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BAUS Annual Meeting, 23–27 June 2008, Manchester Central

Paper Sessions

Tuesday 24 June

Paper Session A
14.00-15.30 Exchange Hall
KIDNEY CANCER
Chairman: Mr Michael Aitchison
Papers 38-45

Paper Session B
14.00-16.00 Exchange Auditorium
PROSTATE CANCER TREATMENT
Chairman: Professor David Neal
Papers 46-57

Wednesday 25 June

Paper Session C
14.00-16.00 Exchange Hall
LAPAROSCOPY AND SURGICAL TECHNIQUE
Chairman: Mr Adrian Joyce
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Paper Session D
14.00-16.00 Exchange Auditorium
BLADDER CANCER
Chairman: Mr John Kelly
Papers 101-112

Tuesday 24 June, 14.00–15.30
Kidney Cancer
Chairman: Michael Aitchison

038

MDM2 and p53 coexpression is associated with poor prognosis in renal cell carcinoma patients undergoing radical nephrectomy

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Introduction: Compromise of the p53 tumour suppressor pathway has been shown to be an important event in the progression of a number of human cancers. Studies have also shown that renal cell carcinomas (RCC) with high expression of p53 have a poorer prognosis. RCC's that over express p53 still retain its normal wild type function. We wanted to investigate the role of the p53 counter-regulatory protein and oncogene MDM2 in patients with RCC.
Materials and methods: A recently created tissue microarray of 91 RCC nephrectomy samples was used to detect the presence of p53 and MDM2 expression by immunohistochemical analysis. A scoring system was devised and two consultant histopathologists independently scored the tumour samples for p53 and MDM2 staining.
Results: Analysis of 91 patient samples revealed that p53 was expressed in 14 (15.4%) and MDM2 was expressed in 24 (26.4%). Eleven tumours (12%) expressed both MDM2 and p53 and this association was highly significant $P < 0.0005$. Five year analysis of patients with tumours that coexpressed p53 and MDM2 showed a significant decreased disease specific survival ($P < 0.05$).
Conclusion: Our results show an intriguing phenotype whereby two normally counter-regulatory proteins are both over expressed in poor prognosis RCC.

039

Partial nephrectomy for renal cell carcinoma in single kidneys

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Introduction: Renal cell carcinoma in a single kidney is an imperative indication for partial nephrectomy(PN) if technically feasible. Conventional indications for PN (single tumour, tumour <4cm) may be less relevant to the selection of patients without a contralateral kidney.
Methods: Retrospective case-note review of patients with single kidneys undergoing partial nephrectomy for renal cell carcinoma.
Results: Forty-three patients underwent partial nephrectomy for renal mass in single kidneys. Median lesion size was 35mm (10–85mm) and median number of CT detected lesions was one (range 1–5). Median length of postoperative stay was eight nights (range 3–38). Median operative time was 178 min (range 70–350). Median estimated blood loss (EBL) was <500 ml although 12 patients had EBL >1 litre. Three patients had major peri-operative complications: two primary haemhorrage (return to theatre $n = 1$, embolisation $n = 1$) and one returned to theatre for secondary haemorrhage. Median follow up was 35 months. three patients became dialysis dependent. Three patients developed distal metastasis and one patient developed nodal disease. One patient died of metastasis. No local recurrence occurred.
Conclusion: The peri-operative morbidity of nephron sparing surgery is higher in patients with a single kidney than is reported for patients undergoing elective PN. Early nephrological and oncological results of PN in this group of patients are excellent.

040

Evolution of laparoscopic partial nephrectomy (LPN) in the treatment of solitary renal mass <4 cm

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Introduction: LPN was performed on 50 patients, by a single surgeon, since June 2003. We compared the outcome of the first 25 and subsequent 25 LPNs. Our technique has evolved with changes including hilar control, by clamping only the artery using a Rummell Loop and the use of fibrin glue in addition to suturing and surgicell bolsters to close the renal defect.
Methods: Case notes were retrospectively reviewed. Data obtained included: operating time, blood loss, warm ischaemia time, tumour size, margin status and change in serum creatinine.
Results:

	1st 25 cases	2nd 25 cases
Average operating time (minutes)*	165	138
Average blood loss (mls)	432	455
Average warm ischaemia time (mins)*	31	26
Tisseal (number of cases where used)	11	23
Average tumour size (mm)	23	24
Positive margins (number)	3	1
Complications (number)	8	7
Average hospital stay (days)	6.9	5.8
Transfusion*	6	1
> 20 μmol rise in creatinine (number)	4	3

(*$P < 0.05$ = significant; one tailed *t*-test)

Conclusion: Continuous evolution of surgical techniques have led to significant

improvements in operating and warm ischaemia time and transfusion rate as well as a trend towards improved positive margin rate and hospital stay.

041

Caval excision or replacement in the management of renal cell carcinoma

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Introduction: Renal cell carcinoma may present with adherent caval tumour thrombus, caval invasion or encasement. Caval replacement may be necessary for complete local control.
Methods: Retrospective case-note review of patients with caval involvement requiring caval excision.
Results: Ten patients underwent caval excision (2001–2007). Eight patients had primary surgery including nephrectomy. Two patients had prior nephrectomy (nodal recurrence encasing cava and caval recurrence post-nephrectomy). Of the eight patients undergoing primary surgery two had cytoreductive surgery for known metastatic disease. Three patients required veno-venous bypass. The cava was excised in all cases and thrombectomy performed as required. Reconstruction: Cava Oversewn (n = 2), PTFE patch (n = 1) and PTFE tube graft (n = 7). One patient underwent laparotomy for postoperative bowel obstruction. Median duration of surgery was 256 min (175–408). Median estimated blood loss was 1250 ml (400–4900ml). No inpatient dialysis. Of eight patients free of metastasis at baseline, with a median of 23 months follow up, three (38%) were free of recurrence, three (38%) were dead from metastasis (22.22 and 70 months post-op) and two patients (25%) had multimodality therapy and are alive to date (seven and 43 months post-op).
Conclusion: Caval excision and replacement can safely be undertaken in well-selected patients. Even in these advanced tumours disease control may be possible.

042

The treatment of pulmonary emboli in patients with renal cell carcinoma associated with venous extension

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Introduction: Pulmonary emboli (PE) usually consist of blood clots. However, renal cell carcinoma (RCC) invading the venous system can embolise to the pulmonary arteries.
Patients and Methods: Our database of 172 RCC patients with venous extension between 1992 and 2007 was examined to identify patients who had a PE pre-, per-, or post-operatively.
Results: PE occurred in 19 patients and was immediately fatal pre-operatively in three. Twelve patients underwent pulmonary embolectomy on cardiac bypass (CB) at the time of radical nephrectomy and removal of IVC tumour thrombus. The embolus contained carcinoma in all. Two underwent nephrectomy and removal of IVC thrombus and the PE was treated with anti-coagulants. Per-operative PE occurred in four cases and was fatal in one. Five underwent removal of the PE (containing carcinoma) on CB. Post-operative fatal PE occurred in one man 2 months after nephrectomy.
Conclusions: PE in renal cell carcinoma is most often due to tumour thrombus within the IVC which can occur pre- or per-operatively. Patients with IVC extension need urgent surgery and the availability of immediate CB at the time of nephrectomy.

043

Outcome of debulking nephrectomy for metastatic renal cell carcinoma in unselected patients in a UK cancer centre

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Introduction: The median survival of metastatic renal cell carcinoma is 6–10 months, but can be improved by debulking nephrectomy and adjuvant therapy. The data from current literature comes from patients selected for and fit enough to participate in randomisation trials. We assessed the outcome from debulking nephrectomy and adjuvant immunotherapy in a single UK cancer centre.
Methods: A review of 48 patients undergoing debulking nephrectomy ± immunotherapy was undertaken. Overall and cancer specific survival, biochemical parameters, metastatic burden, ASA grade and performance status were documented.
Results: Thirty-three males and 15 females (aged 44–72; median 58) with a mean Karnofsky score of 86 and median ASA of two underwent debulking nephrectomy. The median length of stay was 9 days with five (10.4%) complications and no perioperative mortality - two chest infections, two myocardial infarctions and one ATN. The median survival was 18 months compared to 5.3 months in a no treatment group and 8.3 months in an immunotherapy only group within our centre, with 22 patients still alive.
Conclusion: Debulking nephrectomy and adjuvant immunotherapy can produce a durable survival advantage with a low complication rate in an unselected mixed population who have traditionally been regarded as a poor prognosis group.

044

Recurrent disease following radical nephrectomy – the case for surgery

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Introduction: Select patients benefit from an aggressive surgical approach to renal bed recurrence following radical nephrectomy. We assessed a series of patients who had surgery for recurrent disease in the renal bed, nodal area, adrenal and skin following radical nephrectomy.
Patients and Methods: Thirty-three patients underwent surgery for excision of recurrent disease between 1999 and 2006. Time to recurrent surgery was recorded and correlated with site of disease recurrence as well as with survival.
Results: There was renal bed recurrence in sixteen patients, nodal in ten, skin in four, and isolated adrenal recurrence in three with an average time to recurrent surgery of 256, 170, 220 and 348 weeks respectively. At a median follow-up of 150 weeks, 14 patients had died including all patients with skin recurrences. Average time to death for renal bed, nodal, skin and adrenal recurrence was 79, 64, 54 and 168 weeks respectively.
Conclusions: Patients with recurrent adrenal disease had the longest delay before surgery and subsequent time to death.

Recurrent disease in the skin was associated with a poor outcome with the shortest overall survival after surgery. Site of disease recurrence can predict subsequent survival and success of surgery for recurrent disease.

045

ODMIT-C : A multi-centre prospective randomised trial of a single post-operative intravesical dose of mitomycin-C to prevent bladder recurrence following nephroureterectomy for upper tract TCC (UTTCC)

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Guy's and St Thomas Hospitals NHS Foundation Trust and The BAUS subsection of Oncology, London, UK

Introduction: Bladder tumours are reported in up to 40% of patients following nephroureterectomy.

Methods: Patients with no previous history of bladder cancer were randomised to receive a single post-operative dose of 40 mgs intravesical Mitomycin-C on removal of the urethral catheter following nephroureterectomy for UTTCC. Follow-up was by cystoscopy at 3/12, 6/12, and 12/12. The primary endpoint was the development of bladder tumour within the first year. The trial was sponsored by BAUS sub-section of Oncology.

Results: Two hundred and eighty-four patients were randomised. Follow-up data is outstanding on 43 patients but is anticipated to be complete by February 2008. The arms were well matched for age and multifocality of tumour. In the mitomycin treated arm there were more grade three tumours (50 versus 38) and more invasive (≥T1) tumours (85 versus 66). No recurrences occurred in patients with G1 tumours. By intention to treat, bladder recurrence occurred in 16/113 (14%) of the mitomycin arm and 26/114 (23%) of the observation arm ($P = 0.07$). By treatment received, bladder recurrence occurred in 13/99 (13%) of the mitomycin arm and 26/112 (23%) of the observation arm ($P = 0.04$).

Conclusion: A single intravesical dose of mitomycin-C may reduce the risk of a bladder tumour in the first year following nephroureterectomy.

Tuesday 24 June, 14.00–16.00
Prostate Cancer Treatment
Chairman: David Neal

046

Report on the early efficacy and tolerability of I125 permanent prostate brachytherapy from a UK multi-institutional database

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Introduction: Brachytherapy is an increasingly attractive radical treatment for prostate cancer. Patient selection, implant quality and outcome information is important for quality assurance and to accurately inform patients of results.
Materials and methods: All patients implanted at three centres since 2003 have been prospectively registered on a central database. RAPID-Strand™ seeds were used in the majority. Patient demographics, tumour characteristics, pre and post-implant parameters and the use of supplemental therapy is documented. Biochemical and clinical outcomes including urinary toxicity is recorded.
Results: One thousand, five hundred, and thirty-five men with a median follow-up of 21 months are registered. Patient selection is similar between centres with median age 64 (41–82), median iPSA 6.6 ng/ml (0.1–57) and median Gleason six (3–9) noted. Variability in pre and post implant dosimetry is noted. Catheterisation rates of 6–10% are seen, with urinary stricture rates of 1% at each centre. Urinary symptom scores triple at 6 weeks after implant, but are not significantly different to baseline values by 9 months. Two year actuarial biochemical failure free survival is 94.4% and 94.5% for ASTRO and Phoenix definition respectively.
Conclusion: This maturing database representing approximately one third of UK implants since January 2003 confirms the early efficacy and tolerability of prostate brachytherapy. Long term outcome analysis is planned.

047

Prostate brachytherapy: 7-year biochemical relapse-free survival from 500 patients

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Introduction: Over 1300 patients have undergone I-125 prostate brachytherapy (BXT) in our unit. We present data for the first 500 consecutive patients.
Patients and Methods: A prospective database of patients treated with BXT between 1999–2004 was analysed. Patients were stratified into low (51%), intermediate (36%) and high (13%) risk, as defined by the MSKCC Prognostic Index. Patients received 145Gy BXT alone (47%), BXT with neoadjuvant androgen deprivation (35%), 45Gy external beam radiotherapy with 110Gy BXT (3%), or trimodality therapy.
Result: Median follow-up was 61 months (range 38–105) with a mean age of 63 years. Prostate cancer-specific survival was 99.6%. 37 patients (7.4%) experienced biochemical failure (PSA = nadir plus 2 ng/ml): 6% low, 9% intermediate, and 11% high risk patients. Actuarial 7-year biochemical relapse-free survival (bRFS) was 94% for low risk, 90% for intermediate risk, 87% for high risk, and 91% for all patients. PSA nadir = 0.5 ng/ml was achieved by 84% at both 4 (n = 268) and 5 years (n = 160); 5-year PSA = 0.2 ng/ml was 73%. Mean D90 was 147Gy for BXT alone (n = 379), and 112Gy for boost patients (n = 81).
Conclusion: This updates our previously reported bRFS following prostate BXT, confirming that results are durable beyond 5 years.

048

Comparative video-linked motion analyses of open, laparoscopic and robotic prostatectomy

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Introduction: Controversy surrounds the benefits or otherwise of robotics in urology. We present data on the effect of complex tasks performed using the robotic-, laparoscopic- and open- techniques in our Gait Lab.
Methods: Urologists with experience in minimally invasive surgery performed suturing (n = 288), simulating vesico-urethral anastomosis in radical prostatectomy. Each surgeon performed 24 simulated sutures by each technique. Upper body EMG were recorded. Fiducial markers were attached to anatomical landmarks on the surgeon's body and motion cameras captured posture and movements. Continuous stream video recording was done for all tasks for error analysis.
Results: Mean time per suture was 50 seconds for open, 102 seconds for robotic and 205 seconds for laparoscopic ($P < 0.01$, one-way ANOVA). Video analysis of task time and errors showed worsening in performance towards the end of laparoscopic sessions. EMG recordings detected increased recruitment of shoulder muscles in the laparoscopic group. Neck discomfort was reported in the robotic group whereas during laparoscopy and open surgery surgeons reported back and shoulder discomfort.
Conclusions: The increase in task time and errors at the end of a laparoscopic session indicate greater fatigue in laparoscopy compared to open and robotic surgery.

049

Operative details and medium-term oncological and functional outcome of robotic-assisted laparoscopic radical prostatectomy: our first 400 cases with a minimum of 1 year follow-up

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Introduction: Robotic-assisted laparoscopic radical prostatectomy (RARP) using the da Vinci® surgical system is increasingly used for the management of localised prostate cancer.
Patients and methods: Our prospective database was reviewed to identify all patients who underwent RARP and had completed at least 1 year of follow-up.
Results: From December 2003 to August 2006, 400 RARPs were performed. The mean age was 60.4 (43–75) years. Mean pre-operative prostate specific antigen (PSA) level was 8.3 (0.3–42) ng/ml. The mean operating time was 186 (94–435) minutes. Average length of stay was 3.5 (1–12) days. The complication rate was 16%. The positive surgical margin rates for T2 and T3 tumours was 9.9% and 52.3% respectively. The biochemical recurrence-free survival (PSA<0.2 ng/ml) was 87.2 % at a mean follow-up of 20.7 (12–44) months. The pad-free rate at 3,6 and 12 months was 78.5%, 87.6% and 91.4% respectively. Of those men previously potent who underwent nerve-sparing RARP, the potency rate at 3,6 and 12 months was 28%, 42% and 62% respectively.
Conclusion: RARP is a safe and minimally-invasive option for the management of localised prostate cancer. Our initial experience with this procedure shows promising medium-term outcomes.

050

Comparing oncological and functional outcomes of HIFU with robotic radical prostatectomy for treatment of localised prostate cancer

T.G. RASHID, T. DUDDERIDGE, S. ZAHUR and C.W. OGDEN
Royal Marsden Hospital, London, UK

Introduction: HIFU and radical robotic prostatectomy (RRP) are minimally invasive techniques used to treat localised prostate cancer. We compare clinical and functional outcomes of age- and grade-matched patients who have undergone HIFU or RRP to treat clinically localised disease.
Methods: Thirty patients undergoing HIFU completed functional questionnaires (FACT-P, IIEF and IPSS) pre-operatively and at 3-monthly intervals post-operatively. Results were compared with 30 patients who underwent RRP by the same surgeon.
Results: Early functional and PSA results are summarised (Table 1). Biochemical response was seen in 71% (PSA = 0.5 ng/ml as measured for prostate-preserving therapy) and 35% (PSA = 0.05) at 12 months in HIFU and 100% patients at 6 months in RRP (PSA = 0.05). Urinary symptoms returned to pre-operative levels by 9 months for HIFU and showed significant improvement at 6 months for RRP. Sexual function was equivalent for both at 6 and 9 months (RRP, HIFU). Further analysis will take place in April 2008.
Conclusion: Biochemical response and improved urinary function is seen earlier for RRP. Sexual function is equivalent (6 and 24 months, RRP and HIFU respectively). A significant number demonstrate surgical response at 6 and 12 months (RRP, HIFU). Further evaluation of functional differences is required.

TABLE 1: for 050

Mean scores	Pre-op		3 months		6 months		9 months		12 months		18 months		24 months	
	HIFU	RRP	HIFU	RRP	HIFU	RRP	HIFU	RRP	HIFU	RRP	HIFU	RRP	HIFU	RRP
N=	18	27	22	9	20	4	19	-	13	-	11	-	6	-
IPSS	6.2	10.7	14.4	11.3	11.9	6.5	10.0	-	7.4	-	3.7	-	5.3	-
IEFF	46.8	45.5	24.4	17.6	23.7	14.8	29.2	-	26.0	-	43.0	-	48.0	-
PSA (ng/ml)														
N=	23	24	26	8	23	5	20	-	14	-	10	-	2	-
Min	3	1.7	0.02	0	0.02	0.04	0.04	-	0	-	0.04	-	0.04	-
Max	14	14.9	1.9	0.04	1.1	0.04	2.0	-	1.8	-	1.3	-	0.08	-
Median	7.4	5.25	0.1	0.04	0.19	0.04	1.0	-	0.02	-	0.05	-	0.06	-

051

Does intrafascial dissection during nerve-sparing laparoscopic radical prostatectomy compromise cancer control?

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Introduction: High incision of the lateral prostatic fascia during nerve-preserving radical prostatectomy (RP) is advocated to maximise nerve preservation but since this necessitates removing all the fascial coverings from the prostate concern exists regarding its oncological safety.
Patients and methods: Nine hundred and seventy-three laparoscopic RPs (LRP) were performed/supervised between March 2000 and October 2007 for cT1-3N0M0 prostate cancer. Of 510 having bilateral NVB preservation, a CD technique was used in 240 men and a standard technique in 270 men (control group-CG). Potency was self-assessed at 1, 3, 6, 9 and 12 months following surgery and was defined as an IIEF-5 score = 17.
Results: Mean follow-up for CD and CG patients = 11.7 (3–24) and 13.1 (3–24) months. Potency rates at 1, 3, 6, 9 and 12 months were 18%, 37%, 44%, 59% and 62% in the CD group and 18%, 34%, 43%, 55% & 61% for CD patients. Biochemical recurrence rates were 0.0% in the CD and 1.1 % in the CG group (P = 0.30).
Conclusions: Intrafascial dissection of the prostate produces a modest but statistically insignificant improvement in potency rates but importantly does not compromise cancer control.

052

The UK's first 1,000 cases of laparoscopic radical prostatectomy: evidence of multiple learning curves

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The Royal County Hospital, Guildford, UK

Introduction: The learning curve for laparoscopic radical prostatectomy (LRP) is reportedly 30–100 cases but as some aspects of the procedure are more demanding than others, more than one learning curve is likely to exist.

Patients and methods: One thousand consecutive patients with clinical stage T = 3aN0M0 prostate cancer underwent LRP during a 92 month period.
Results: The median (with range) operating time was 177 (78–600) minutes. The median blood loss was 200 (10–1300) ml and four patients were transfused (0.4%). The median post-operative hospital stay was 3.0 (3–28) nights. There were 48 complications (4.8%) requiring surgical intervention in 33 (3.3%) patients (58% of these as a day case admission). PSM rates according to d'Amico risk groups were: low = 9.1%; intermediate = 20.3%; and high = 36.8%. At a mean follow-up of 27.7 (1–72) months 94.9% patients were pad-free, 65.6% who had both neurovascular bundles preserved had erections, and 96.1% were free of biochemical recurrence.
Conclusion: Learning curves for operating time, blood transfusion and hospitalisation were overcome within the first 30 cases, but complication, continence and positive margin rates took >100 cases to plateau and potency rates >500 cases.

053
Experience of robotic radical prostatectomy using the DaVinci S Robot in localised prostate cancer
T.G. RASHID, S. ZAHUR, T. DUDDERIDGE, C.J. JAMESON and C.W. OGDEN
Royal Marsden Hospital, London, UK

Objective: Robotic radical prostatectomy (RRP) potentially has advantages over open surgery relating to reduced hospital stay and early functional recovery, without compromising oncological outcomes. We present the first 100 consecutive cases of RRP using the four-armed DaVinci S surgical system in the UK and compare early results with published series of RRP from international centres of excellence.
Methods: All patients undergoing RRP from January 2007 completed functional questionnaires (SF-36 v2, UCLA prostate cancer index, IIEF and IPSS) pre-operatively, and at 3-monthly intervals post-operatively. Clinicopathological data was collected.
Results: Median operating time was 240 minutes (range 185–410). Median hospital stay was 2 days (range 1–4). Clinicopathological data (Table 1) demonstrated positive margins in organ confined disease in four cases (7.1%). At 6 months there were no cases of biochemical recurrence. No patient to date has required treatment for incontinence. Detailed analysis of functional outcomes will be undertaken in April 2008 when 6 month data is available.
Conclusion: In addition to well described potential advantages of robotic surgery, the DaVinci S system requires only one patient-side assistant and gives more control to the operating surgeon. Our results are comparable to those from other centres and support the ongoing use of this technique.

054
Are the characteristics of prostate cancer amenable to focal therapy?
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Introduction: The multifocality of prostate cancer has slowed the development of focal therapy (FT), possible over-treatment of localised prostate cancer has recently fuelled an interest in these techniques. We examined the pathological characteristics of a series of prostate cancers to assess the feasibility of FT.
Methods: One hundred consecutive radical prostatectomy specimens examined at a single hospital were assessed. The number, volume and Gleason grade of each tumour was recorded, as well as biopsy features and preoperative PSA.
Results: The mean number of tumours was 3.5 (range 1–15). The mean volume of largest (index) tumour was 0.95 mls (range 0.1–18.2ml), representing 75% (14–100%) of the total tumour volume. The mean volume of the largest non-index tumour was 0.2 mls (range 0.05–1.7ml). Thirteen men had a non-index tumour of >0.5 mls, all contralateral to the index lesion. In men with the largest non-index tumour = 0.5mls, eleven were Gleason grade = 7, with two ipsilateral to index tumour. The % of positive biopsy cores predicted significant non-index lesions, but preoperative PSA did not.
Conclusions: Successful identification and ablation of the index tumour would treat 76% of significant (>0.5ml or GS>6) cancers in this series. Non-index tumours are usually contralateral and the majority clinically insignificant.

055
Transrectal high intensity focused ultrasound in the treatment of primary localised prostate cancer
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Introduction: HIFU is an emerging treatment modality in localized prostate cancer.
Patient and Methods: A retrospective review of primary (<T2cNoMo) cases treated using the Sonablate500 between 1/02/2005 and 15/05/2007.
Results: *n* = 172. Mean age 64.1 years (SD 8.3). Mean follow-up 346 days (SD 237, max 759). 27.8% (38/136), 37.5% (51/136) and 34.6% (47/136) in low, intermediate and high D'amico risk categories. 29%

TABLE 1. for 053

	Gleason Grade (*n* = 64)					Stage (*n* = 64)						
						T1 (*n* = 1)	T2 (*n* = 55)			T3 (*n* = 4)		Pre-operative PSA
	3 + 3	3 + 4	3 + 5	4 + 5	4 + 5	T1c	T2a	T2b	T2c	T3a	T3b	(ng/ml)
N	24	33	1	3	3	1	9	3	43	5	3	Median = 7.5
%	37.5	51.6	1.6	4.7	4.7	1.6	14.1	4.7	67.2	7.8	4.7	Range 1.7–34.0
						Post-operative PSA £0.04						
			3 months 13/14							6 months 8/8		

(50/172) on 3 months of casodex pre-HIFU (reduce gland size). Median hospital stay 5 hours (range 3–24). Stress urinary incontinence (7.6%) (13/172), UTI/dysuria syndrome (23.54%) and stricture (36%). A significant reduction in stricture rate using suprapubic catheters observed (14.6% versus 44% urethral catheter, $P = 0.001$). PSA levels <0.2 ng/ml at 3, 6, 9, 12, 18 and 24 months achieved by 69.7% (108/155), 65% (78/120), 58% (60/103), 57.8% (48/83), 57% (36/63) and 60.9% (14/23), respectively. <0.5 ng/ml achieved by 83.2%, 78.3%, 80.58%, 78.31%, 74.6%, and 82.61%, respectively. 31 demonstrated rising PSA, were biopsied with 13 positive biopsies. 4/13 retreated by HIFU. 'No evidence of disease' in 92.1%, 90.2% and 91.5% of patients in low, intermediate and high risk groups (overall 92.4%).
Conclusions: Transrectal HIFU using the Sonablate500 for localized prostate cancer is a safe daycase procedure with low toxicity and good medium term oncological outcome.

056

Concomitant bladder and prostate cancer: is radiotherapy a factor in correlation?

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Introduction: Prostate and bladder cancers are common malignancies that can co-exist. Increased rates of secondary cancers have been reported after radiotherapy. We evaluate if radiotherapy for the first malignancy inceases the incidence of the second malignancy.
Methods: We retrospectively reviewed our cancer registry databases for patients with prostate and bladder cancer (1975–2005). We identified patients with a concurrent diagnosis of both cancers. Medical notes of patients with both malignancies were reviewed.
Results: A total of 2958 patients were diagnosed with prostate cancer and 2001 patients with bladder cancer. Fourteen patients with prostate cancer (0.5%) subsequently developed bladder cnacer after a mean gap of 3 years (range 1–14 years). Twenty-two patients with bladder cancer (1.1%) subsequently developed prostate cancer after a mean of 6 years (range 1–18 years). In total, 779 patients received radiotherapy (RT) for prostate cancer with 4 developing bladder cancer (0.5%). Similarly, 561 patients received RT for bladder cancer with only one developing prostate cancer (0.2%).
Conclusions: Our study concludes that radiotherapy for prostate cancer does not increase the rate of bladder cancer and vice versa. However, further evaluation in a prospective setting is required to substantiate these findings and to examine the role of other risk factors.

057

Survival outcome following hormone manipulation of metastatic prostate cancer

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Introduction: Customarily, the median survival of patients with metastatic prostate cancer after androgen deprivation is about 30 months (Eisenberger N Engl J Med. 1998;339(15):1036-42). We evaluated the survival outcomes of contemporary patients treated with hormones alone.
Patients and Methods: The study included 111 men with metastatic prostate cancer who were treated as a part of various prospective, randomized trials in our center.
Results: The median age of the patients was 73 years (range 49–87 years). The pathological diagnosis was obtained from either TRUS biopsy or TURP chippings in majority (96.4%) and 80% had Gleason grade 7 or higher disease. MAB was used as primary therapy in 80% of the patients and the remaining received GnRH analogues alone. Sixty-two per cent patients developed objective disease progression during the treatment and 55% required palliative radiotherapy. Using Kaplan-Meier methods, the median overall survival was 28 months. Fifty-one patients received secondary hormone manipulation and the remaining 60 had primary hormone treatment only. The median overall survival for the patients who received secondary hormone manipulation was 33.4 months in comparison to 20.9 months for the patients who didn't. (Log rank $P = 0.02$).
Conclusion: Secondary hormone manipulation improves survival in metastatic prostate cancer but overall survival on hormones is no greater than 10 years ago.

Wednesday 25 June, 14.00–16.00
Laparoscopy and Surgical Technique
Chairman: Adrian Joyce

089

Outcome following robotic-assisted laparoscopic dismembered pyeloplasty

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The da Vinci surgical system facilitates precise reconstructive procedures. We describe nineteen cases of robotic-assisted laparoscopic pyeloplasty (RALP) including two horseshoe kidneys. 19 patients (14 men, mean age of 37 years, 8 left/10 right) had PUJ obstruction. 3D CT vascular reconstructions were performed to clarify anatomy and identify crossing vessels. Our approach includes an intra-operative retrograde study with multi-length JJ stent insertion and a four port technique with patients in full lateral position. An Anderson-Hynes dismembered pyeloplasty was performed using two vicryl sutures (15 and 20cm) for the anastomosis. Mean operative time was 162 minutes (range 90–210), mean anastomosis time 40 minutes (20–54), and estimated blood loss 60 mls. Patients were discharged at a median day 2 (1–5) with urethral catheter and abdominal drain. These were removed in clinic on post-operative day 5. A bowel diathermy injury was identified and sutured intra-operatively, there were two re-admissions for stent symptoms with normal CT imaging and one anastomotic leak managed conservatively. Stents were removed at 6 weeks and all MAG3 renograms at 3 months showed no residual obstruction. RALP is safe and efficacious. The precise suturing possible with the da Vinci system means this is now our standard pyeloplasty technique.

090

Who needs a robot?

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Introduction: It is universally recognized that the learning curve for laparoscopic radical prostatectomy can be reduced by robotic assistance. However, this comes at considerable expense. The aim of this study was to evaluate if the cheaper alternative, articulating laparoscopic instruments, can reduce the gap between the two learning curves.
Method: In our first thirty cases of laparoscopic radical prostatectomy we compared the effect on the learning curve of using articulating versus conventional needle holders. We also used an iSurgicals laparoscopic simulator, and the articulating Radius by Tuebingen. Twenty surgeons, of advanced and intermediate laparoscopic experience placed a posterior suture in a simulated urethro-vesical anastamosis model using both, the Radiusâ and standard needle holders. Results were recorded and assessed using a validated scoring system for accuracy and needle handling.
Results: All surgeons demonstrated more accuracy in needle placement using the Radius. However, nearly all participants required more time to complete the task with the Radius, which has its own learning curve.
Conclusion: Development of articulating laparoscopic instruments is facilitating promising improvements in the learning curve for laparoscopic radical prostatectomy, and may provide a cost effective alternative to robotic surgery. We present the current pros and cons of the Radius device.

091

Laparoscopic radical prostatectomy experience in an English county in 2007

S.M. BHANOT, G.R. NAIR, D.M. SALKAR, S. BANKA, N. HUSSAIN and R. PATEL
King George Hospital, Ilford, UK

Introduction: We are the only urology department in our region offering laparoscopic radical prostatectomy to all patients since 2005 on a regular basis. We are both a secondary and tertiary referral centre.
Patients and Methods: One hundred and fifty men with a mean age 65 and mean PSA 7.5 underwent laparoscopic radical prostatectomy in our department. 28 men had bilateral and 35 unilateral nerve sparing procedure. All procedures were extra peritoneal.
Results: Mean operating time 195 minutes; Mean blood loss 337 ml; Mean length of stay after operation 2 days; Mean catheter time 7.5 days.
Complications: Conversion to open surgery 3/150. Two rectal injuries(first conversion, second intra corporeal three layer closure, both OK without fistula/bowel symptoms). One bladder rupture from balloon trocar. One conversion due to non progression (history of previous anterior resection and leakage followed by mesh for incisional hernia). 2/150 post op bleeding; 6/150 UTIs; 1/150 port hernia; 1/150 lymphocoele; 1/150 bladder neck stenosis. Pathology: Tx 2%; T2 74%(positive margins 12%); T3 24% (positive margins 60%). Continence at 3 months: 80% with one or less than one pad/day.
Conclusion: Our intra operative and post operative outcome measures following laparoscopic radical prostatectomy are comparable to published international standards.

092

24 hour laparoscopic radical prostatectomy: the standard of care?

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Introduction: Laparoscopy is our standard approach to radical prostatectomy. As our experience has evolved we have been able to identify the process points that allow short hospital stay.
Methods: We reviewed a prospective database of 198 laparoscopic radical prostatectomies (LRPs) performed at one institution by one surgeon over 4 years. A standard five port extra-peritoneal approach was used. Patients are reviewed and managed postoperatively according to a protocol.
Results: 198 men (mean age of 59.7 years) underwent LRP. Mean operative time was 171 minutes, estimated blood loss 290 mls (9 blood transfusions, 4.5%). Median length of stay was 2 days overall but only one for

the last 100 patients with only 20 of these staying more than 24 hours. Six of these stays were associated with post operative complications (20 overall in the series) with the rest due to partner anxiety, social circumstances and protocol deviation. Issues requiring greater than 24 hour stay are apparent within 16 hours of surgery.
Conclusions: A 24-hour stay after LRP is now our standard goal. The keys are confidence in the normal postoperative course and managing patient expectation. We have achieved this by setting clear a post-operative timetable and pro-active consultant led peri-operative management.

093
Laparoscopic radical prostatectomy – the cost of learning in the UK?
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Bradford Teaching Hospitals, Duckworth Lane, Bradford, UK

Introduction: Laparoscopic Radical Prostatectomy (LRP) is an established curative therapy for localised prostate cancer recognised by NICE. We present the costs involved in developing a LRP service.
Materials and Methods: Costs were divided into financial and time spent learning the procedure. All costs incurred were collected prospectively.
Results: Clinical visits to observe and assist 23 cases, accounted for 17 days leave and cost £2360. Mentorship entailed 8 days supervision of 9 LRP cases costing £6790. Costs of new equipment came to £91 753. Therefore, a total of 25 days operating prior to performing first solo procedure, including over 100 hours practising on the lap trainer or watching DVD's (of the procedure). Total cost was £101 203, £15 000 from surgeon's own trust funds.
Conclusion: LRP gives excellent results in the treatment of localised prostate cancer. However, we must be aware of the costs of learning this technique. Operative times increase during the learning period, with a resultant decrease in productivity. There are also considerable financial costs in learning this procedure in an organisation already stretched due to limited resources. Finally, any surgeon contemplating developing this procedure should be prepared to sacrifice large amounts of their personal time and money.

094
A dual-focus monitor system for laparoscopic skill acquisition – preliminary results using the radical prostatectomy model
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The STILUS [Surgical Trainees Interested In Laparoscopic and Robotic Urological Surgery] Group, Surrey, UK

Introduction: Traditionally, for the development of optimal laparoscopic urological skills, the trainee practised on a box model with a single camera and monitor giving a solitary view. We tested the impact of this 'two-view' system on the learning curve for vesicourethral anastomosis (VUA) and dorsal vein complex ligation (DVC) in laparoscopic radical prostatectomy as test model.
Materials and methods: Kits consisted of box models (DIY-LTK®) equipped with either a single camera/monitor system or a dual camera/monitor system). Eight novices were enrolled. Four performed the task of VUA using the Single camera system and four used the Dual-Focus System. For DVC ligation, six novices were enrolled. Three performed the task of dorsal vein ligation using the single and three used the Dual-Focus System. The times for achievement of a target level of skill were tallied. Patterns of eye movements, in relation to each of the monitors, were also recorded.
Result: The Dual-Focus System allowed skill acquisition to the target level, 1.8 and 2.2 times quicker for VUA and DVC respectively, than the traditional single camera/monitor system.
Conclusion: Dual-Focus allows for targeted skill acquisition for vesicourethral anastomosis and dorsal vein complex ligation approximately two times quicker than the traditional single monitor system.

095
A comparative analysis of open, laparoscopic and robotic radical cystectomy for bladder cancer
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Introduction: With advancements in technology open radical cystectomy (ORC) is being challenged by the minimally invasive options of laparoscopic (LRC) and robotic radical cystectomy (RRC). This is the first reported comparison of the three techniques.
Patients and methods: Thirty age-matched patients (10 in each group) had ORC, LRC or RRC and ileal conduit diversion by three surgeons within a team over a 5 year period. Median data is presented in each category.
Results:

TABLE: for 095

Op	Op time-mins	Blood loss-mls	Complication %	Hosp stay-days	Recovery-weeks	Oncologic follow-up
ORC	325	1300	60	16	8	60% DF @5 year
LRC	345	350	50	16	3	60% DF @4 year
RRC	365	150	20	10.5	4	100%DF @3 year

DF=disease free either local or systemic

Conclusions: RRC and LRC take longer than ORC but are associated with significantly less blood loss and quicker recovery. Hospital stay is shortest for RRC which also has the lowest complication rate. The minimally invasive approaches do not appear to compromise cancer control at least in the medium term.

096
Laparoscopic radical cystectomy: initial experience from a single UK centre
M.I. JOHNSON, A. D'OYLEY, G.C. DURKAN, A.C. THORPE and N.A. SOOMRO
Freeman Hospital, Newcastle upon Tyne, UK

Introduction: Laparoscopic radical cystectomy (LRC) is an evolving technique. We compared our early results with those achieved by open radical cystectomy.
Patients and Methods: Sixteen consecutive cases of LRC and extracorporeal ileal conduit formation were performed for transitional cell carcinoma between May 2005 and September 2007. Minimum follow up was 3 months.
Results: There was 1 conversion for venous injury during a combined laparoscopic nephroureterectomy and LRC. Urothelial tumour excision was complete in all cases. one patient had an unexpected locally advanced prostate cancer, which was incompletely excised. There were no deaths within 60 days of surgery. Extended pelvic lymphadenectomy was performed in selected cases with a mean lymph node count of 15.

TABLE: for 096

	Laparoscopic (n = 16)	Open (n = 31)
Age	68	68
Hospital stay (days)	18.5	20
Blood loss (mls)	500	1500
Total Operating time (mins)	450	300
Transfused (%)	31%	68%
Complications (%)	35%	32%
Final pathological stage	T0: 3 (19%) Ta: 4 (25%) T1/CIS: 6 (37%) T2: 3 (19%)	T0: (6%) Ta: 2 (6%) T1/CIS: 8 (26%) T2: 4 (13%) T3-4: 15 (48%)

Conclusions: LRC can be introduced safely with acceptable early functional and oncological results.

097

Results from a prospective study comparing quality of life issues related to the open versus laparoscopic approach to the kidney

K. DAVENPORT, O. HARRYMAN, S. KEOGHANE, R. MELOTTI, A.G. TIMONEY, F.X. and KEELEY JR
Bristol Urological Institute, Bristol, UK

Introduction: This study aimed to determine whether a laparoscopic approach to the kidney resulted in improved patient quality of life over the traditional open approach.
Patients and Methods: One hundred patients undergoing open or laparoscopic nephrectomy completed SF-36 quality of life questionnaires and pain visual analogue scales (VAS) pre-operatively, 2 days and one month post-operation. Thirty-eight in the laparoscopic group and 33 in the open group completed the study.
Results: Overall the laparoscopic group had improved quality of life scores, with significantly higher physical component scores at one month post-operation (P = 0.009) than the open group. There were significant differences in the physical (P = 0.027) and bodily pain (P = 0.003) dimensions at one month post-operation in favour of the laparoscopic group. The laparoscopic group also had significantly lower pain VAS scores at one month post-operation. There were no significant differences in complication rates, however the laparoscopic group had a significantly shorter hospital stay (4 versus 6 days, P = 0.0009).
Conclusions: Patients undergoing laparoscopic nephrectomy benefited from an improved quality of life, shorter hospital stay and less pain at one month post-nephrectomy when compared to those undergoing an open nephrectomy. This study provides further evidence for the advantages of the laparoscopic approach over open surgery.

098

The BAUS laparoscopic nephrectomy audit: increased volume, improved outcomes

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Introduction: The BAUS laparoscopic nephrectomy audit has been running for over 5 years. The results for 2006-07 are compared with those obtained 5 years ago.
Patients and Methods: Each year, consultants performing laparoscopic nephrectomy are invited to submit their data. The number of reported procedures has increased over 5 years from 380 in 34 centres (2002–03) to 941 in 41 centres (2006–07). The median number per consultant has increased from 6 to 16.
Results: Five years ago, 27% of procedures were performed for non-function with 36% for renal cell carcinoma (RCC). By 2006-07, 51% were for RCC. The median operating time remains at 150 minutes; however the conversion rate has reduced considerably (14% versus 6%) as has the transfusion rate (11% versus 6%). Mortality remains stable at 1.6% (2002–03) versus 1.1% (2006–07) but morbidity has reduced (23% versus 17%).
Conclusion: This audit has demonstrated a sustained improvement in patient related outcomes. Morbidity, conversion and transfusion rates have reduced considerably. The annual number of procedures per consultant is now above 12 which has been shown to improve outcomes. This audit functions as an important benchmark for novice laparoscopic surgeons and forms a vital part of clinical governance and, in the future, recertification.

099

Laparoscopic retroperitoneal lymph node dissection (LRPLND) in the management of clinical stage I germ cell tumours (GCT): Fifteen years follow-up from a large European series

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Introduction: We present 15 years experience of L-RPLND combined with adjuvant chemotherapy (after RPLND) for patients with positive nodes (pN+), evaluating the morbidity and long-term oncological outcome.
Patients and Methods: Data for 87 patients with clinical stage I GCT were collected prospectively from 1992 to 2007. Primary diagnostic L-RPLND was performed for pathological staging using a modified template dissection. Patients with lymph node involvement underwent adjuvant chemotherapy.
Results: Mean operative time was 177 (68–360) minutes. Hospital stay was 6 days (range 4–18 days). Positive nodes were identified in 24% of NSGCT patients, who subsequently underwent adjuvant chemotherapy. After a mean follow up of 84 (1–186) months, distant relapse occurred in 13.3% of pathological stage I patients (no adjuvant chemotherapy). No pN+ patients relapsed. Post-operative complications occurred in 9.4%; one pulmonary embolus, one lymphocoele, temporary ureteric stenting in two cases, ureteric stenosis requiring surgical repair in three patients and retrograde ejaculation in one patient. All patients remain disease-free.
Conclusions: After the learning curve, L-RPLND has comparable operative times to contemporary open series, and low morbidity. No pN+ patients recurred, demonstrating the efficacy of adjuvant chemotherapy. This approach provides excellent oncological outcomes, avoiding intensive surveillance.

100

Hem-o-lok clips for the renal hilum: are they safe?

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Department of Urology, Monklands Hospital, NHS Lanarkshire., Airdrie, UK

Introduction: Controlled dissection and ligation of the renal pedicle is the most

challenging step during laparoscopic nephrectomy. Exclusive use of hem-o-lok clips for both renal artery and vein is uncommon, with most surgeons relying upon automated titanium clips for the artery and a vascular stapling device for the vein. Hem-o-lok clips are not recommended for use on the renal artery during laparoscopic live-donor nephrectomy. Malfunctions of the vascular stapling device are also described. We routinely secure both vessels using hem-o-lok clips during laparoscopic nephrectomy. We believe this to be a safe, reproducible and cost-effective.

Patients and methods: We performed 60 laparoscopic nephrectomies between September 2005 and December 2007. A prospective record including indication, technique, operative time and complications was recorded.

Results: In all but two cases where the endo-GIA vascular stapler was used for the renal vein, hem-o-lok clips were safely used for both hilar vessels. In one case (1.7%) a hem-o-lok clip slipped from a branch of the renal vein with no serious sequelae.

Conclusion: Hem-o-lok clips, when correctly applied, are a cost effective and reliable method of achieving hilar control during a laparoscopic nephrectomy.

Wednesday 25 June, 14.00–16.00
Bladder Cancer
Chairman: John Kelly

101

Should the presence of urinary tract infection exclude patients with haematuria from rapid evaluation protocols?

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Introduction: Current protocols for the rapid evaluation of haematuria exclude those with urinary tract infection (UTI) since this is assumed to be evidence of a benign treatable cause. The likelihood of a urological cancer diagnosis in such patients is however uncertain and we present our prospective analysis to determine the level of risk.

Materials and Methods: We audited results of haematuria evaluation for 1730 patients referred between April 2003 and March 2006. All patients underwent a standardised investigation protocol to detect urinary tract cancer including microbiological examination of urine. Differences in proportions were assessed for significance ($P < 0.05$) using Fisher's exact test.

Results: A total of 161 (9.3%) patients had a +ve urine culture at evaluation of whom 25 (15%) were symptomatic. Of those with UTI 101 (62%) were referred by protocol compared to 964 (61%) without UTI. The rates of urinary tract cancer diagnosis according to infections status are tabulated (Table)

TABLE: for 101

	No Urinary Tract Cancer	Urinary Tract Cancer	Total
Culture +ve	129	32	161
Culture -ve	1275	294	1569
Total	1404	326	

P = X (Fisher's-exact-test)

Conclusion: Despite selection bias inherent in this analysis it appears that the presence of UTI does not decrease the likelihood of urinary tract cancer diagnosis and there is therefore no indication to delay prompt evaluation in patients with haematuria and culture positive urine.

102

The prevalence of chronic kidney disease in the microscopic haematuria clinic

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Introduction: Recent guidelines on the management of CKD suggest that all microhaematuria patients with significant proteinuria, or an eGFR below 60, should be referred to a nephrologist. The aim of this study was to assess the prevalence of these features in the microscopic haematuria population in order to estimate the impact of these guidelines on service provision.

Methods: Retrospective data were collected from 150 consecutive patients attending a dedicated microscopic haematuria clinic. Basic demographic details, eGFR and the presence of dipstick proteinuria were recorded. Known renal or urological disease was also documented. Procedures were set in place to enable prospective collection of similar data.

Results: Mean patient age was 76, with mean serum creatinine and eGFR 92 μmol/l and 77 ml/min/1.73m^2 respectively. 21 patients (14%) had an eGFR below 60, of whom only two were known to have renal disease. 23% of patients had dipstick proteinuria. Significant urological pathology was diagnosed in 4.6% of patients, but did not contribute to a decreased eGFR in any patient.

Conclusion: Thirty-seven per cent of patients attending a microscopic haematuria clinic meet criteria for nephrological referral, whereas less than 5% have a urological pathology. This equates to an increase in nephrology referrals of 22 patients/year/100,000 population.

103

The use of NMP22 as a point of care test for urothelial cancer in a one stop haematuria clinic

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Introduction: Urine cytology (UC) has a low sensitivity for bladder cancer (BC) and requires cytological expertise making it unsuitable as a point of care (POC) test within the one stop haematuria clinic (OSHC). Flexible cystoscopy (FC) and radiological imaging alone miss a small number of bladder and upper tract tumours. We assessed the value of NMP 22, a new POC test for BC, in the OSHC as an adjunct to FC and imaging.

Materials and methods: Five hundred and seventy-seven patients presenting to a OSHC were assessed with NMP22 followed by FC and U/S. Patients with positive NMP22 underwent intravenous urography and cystoscopy under general anaesthetic. The sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) of NMP 22 was calculated.

Results: NMP 22 had a sensitivity of 78% and a specificity of 94%.The PPV and NPV were 43% and 97% respectively. There were 33 false positive NMP 22 results, of which 16 had a pre-existing exclusion criteria. NMP22 detected three cancers missed by FC and U/S.

Conclusions: NMP22 has a higher sensitivity and comparable specificity to UC, with the advantage of producing an immediate unambiguous result in the OSHC. It will detect a small number of cancers missed by FC and U/S.

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What is the natural history of frank haematuria after initial negative investigations?

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Introduction: Frank haematuria (FH) has a cancer yield of around 24.2%. Investigations include US, IVU and cystoscopy. A significant proportion receives no diagnosis. Recurrence and/or confirmed urological diagnosis is unknown. This study assesses long-term outcomes in patients with initial negative investigations.

Patients and Methods: Data was prospectively gathered from patients attending a haematuria clinic from 1999 to 2001. In 2007 patients who received no diagnosis were assessed using a postal questionnaire complementing the hospital patient database.

Result: Three hundred and seventy-eight patients (78.8%) male, (21.2%) female, mean age 61.8 years, had mean follow-up of 6.9 years. 87 (23.0%) were deceased; 8 (9.1%) died from urological cancers "(five prostate, two renal, one bladder)". Of the remaining 291 patients, 194 (66.6%) returned the questionnaire. 41 (21.1%) reported repeated FH (10 had a single episode), 25 (12.9%) underwent repeated investigation. 11.3% had a urological diagnosis (12 calculi, five BPE, three prostate, one renal and one bladder cancers). 10 (5.2%) required surgical intervention.
Conclusion: The majority cleared by initial investigations remain asymptomatic. The deceased reflects age and co-morbidity of this population. More selective investigative approaches are required. A significant minority will experience recurrence. 3.4% will have urological cancer diagnosis. Vigilance and repeat investigation may be required.

105

Does fluorescence enhanced cystoscopy and transurethral resection of bladder cancer improve the quality of resection, accuracy of staging and patients care?

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Introduction: Fluorescence enhanced cystoscopy (FEC) with 5-aminolevulinic acid ALA/HEXVIX has been increasingly used in the diagnosis and resection of bladder cancer. We evaluated if ALAFEC improved the quality of resection, the accuracy of staging and the choices of subsequent therapy thus improving patients care.
Patients/Methods: A total of 82 patients underwent ALA/FEC and TURBT. 25 patients underwent 2nd-look TUR, 31 were for recurrent tumors and 24 were first time TUR. The total number of tissue samples was 452; from these 76 were Ta tumors, 16 were T1 tumors and 32 CIS.
Results: None of the 25 patients who underwent 2nd look TUR had residual tumor or stage migration, all 25 had FEC enhanced TURBT as initial procedure. In 26 patients (31,7 %) ALA/FEC revealed tumors or CIS which were overlooked with conventional white light cystoscopy(WLC). 13 of the 76 Ta tumors (17,1%) and 20 of the 32 CIS (62,5%) were overlooked with WLC.
Conclusion: ALA/FEC and TUR not only improves the accuracy of bladder cancer staging, especially in CIS, but also ensures complete resection at TUR thus impoving quality of resection. As a result the therapeutic management plan may change allowing to choose the most beneficial treatment for the patient.

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Does the high-grade and low-grade histological sub-classification of G2 pT1 TCC influence recurrence and progression rates

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Introduction: We assess the behaviour of G2 pT1 TCC bladder with reference to the high and low grade sub-classifcation. We evaluate the pattern of use of intravesical immunotherapy in G2 pT1 TCC bladder.
Materials and Methods: A retrospective case note review was performed of 48 consecutive patients diagnosed with G2 pT1 TCC bladder between January 2003 and December 2004. Demographic information was recorded, along with use of immunotherapy. Recurrence and progression of the disease on subsequent cystoscopy was noted. Mean follow up of 40 months was available (range 34–52).
Results: The average patient age was 76 years and the male:female ratio 5:1.

TABLE: for 106

Grade	BCG Rx	Recurrence	Progression
High (n = 31)	BCG-19	8	4
	No BCG- 12	3	2
Focal High (n = 10)	BCG-3	4	1
	No BCG-7	1	0
Low(n = 7)	BCG-0	0	0

Conclusion: It is clear that tumours demonstrating G2 (high grade) elements are at high risk of recurrence and progression. Such tumours need to be treated aggressively. It would seem that G2 (low grade) pT1 TCC bladder has a low recurrence and progression rate, and probably does not require primary immunotherapy. Currently, we are unable to determine whether intravesical immunotherapy is of benefit in the G2(high grade) pT1 TCC bladder group.

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Are we treating muscle invasive bladder cancer quicker? Changes over a 17 year period

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Introduction: There is a significant survival benefit if muscle invasive bladder cancer is diagnosed and treated early. DOH targets use TURBT as the "stop the clock treatment" but this is a diagnostic procedure and not definitive treatment. We reviewed practice in our region over 17 years to assess delay to definitive treatment.
Methods: We performed a retrospective review of all new cases of muscle invasive bladder cancer presenting in our region in 2006. This followed similar reviews in 1989, 1993 and 1999. Type of referral and time of referral, cystoscopy, TURBT, imaging and definitive treatment were recorded.
Results:
Discussion: DOH 31 and 62 day targets have had an impact on delays to cystoscopy and TURBT. Delay to definitive treatment appears to be increasing with no significant change in overall delay. An increase in patients receiving immediate definitive treatment; delays in referral to tertiary centers and "taking the eye off the ball" with respect to target driven treatment may all be factors.

TABLE: for 107 Patient numbers and median delays

	1989	1993	1999	2006
Total number of patients	186	199	119	142
Number having immediate definitive treatment	65 (35%)	70 (35%)	76 (64%)	100 (70%)
Interval (no. of days & range)				
Referral to first seen	24 (12–42)	31 (15–51)	15 (1–79)	13 (0–164)
First seen to TURBT	35 (8–75)	21 (1–46)	20 (1–153)	17 (0–159)
TURBT to definitive Rx	55 (31–82)	44 (27–56)	54 (5–230)	71.5 (7–178)
Total Delay	114 (51–199)	96 (43–153)	101 (9–395)	102 (20–269)

108

The Influence of oesophageal Doppler monitoring on fluid administration and outcome in cystectomy

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Introduction: Radical Cystectomy is a major procedure with significant morbidity and mortality. Common complication following Cystectomy is postoperative ileus and may delay hospital discharge. Goal-directed optimisation of intraoperative haemodynamics has shown to improve surgical outcome. Transoesophageal Doppler monitor is a minimally invasive method for continuous monitoring of circulation.
Patients and Methods: Forty patients undergoing cystectomy were recruited for a single blinded prospective randomised controlled trial. Both trial and control groups had standard anaesthesia and Doppler monitoring. The trial group received additional colloid boluses intraoperatively as dictated by Doppler measurements. Parameters relating to anaesthetic monitoring, changes in GFR, inflammatory markers and outcomes like major cardio respiratory complications, wound infection, return of bowel function, ileus hospital stay and mortality were compared between these two groups.
Results: The trial group did show less marked change in inflammatory parameters and early return of bowel function (2 days versus four) and the postoperative ileus reduced significantly with 0 instances of TPN. Unexpected HDU admission reduced by 50%. Fewer instances of intermediate or major postoperative complications noted and a reduced hospital stay (19 versus 26 days).
Conclusion: Optimising intraoperative fluid administration using Transoesophageal Doppler monitor reduces postoperative morbidity and mortality with early return of gut function.

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The UK'S volume–outcome relationship for radical cystectomy

E.K. MAYER, A. BOTTLE, A.W. DARZI, J.A. VALE and T. ATHANASIOU
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Introduction: The aim of this study was to assess the volume-outcome relationship for radical cystectomy in the UK.
Methods: Data for elective cystectomies were taken from Hospital Episode Statistics for the seven financial years 2000/1 to 2006/7. The following outcome data was also determined; 30-day mortality, reoperation, complication and readmission rates and length of stay. Institutions and surgeons were categorised into low, medium and high volume bands and regression analysis was performed on outcomes after adjustment for case-mix and institutional structural and process of care factors.
Results: Both high volume institutions and surgeons achieve a significantly lower case-mix adjusted odds ratio of mortality following cystectomy (OR = 0.64, 95%CI 0.45–0.91,$P = 0.01$ & OR = 0.58, 95%CI 0.41–0.83,$P < 0.01$ respectively). Interestingly, high volume institutions and surgeons have a significantly higher case-mix adjusted OR for complications and re-operation within 14 or 30 days following cystectomy. There was no statistically significant association for readmission rates within 28 days.
Conclusion: There appears to be a higher volume-better outcome relationship for mortality following cystectomy in the UK when comparing high with low and medium volume institutions or surgeons. The opposite relationship for reoperation rates and complications can be partly explained by differences in institutions structural and process of care factors.

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Laparoscopic radical cystectomy in an elderly patient group: an initial single centre UK series of 60 patients

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Introduction: Since its initial introduction 15 years ago Laparoscopic Radical Cystectomy (LRC) has become adopted in an increasing number of centres as a minimally invasive alternative to open radical cystectomy. We describe an initial UK series of 60 patients in a predominantly elderly population.
Methods: Between 2003–2006 a series of 60 consecutive patients underwent LRC. The mean age of patients was 72 (54–84). Mean follow-up has been 18 months.
Results: Mean operating time was 300 mins with an average blood loss of 450 mls. An average of 17 lymph nodes were removed during lymphadenectomy. Hospital stay averaged 13 days. The incidence of early and late complications was 22% and 17% respectively and compares favourably to other published LRC and contemporary open case series. Oncological outcomes at this early stage appear to mirror the open cystectomy series.
Conclusions: LRC represents a viable minimally invasive alternative to open cystectomy. Results compare favourably with open contemporary series. The advantages in an elderly patient group may hitherto have been underestimated and a comparison of data is presented.

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A three centre experience of orthotopic neobladder. Reconstruction after radical cystectomy – our experience, results and follow up of 104 patients

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Introduction: We present an analysis of our data from 1994 to 2007 reporting upon our three-centre experience of orthotopic neobladder reconstruction after radical cystectomy assessing the long term complication rate, continence, rate of intermittent self catheterisation (ISC), and the cancer recurrence rate.
Patients and Methods: Between June 1994 and April 2003, 104 suitable consecutive patients (92 men and 12 female) underwent a radical cystectomy and orthotopic neobladder reconstruction. Their median age at the time of surgery was 62 years (range 38–80 years). The median follow-up was 88 months (range 52–156 months).
Results: The late complication rate was 31%. The continence rates were high with a daytime continence rate of 98%, nocturnal continence rate at 76% and 10 of the patients performing ISC. At a median of 88 months 64% of patients remain alive and well with no sign of recurrence.
Conclusions: Patients satisfying the criteria for orthotopic neobladder reconstruction should be offered it, and that the orthotopic reservoir should now be considered with the ileal conduit as 'best practice' in urinary diversion after radical cystectomy.

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Robotic assisted radical cystectomy: oncologic and functional outcomes at up to 3.5 years

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Introduction: We report the outcomes of the robotic-assisted radical cystectomy (RARC) at up to 3.5 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 20, who have completed follow-up of at least six months. Maximum follow-up extends to 3.5 years. Urinary diversion, ileal conduit (*n*=17) or Studer pouch (*n*=3) was performed extracorporeally.

Results: Of 17 men and 3 women, median age 66 years, median operating time was 30 minutes and blood loss was 150 ml. Median hospital stay was 10 (7–22) days. Surgical margins were all clear. Eighteen had TCC (G3pT2 = 9; CIS = 4; G3pT1 = 4; G2pT1 with CIS = 1), one adenocarcinoma and one squamous cell carcinoma. Median lymph nodes retrieved was 16 (6–28) with two microscopic nodal metastases. One patient died of distant metastasis and another had a ureteric recurrence. None have developed local pelvic recurrence. Overall survival is 95% (disease free survival 90%).

Conclusions: At medium term follow-up of up to 3.5 years, RARC appears to be oncologically as effective as open and laparoscopic radical cystectomy.