66 hrs	17%	5 day	10 day	23 day

Conclusion: Trans-oesophageal Doppler monitoring in cystectomy improves intra-operative haemodynamics, achieving effective tissue perfusion and reducing physiological stress during surgery. This in-turn accelerates post-operative bowel recovery with a reduced incidence of ileus, allowing early hospital discharge.

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Long term survival outcome following radical cystectomy for TCC of the bladder – comparison between primary and salvage radical cystectomy

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Introduction: To evaluate the long term overall (OAS) and cancer specific survival (CSS) for patients undergoing primary and post-radiation salvage radical cystectomy (SRC).

Patients and Methods: Outcome for 552 patients who underwent radical cystectomy for TCC of the bladder between 1970 and 2005 was analysed. Of these, 313 patients underwent primary radical cystectomy (PRC) and 239 underwent SRC. The median age was 62.5yr for the PRC and 65.5 yr for SRC. Over the study period of 37 yr, 400 patients died (267 cancer specific) with an overall median

follow up of 5.05 yr. Statistical analysis was performed to assess OAS and CSS differences between the groups.

Results: There was no statistically significant difference in long term OAS ($p = 0.063$) or CSS ($p = 0.39$) between the groups. Five year OAS was 45.5% for the PRC and 42% for the SRC cohorts with a CSS of 51% and 50% respectively. The 10 yr OAS for PRC group was 32% and 26% for the SRC group with CSS of 45% for the PRC and 46% for SRC cohorts respectively.

Conclusions: A bladder preservation strategy involving radiotherapy and salvage cystectomy for radiation failure does not appear to incur a survival disadvantage for patients in the long term.

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International Robot-assisted Cystectomy Consortium (IRCC): immediate oncologic results after three hundred and eighty-two cases

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International Robot-assisted Cystectomy Consortium (IRCC): Immediate oncologic results after three hundred and eighty two cases

Introduction and Objective: Several institutions worldwide have attempted to evaluate and incorporate robot assisted radical cystectomy (RARC) into their practices. We report combined immediate oncologic results after RARC from a consortium.

Methods: The International Robot-assisted Cystectomy Consortium (IRCC) is a cooperative effort by multiple academic institutions across the globe. Between 2002–8, 11 academic institutions worldwide contributed to a centralized database of patients who underwent RARC with urinary diversion for invasive bladder cancer.

Results: Total of 382 patients underwent RARC. Mean age of the cohort was 67 years (range 37–90). Final pathological stage showed 225 patients (59%) had organ-confined disease \leq pT2, 115 (30%) had pT3, and 42 (11%) had pT4 disease. The overall rate of positive margins was 8%. The mean lymph node yield was 17 (1–68). Patients with positive lymph nodes were 81 (21%).

Conclusions: IRCC is a multi-institutional consortium effort with the largest series of RARC. Our immediate oncologic results appear to be comparable to open radical cystectomy. Long term oncologic results will define its role in urologic oncology.

Wednesday 24 June, 1400–1600

LAPAROSCOPY/SURGICAL TECHNIQUE

Chairmen: Professor Ralph Clayman & Mr Adrian Joyce

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Prospective randomised study to evaluate the effect of Sonosurg[®] – device versus Clips and cold dissection during nerve sparing radical prostatectomy on clinical outcome

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Introduction: The deleterious effect of energy-based dissection (ultrasound/diathermy) on cavernosal nerves has been clearly demonstrated in animal models. We evaluated the effect of ultrasound dissection during intrafascial nerve sparing Endoscopic Extraperitoneal Radical Prostatectomy (nsEERPE) compared to energy-free nerve sparing procedure.

Patients and Method: Three hundred consecutive patients were randomized and allocated to two groups. In Group A (n = 150) nerve sparing was performed using the Sonosurg[®] and in Group B (n = 150) only titanium clips and scissors.

Results: The positive surgical margin rate was 4.2% in group A and 4.9% in group B for pT2 tumors, and for pT3 tumors was 21.9% in group A and 22.2% in group B. At 12 months 91.3% (A) and 92% (B) of the patients achieved complete continence. Potency rates after 6 months follow up were significantly different ($p < 0.039$): 50% (A) and 62.7% (B) respectively.

Conclusion: The use of energy free dissection does not compromise oncological outcome, prolong the operation time, increase the transfusion rate, nor prolong catheterisation time and the continence rate is not reduced. There is a clear advantage with energy free dissection upon erectile function at both six and twelve months.

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Hand assisted laparoscopic partial nephrectomy with the radiofrequency coagulation-assisted technique – the way forward?

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Introduction: To evaluate feasibility of hand assisted laparoscopic partial nephrectomy combined with the radiofrequency coagulation-assisted technique.

Patients and Methods: In all, 55 patients with solitary renal tumour smaller than 53 mm underwent hand assisted partial nephrectomy. Kidney and renal hilum were dissected and prepared for possible clamping. Healthy tissue encompassing renal tumour was coagulated using four tined needle probe attached to radiofrequency generator. The probe tines were deployed to create ablation zone 1 cm wide. Tumour was removed using cold scissors cutting in coagulated area.

Result: Mean patient age was 64.3 years (range 45–80) with BMI 29.5 (range 20–45). Mean tumour size was 30.5 mm (10–53). 22 tumours were located at upper pole, 9 at lower pole and 24 centrally. Mean operative time for coagulation with radiofrequency probe was 17 minutes (8–25) and mean operative time for whole partial nephrectomy was 82 minutes (50–170). Intraoperative complications did not occur and minor postoperative in three (12%). All tumour margins were negative.

Conclusion: Early experience with hand assisted and radiofrequency assisted laparoscopic partial nephrectomy shows that it is safe and quick method enabling excellent control of bleeding without renal hilum clamping and thus speeding up operation. Learning curve is extremely short.

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Focused laparoscopic training in urology
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Introduction: Urology in the UK faces multiple challenges in the training of laparoscopic surgeons. These include few basic laparoscopic procedures to gain initial experience, the training of both junior and senior surgeons in the same institution with fewer hours worked by juniors and service pressure from targets.

Methods: We describe a training model for laparoscopic radical prostatectomy. The procedure has been divided into 9 standard steps. The training model includes affordable technologies including an additional touch screen for the trainer to draw on to guide the trainee on the operating screens and a robotic camera holder controlled by the trainer. A case by case debriefing using a "Directly Observed Procedural Skills" style assessment allows future training to be adapted to suit individual learning needs.

Results: Eleven surgeons have used this training model. More than one surgeon can train per case resulting in fewer cases needed to meet pre-defined competencies and having less impact on service delivery. By progressing through the steps of the training model in a logical way, trainee surgeons learn safely and efficiently.

Conclusion: Using this systematic learning technique it is possible for established senior surgeons and trainees with an interest in laparoscopy to learn laparoscopic radical prostatectomy.

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Laparoscopic endoscopic single site surgery (LESS) – tumour nephrectomy
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Introduction: The concept of scar-free surgery is close to being realised by laparoscopic endoscopic single site surgery (LESS). LESS is an evolving approach to laparoscopic surgery with the development of single port systems and flexible instruments. We performed LESS for renal tumour nephrectomy in a series of four patients.

Patients and Methods: Four patients underwent single port nephrectomy using the R-Port (Advance Surgical Concepts), inserted via a transumbilical incision. A novel, flexible grasper (Real Hand) and a 5 mm high definition camera (Olympus) were used in addition to standard laparoscopic equipment.

Results: All were T1 renal tumours (size 4–6 cm). The median patient age was 65 years and median BMI was 22.5. The median operative duration was 140 minutes and the median blood loss was 100 ml. Histology confirmed complete excision of specimen confined renal cell carcinoma. No intra- or post-operative complications occurred.

Conclusion: We found LESS feasible and safe in this select group of patients. LESS has been made possible by the development of the multiport and flexible laparoscopic instruments that ensure no oncological compromise occurs. Single site surgery presents the closest approximation to scar-free surgery and will play an important role in the future development of laparoscopic surgery.

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Laparoscopic extraperitoneal para-aortic lymph node dissection (LERPLND): is it feasible?

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Objective: To assess the outcome from laparoscopic extraperitoneal para-aortic lymph node dissection (LERPLND) in patients undergoing cancer treatment.

Methods: We present a retrospective case review of 40 patients undergoing retroperitoneal lymph node dissection (LERPLND) from 2003 onwards. The indication for the procedure included assessment of stage 1b2– 4a cervical carcinoma prior to chemo-radiation and template dissection for post-chemotherapy testicular carcinoma recurrence.

Results: The median age of the patients at diagnosis was 41 years (range 25–59 years), with completed follow-up for a mean duration of 18.5 months (range 4–61 months). All were completed via the laparoscopic technique. There were no reported intra-operative complications but 2 lymphocysts occurred post-operatively. The median hospital stay was 2.1 days.

Conclusions: Laparoscopic para-aortic lymphadenectomy (LERPLND) was achievable in all cases, and is an attractive alternative to open or transperitoneal surgery in para-aortic node dissection.

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Introduction of 23 hour stay laparoscopic radical prostatectomy – a team effort

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Introduction: NICE guidance suggests laparoscopic prostatectomy to be as efficacious and safe as open surgery. Reduced hospital stay and blood loss are the main benefits. We describe our use of an enhanced recovery care pathway to reduce patient stay.

Patients and Methods: All patients followed a detailed peri-operative pathway with a specific anaesthetic technique and an enhanced post-operative recovery programme including consultant-led micro-management.

Results: Specific efforts were made to reduce carbon dioxide absorption and the use of peri-operative opiates (Clonidine). Mannitol and Dexamethasone were used for neuroprotection. Watertight anastomosis enabled drain removal after 12 hours. The cohort included 100 men (mean age 61.9yrs) with a presenting mean PSA of 13.7 ng/ml (range 2.16–62.0). Overall, mean length of hospital stay for the first 30 patients was 1.93 days and 1.2 days for the latter 70 patients. Of the latter 70 patients 90% met the 23 hour stay target. Early discharge did

not increase the rate of complications in the first 30 post-operative days.

Conclusion: Laparoscopic prostatectomy has been successfully introduced to our unit and 23 hour stay appears feasible and safe to patients. It requires the team to follow a set protocol and careful micro-management by the operating surgeon.

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Laparoscopic radical prostatectomy – can the learning curve be accelerated?

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Minimally invasive prostatectomy, either laparoscopic (LRP) or robotic, is rapidly developing as the surgical standard of care for localised prostate cancer. However the latter is expensive and the former demanding to learn. Descriptions of stepwise techniques for LRP and BAUS guidance provide a framework for urologists to acquire the advanced laparoscopic skills needed to safely introduce a LRP service (BJU 2007 Aug; 100(2):379–81). We present outcomes for an initial prospective LRP series based on both the current BAUS guidance and modular training by an experienced upper tract laparoscopist. Thirty-four patients underwent an extra-peritoneal LRP. Median age was 63 years, mean PSA was 6.4, Gleason score 6 and gland size 42.5 grams. Concomitant node dissection and nerve sparing was performed in 11.8% and 38.2%. Median operative time was 250 minutes. 3% required a transfusion and 8% were converted. Median LOS was 3 days. Overall positive margin rate was 23.5%. PSA was unrecordable in 96.5% at mean follow-up of 12-months. These results are entirely in keeping with other larger series. BAUS guidance provides an appropriate framework for the introduction of a LRP service. Adoption of this systematic approach facilitates the rapid and safe introduction of this complex procedure with excellent oncological outcomes.

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Laparoscopic radical prostatectomy as a primary treatment modality for locally advanced (cT3) prostate cancer: Feasibility, oncological and functional results from a large series

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Introduction and Objectives: The best treatment option for locally advanced prostate cancer remains controversial. In current clinical practice, radiotherapy in combination with hormonal treatment has become the preferred treatment modality for locally advanced prostate cancer. Recently, due to the increased overall surgical experience, open RP has emerged as a treatment option for locally advanced prostate cancer. We present our experience with extraperitoneal laparoscopic radical prostatectomy for clinically advanced prostate cancer.

Material and Methods: Between 1999 and 2007, 526 patients in our institution underwent LRP for clinically advanced (cT3) prostate cancer. Data for operation times, morbidity, positive surgical margins, continence and sexual function were analyzed retrospectively and compared with similar data from cT2 patients for which LRP is a standard treatment.

Results: The mean operative time was 213 min. 46 patients (8.8%) had minor or major complications. Positive surgical margins were identified in 206 patients (39.2%) and 58 (16.2%) patients had biochemical failure during follow up. The incontinence ratio after 1 year was 7.4% comparable to that of cT2 patients (7.6%). Sexual function showed no statistically significant difference between the two groups of patients.

Conclusions: LRP for clinically advanced prostate cancer is surgically feasible, and results comparable.

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Initiating a multi-procedural robotic service; lessons learned in a teaching hospital setting

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Introduction: The complexities of initiating a robotic programme range further than surgical challenges alone. Justifying a business case requires defining and appeasing a large multidisciplinary team. Presented are our data, pitfalls and solutions.

Patients and Methods: The core MDT consisted of: theatre and operational managers; estates department; theatre/ward nurses; sterilisation service; anaesthetists; clinical risk dept; ethical committee and urologists. Complex logistical issues, sterilisation, theatre flexibility and staffing were negotiated and performance data collected.

Results: Delays of two months occurred due to sterilisation issues. Logistics of storage and installation proved difficult. Theatre flexibility was complex. Over four months, 13 radical prostatectomies; 3 pyeloplasties; 1 pelvic lymph node dissection; 6 nephrectomies; 4 nephro-ureterectomies and 1 partial-nephrectomy were performed. Nursing theatre set-up, clear-up, anaesthetic and surgical times were compared. Disparity was observed due to different learning curves. Consensus management proved challenging and delayed progress. Early discharge depended on surgical technique as well as motivation by pre-clerks and ward nurses.

Conclusion: Difficulties in the programme were far reaching. Learning curve involves surgeons, scrub nurses, operational managers, pre- and post-op nurse carers. Tolerance and support are fundamental. Doing varied procedures "*ab initio*" poses challenges beyond well-described "RP" learning curves.

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Training in robotic-assisted radical prostatectomy. What can be achieved in a 1-year fellowship. A review of a fully mentored, modular training programme with initial surgical outcome

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Introduction: Over a one year period from February 2008 we undertook a robotic Fellowship in a high volume centre with the aim of being able to perform a robotic-assisted radical prostatectomy independently in under 3 hours.

Methods: We undertook a stepwise modular training programme.

1. 20 cases assisted/observed.
2. Console/robot introduction session completed.
3. 20 hours "drylab" console work. 20 model anastomoses and DVC sutures performed.
4. The operation was divided into steps with each step perfected before moving onto the next. Training supplemented with recorded cases. First complete case achieved 7 months into fellowship.

Results: Model anastomotic times decreased from 36–18min. 110 live cases in 10 months. 24 observed, 30 assisted and 56 on the console, 15 performed completely. Of these, mean age was 64.5 (55–73), mean preop PSA 12.2 (4.8–40), mean op time was 176min (131–224), no patients transfused. All discharged day one. 2 patients had complications. 6 month functional and biochemical outcome will be presented at the meeting.

Conclusion: Ability to perform RARP with a low complication rate is feasible in a 1 year fellowship. However more cases are needed to perfect complexities of the operation such as nerve sparing techniques. High quality mentoring within a complete robotic team is a necessity for adequate learning.

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Experience matters in robotic-assisted radical prostatectomy: comparison of consecutive sets of 50 cases in a single surgeon series of 500 patients

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Introduction: Robotic-assisted radical prostatectomy was introduced to our institution in 2004 using the Da Vinci 4 arm system. We wanted to compare the operative, pathological, functional and biochemical outcomes throughout our series to see what difference experience makes.

Methods: Over a 50 month period all 500 cases were included. A review of our prospectively collected database was performed, comparing patients in blocks of fifty.

Results: Improvements in most parameters were seen from the first 50 to the last. Mean age dropped by 5 years, preoperative PSA and Gleason grade were similar. Mean operative times reduced from 198 to 145 minutes, mean hospital stay reduced from 2.91 to 1.13 days, with complication rates reduced from 24% to 2%. There was a slight increase in blood loss and positive margin rate. Early

outcome data showed an improvement in continence and ED rates, minimum 6 month data will be presented at the meeting.

Conclusions: Most parameters improve with experience. Increase in blood loss and positive margin rates reflects more patients undergoing athermal nerve sparing. We estimate it takes around 50 cases for these baseline demographics to plateau however more cases are needed for refinement of the nerve spare technique (around 200).

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Robotic-assisted radical cystectomy: oncologic and functional outcomes at up to 5 years

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Introduction: We report the outcomes of the robotic-assisted radical cystectomy (RARC) at up to 5 years. Medium or long term follow-up of this procedure is limited.

Material and Patients: We report the oncologic and functional outcomes in the first 50 patients, between 2004–9. Maximum follow-up extends to 5 years. Urinary diversion, ileal conduit (n = 44) or Studer pouch (n = 6) were performed extracorporeally.

Results: Of 43 men and 7 women, median age 68 (38–80) years, median operating time was 360 (277–600) minutes and blood loss was 300 (100–1150) ml. Median hospital stay was 9 (5–24) days. Surgical margins were all clear. Forty-seven had TCC on final histology (CIS = 5, T0 = 4, G3Ta = 7, G3T1 = 8, G3T2 = 8, G3T3 = 10, G3T4 = 3, G2T1 + CIS = 2), one adenocarcinoma, one squamous cell carcinoma and one sarcomatoid. Median lymph nodes retrieved was 14 (2–28) with 6 microscopic nodal metastases. Two patients died of distant metastasis. One developed pelvic recurrence. Overall survival is 96% and disease-free survival 90% at up to 5 years. Overall complication rate was 28%.

Conclusions: At medium term follow-up of up to 5 years, RARC appears to be as effective as open and laparoscopic radical cystectomy.