

BAUS Annual Meeting, 23–27 June 2008, Manchester Central
Unmoderated Poster Sessions

Tuesday 24 June

Unmoderated Poster Session 1
13.15–13.45 Exhibition Hall
Posters U1–U15

Wednesday 25 June

Unmoderated Poster Session 2
13.15–13.45 Exhibition Hall
Posters U16–U27

Tuesday 24 June, 13.15–13.45
Unmoderated Poster Session 1

U01

Does bladder neck resection prior to I125 LDR brachytherapy improve post-implant urinary toxicity? A match-paired analysis

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Introduction: To evaluate the effect of bladder neck resection (BNR) prior to brachytherapy (BXT) on patients' International Prostate Symptom Score (IPSS) and urinary Quality of Life (QoL) score 3 and 6 months post-implant.

Materials and methods: A total of 22 patients underwent BNR for obstructive symptoms and/or obstructive uroflowmetry prior to BXT between August 2006 and October 2007 at a single institution. Patients' prostate volume and Qmax at baseline were documented. IPSS and QoL score were reported at baseline, 3 and 6 months post-implant. Using our centre's prospective database, a matched contemporaneous control group was identified using as inclusion criteria prostate size and Qmax prior to treatment.

Results: The results of the analysis are shown on Table 1. At 3 and 6 months, patients who had a BNR experienced less deterioration in their IPSS than those in the control group. However, a significant improvement in QoL was only demonstrated at the 6 month interval.

TABLE: for U01

	IPSS change (median)		QoL change (median)		
	BNR pts	ControlsP	BNR pts	ControlsP	
3 months post-BXT	5	8	0.0081	2	0.129
6 months post-BXT	2.5	6.5	0.0010	2	0.015

Conclusion: BNR appears to improve early urinary toxicity in suitably selected patients undergoing BXT.

U02

Holmium laser bladder neck incision at time of volume study in obstructed men undergoing I125 brachytherapy reduces risk of urinary retention

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Introduction: Men undergoing I125 seed brachytherapy for localised prostate cancer develop urinary toxicity post implant with approximately 10–15% requiring intermittent self catheterisation. Men with high I-PSS and/or significantly obstructed flows may be declined treatment because of the high risk of retention.

Patients and Methods: Forty-four men undergoing I125 brachytherapy with Qmax < 15 ml/s underwent Holmium laser BNI +/- enucleation of the median lobe at the time of the volume study. Implant was carried out approximately 6 weeks later. Average age was 63 years, PSA 7.0, prostate volume 33 cm³, I-PSS 19 and Qmax 9.1 ml/s.

Results: There were no adverse events, catheter time and length of stay all under 24 h. 9 men had BNI's alone. One patient required to self catheterise for 6 weeks, a retention rate of 2.2%. Qmax/I-PSS at 1 and 3 months was 17.8 ml/s/16 and 21.4 ml/s/9. At 3 months men reported symptoms were greatly improved (56%), moderately improved (24%), no change (8%), and worse (12%).

Conclusion: Holmium laser bladder neck incision ± median lobe enucleation at time of volume study reduces risk of urinary retention and urinary toxicity in men with obstructed flows undergoing I125 prostate brachytherapy.

U03

The evaluation of lifelong erectile dysfunction with nocturnal penile tumescence rigican (NPTR) testing combined with a phosphodiesterase type 5 inhibitor (PDE5I)

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Introduction: Young men with lifelong erectile dysfunction that have failed PDE5I medication often end up with surgery due

to the inability to establish a diagnosis. This study assesses the effect that a PDE5I has on nocturnal erections.

Patients and methods: Twelve men with lifelong ED and having failed PDE5I medication were evaluated. All patients had a radiological diagnosis of veno-occlusive dysfunction by Duplex and/or cavernosometry. All patients then had two nights of NPTR testing with 100 mg sildenafil given on the second night. A normal NPTR test was considered when there were two erectile episodes of 10 min duration with 70% base and tip rigidity.

Results: For the first night, 10/12 patients had an abnormal NPTR. On the second night with the addition of sildenafil, 4/12 patients had an abnormal NPTR. As 8 patients were now shown to respond to PDE5I therapy, they were successfully managed conservatively. The 4 patients who continued to have abnormal NPTR testing had surgery (1 prosthesis, 1 revascularisation, 2 venous ligation).

Conclusion: NPTR testing with the addition of a PDE5I can prove that these patients are not true PDE5I failures and therefore may prevent surgical therapy in a proportion of cases.

U04

Penile prosthesis insertion in cases of severe penile fibrosis

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Introduction: The long-term results of the insertion of penile prosthesis in patients with severe penile fibrosis are presented.

Methods: A penile prosthesis was inserted into 50 patients (mean age 43.4 years). A 3-pieces-inflatable prosthesis was inserted in 28 patients and a malleable in 22. The dilatation required the use of Rossello cavernotomes in 26 patients and a double subcoronal incision in 22 patients. In one patient the tip of the corpora had been destroyed by infection and therefore a Dacron cap was necessary to house the cylinder.

Results: Eighty per cent of patients needed downsized cylinders. The intra-operative complications included urethral

perforation (n = 3) and cylinder cross-over (n = 4). However, all patients have now had the insertion of 2 cylinders with a satisfaction rate of 90% after a median follow-up of 17 months (1–86mts). Ten patients have had an elective exchange of their malleable to an inflatable prosthesis using an upsized cylinder. The prosthesis was explanted in 5 patients (infection = 3, erosion = 2) and revised in a further 4 patients (soft glans = 1, mechanical failure = 3).

Conclusions: Fibrosis of the corpora is not a contraindication to the insertion of penile prosthesis, however the complications rate is higher than in virgin patients (16%) and revision surgery may be required (28%).

U05

Efficacy and tolerability of hypofractionated conformal radiotherapy for good prognosis carcinoma of the prostate
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Introduction: Research into the optimum dose and fractionation for radical prostate radiotherapy continues, including dose escalated and hypo-fractionated regimes. We recently reported the 7 years results of hypofractionated radiotherapy (50 Gy in 16 fractions over 22 days) in good prognosis prostate cancer, with ASTRO and Phoenix biochemical failure-free survival of 78% and 76.8% respectively. We report on late toxicity and quality of life in a cohort of patients treated with this regime.

Materials and methods: Eighty-five men with good prognosis prostate cancer, iPSA ≤ 10 ng/mL and Gleason ≤ 6 and T1/2, due to attend follow-up were asked to complete the subjective component of the Late Effects on Normal Tissue/Subjective Objective Management Analytic questionnaire, UCLA-PCI and SF-36v2 questionnaires.

Results: Forty-two men with a median follow-up of 6.3 years completed questionnaires. Mean UCLA-PCI function and bother scores for urinary, bowel and sexual domain

were 86% and 85%, 90% and 89%, 16% and 18% respectively. SF-36v2 indices are in keeping with published series. LENT/SOMA mean scores for rectum/bowel, bladder/urethra, ureter/kidney and sexual domain were 87%, 90%, 97% and 32%. Sexual scores although low are comparable to results with conventional fractionation. **Conclusions:** Randomised trials comparing conventional and hypofractionated radiotherapy continue. In our population hypofractionated radiotherapy is effective and well tolerated.

U06

The British Association of Urological Surgeons Section of Oncology Urological Cancer Observatory Project

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Introduction: Providing patients with relevant and accurate data on prognosis and outcome in Urological Oncology is extremely important. To provide this information on a national basis we have combined three existing databases to create a national registry of Urological cancer cases in Great Britain.

Patients and methods: We have linked the Cancer Registry databases, the Hospital Episode Statistics database, and the clinical database of the British Association of Urological Surgeons (BAUS) on a patient-by-patient basis. These sources contribute a population based registry of cancer cases, a record of in-patient procedures and a clinical definition of the stage and grade of the disease at diagnosis.

Results: Initial studies have shown that the cystectomy rate in G3Ta and T1 bladder cancers is low at 4% and that a delay in cystectomy of more than 90 days for T2 bladder cancer results in a poorer 5 year survival (57% vs. 45%). We have also found little consistency in lymph node sampling with radical prostatectomy.

Conclusion: The BAUS Urological Cancer Observatory project allows the impact of and outcome of Urological oncology to be investigated on a national basis to provide evidence which will hopefully inform the management of these cancers in the future.

U07

Is laparoscopic renal cryoablation safe for renal tumours > 3 cm? A European multicentre experience

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Introduction: Laparoscopic renal cryoablation is safe and effective treatment for small renal tumours. Recent report from other centres suggests a higher complication rate for tumours ≥ 3 cm. We present our experience from 3 European institutions.

Methods: Twenty-eight renal lesions ≥ 3 cm, suspicious for malignancy on CT or MRI, were treated with cryoablation. Under laparoscopic vision and with intracorporeal ultrasound guidance, the tumour is identified and a biopsy is taken before freezing (at least 2 freeze cycles). Persistent non-enhancement of the lesion (CT or MRI) is considered as successful ablation.

Results: Baseline data: mean age 68.5, tumour size 35.6 mm ASA score 2.3 and mean hospital stay of 3.7 days. Biopsy results included: 23 carcinomas, 1 each of atypical cyst, sarcoma and oncocytoma (2 were non diagnostic). There was one major complication namely post-op MI and 3 minor complications (wound haematoma 2, pneumonia 1). None of the patients required transfusion. Follow-up was available for 0–23 months with mean of 7.6 months. 18/26 had at least one post-op imaging with no recurrence reported so far.

Conclusions: Cryoablation is an attractive treatment option with minimal morbidity for large renal tumours, especially for patients with high co-morbidity.

U08

Is CXCR-4 a prognostic indicator in renal cell carcinoma?

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Introduction: While CXCL12/CXCR-4 (SDF/chemokine receptor 4) biological axis may be a critical determinant for metastatic potential of RCC, a direct link remains to be elucidated. In this study, we tried to find correlation between CXCR-4 expression and

T-stage, Fuhrman grade, recurrence, and tissue type (primary versus metastases) of RCC.

Materials and methods: Seventy-three archival specimens of RCC were retrospectively analyzed by IHC for CXCR-4 staining intensity which was correlated with tumor stage, grade, recurrence, and tissue type (primary vs. metastases). Formalin-fixed and paraffin-embedded archival specimens of primary and metastatic RCC were stained using rabbit anti-CXCR-4 affinity using standard IHC technique. 2-way ANOVA, student's t test, and chi-square analysis were used for statistical analysis.

Result: Receptor staining intensity positively correlated with T-stage (ANOVA,

TABLE: for U08

Tumour type	Number
Primary RCC:	38
Clear cell carcinoma (CCC)	50
Papillary RCC	3
CCC + papillary RCC	10
CCC + chromophobe RCC	5
Sarcomatoid RCC	3
Oncocytoma	2
RCC metastases:	35
Bone	26
Lung	8
Brain	1

0.0009) (student's 't' test: T3 vs. T1: $p < 0.0001$; T3 vs. T2: $p = 0.0062$), grade (ANOVA: G2, 0.0262; G1, 0.0500), recurrence (chi-square: $p = 0.0349$), and metastases (lung, liver, and bone) (ANOVA, 0.0101; chi-square, 0.0122) on univariate analysis. Tumour grade (chi-square: $p = 0.0171$) and recurrence (chi-square: $p < 0.0001$) were independent prognostic indicators on multivariate analysis.

Conclusion: CXCR-4 expression positively correlated with tumour stage, grade, recurrence, and metastases. Tumor grade and recurrence were independent prognostic markers.

U09

Cancer-specific survival of node-positive renal cell cancer after radical nephrectomy and lymphadenectomy in the absence of other metastases

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Introduction: The value of lymphadenectomy with radical nephrectomy for renal cell

carcinoma is uncertain. As a hypothesis forming exercise, we examine the impact of nodal status on cancer-specific survival in the absence of other metastases.

Methods: A total of 222 patients with the diagnosis of RCC and no evidence of any distant metastasis were selected from our data base of 482 patients. All patients underwent routine lymphadenectomy.

Results: Median follow up was 7.8 years. Overall Cancer-specific survival at 5 years was 88%. IVC extension had no impact on survival ($p = 0.77$). Nodal status was a highly significant predictor of survival on Cox regression analysis ($p < 0.0001$). Cancer-specific survival at 5 years for patients with and without lymph node metastasis was 56% and 94%, respectively (log rank, HR 8.12 (2.58 to 25.55), $p < 0.0001$).

Conclusions: A large survival difference for patients with and without the presence of lymph node metastasis in the absence of other metastasis is evident. The results of this study may allow for adequate powering of a RCT examining the impact of lymphadenectomy on survival.

U10

Using novel governance tools for monitoring surgical performance during a surgeon's learning curve for laparoscopic prostatectomy

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Introduction: The difficult 'learning curve' for laparoscopic radical prostatectomy (LRP) is often cited as the main reason for the use of the less cost effective 'robotic' alternative. The characteristics of this learning curve are not well established. Using analogous techniques to those used in industry to measure process and governance data from the first 300 LRPs performed by a single surgeon are analysed in an attempt to identify the most oncologically and process relevant early outcome measures.

Patients and methods: Comprehensive prospective data was collected from the first 300 LRPs performed by a single surgeon. The data was interpreted using continuous data statistical tools such as cumulative sum and control charts.

Results: Learning curves were generated to demonstrate the sequential improvement in the various outcome measures with increasing surgical experience. Using these

curves we can establish when the surgeon has completed his learning phase as well as demonstrating how these tools can identify periods of over or underperformance.

Conclusions: Operative time is a convenient and often used outcome measure for calculating a surgeon's learning curve. By using other, more relevant outcome measures we demonstrate how these measures can be used as a governance tool to identify underperformance.

U11

'Scarless' nephrectomy and other laparoscopic procedures using a novel laparoscopic port (r-PORTTM)

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Introduction: We report on our initial clinical urological experience with this novel device and the advent of One Port Umbilical Surgery (OPUS) and the Single Port Access (SPA) procedure.

Materials and methods: Six patients underwent therapeutic laparoscopic intervention (two simple nephrectomies, one orchidopexy, one orchidectomy, one varicocele ligation and one ureterolithotomy) using a single r-Port each. Three of these procedures were OPUS, and the other two were SPA procedures. In all cases, a 5 mm 30° telescope and two 5 mm working instruments were inserted through the port. In the case of the nephrectomies, haemostasis and pedicle control was obtained using the Harmonic Scalpel and Hem-o-lok clips. Frequent instrument changes effected as necessary to allow the operative procedure to proceed to completion did not affect the seal.

Results: All cases were completed uneventfully. Operative time averaged 83 min. There were no perioperative port related or surgical complications in these cases.

Conclusions: The r-Port allows laparoscopic surgery to be performed safely with fewer ports, thereby allowing for SPA procedures and OPUS with their inherent cosmetic advantages and reduction in postoperative discomfort; more studies are being carried out to quantify this observation.

U12

Urodynamic evaluation of cerebral palsy

W.H. CHU, P.S.K. CHU and C.W. MAN

*Division of Urology, Department of Surgery, Tuen Mun Hospital, Tuen Mun, Hong Kong, China, UK***Introduction:** To review the urodynamic findings in patients with cerebral palsy and the outcomes of their related therapies.**Patients and methods:** From January 2000 to June 2007, 28 patients (14 male, 14 female) with cerebral palsy, aged 6–31 years (median 9.5) were seen in neurourology or combined selective dorsal rhizotomy (SDR) clinic. The patterns of motor involvement include spastic hemiplegia/ diplegia. They all suffered from different degree of mental retardation. Their medical records, radiological imaging and cystometric findings were reviewed. Treatment and clinical response were assessed.**Results:** Of our study group, 24/28 (86%) patients had dysfunctional voiding symptoms: frequency, urgency and/or urge incontinence. 25/28 (89%) had neurogenic detrusor overactivity on slow-fill cystometry. 3/28 (11%) had hydronephrosis. Symptomatic patients with urodynamic evidence of neurogenic detrusor overactivity were managed by anti-muscarinic drug or clean intermittent catheterization. Nineteen (68%) patients underwent selective dorsal rhizotomy. 24/28 (86%) enjoyed either symptom improvement or napkin-free status.**Conclusions:** More than 80% of patients with cerebral palsy in our study group suffered from symptomatic dysfunctional voiding associated with neurogenic detrusor overactivity. Although only 11% of our patients had upper tract involvement, early referral to urologist with urodynamic assessment is recommended.

U13

Botox in augmented bladder – is it effective?

R. HAMID, D. WOOD, P.J.R. SHAH and T.J. GREENWELL

*Institute of Urology, UCL and Department of Urology, University College London Hospitals, London, UK***Introduction:** The use of botulinum toxin A has exponentially increased over the last decade in urology. One of the more established uses of Botox is in the treatment of overactive bladder. We evaluated its efficacy

in the treatment of persistent bladder overactivity after augmentation cystoplasty.

Materials and methods: Six patients of mean age 40.5 years (range 31–53 years, 4 female and 2 male) with persistent detrusor overactivity confirmed on urodynamic studies were included in this study during the last one year. All patients had undergone augmentation cystoplasty a mean of 5 years previously. Four patients had idiopathic over-activity; while two had neurogenic over-activity.**Results:** Botulinum toxin A was used in this study. In all patients the Botox was injected in bladder remnant and not in the augmented bowel. 200 IU was used in idiopathic cases and 300 IU in neuropathic cases. No serious side effects were noted. The patients were re-evaluated at 3 months post injection. Only one patient (neuropathic) reported significant improvement whilst there was no benefit in the remaining five patients.**Conclusions:** Our initial experience with the use of Botox for treatment of persistent bladder over-activity after augmentation cystoplasty are disappointing.

U14

Effect of botulinum toxin-A on dorsal root ganglia P2X3 receptor expression in an animal model of bladder overactivity

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*Departments of Urology and Clinical Neurosciences, Guy's Hospital and KCL School of Medicine, London, UK***Introduction:** To investigate the effect of botulinum toxin-A (BTX-A) on dorsal root ganglia (DRG) P2X3 expression in an animal model of bladder overactivity created by partial bladder outflow obstruction (BOO).**Materials and methods:** Four groups of adult Sprague-Dawley rats were utilised and included: 1) partial BOO (n = 6) or 2) sham (n = 5) surgery for 4 weeks, 3) partial BOO for 3 weeks followed by either 6.25U BTX-A (n = 4) or saline (n = 5) bladder injections for 3 weeks. L6 and S1 DRG were harvested following transcardiac fixation and stained for P2X3 purinergic receptor in all groups.**Results:** Significant increases in bladder weight were observed for BOO compared with sham surgery (0.46 g vs. 0.14 g; p = 0.03). There was a trend towards

increased P2X3 immunoreactivity in BOO rats compared to sham but this did not reach statistical significance. BOO plus BTX-A treated rats had significantly less P2X3 immunoreactivity compared to BOO alone (p < 0.001; p = 0.001) and BOO plus saline injected rats (p = 0.02; p < 0.001), for L6 and S1 DRGs, respectively.

Conclusions: BTX-A reduces P2X3 immunoreactivity in bladder related DRG in rats with partial BOO. This suggests that the mechanism of action of BTX-A in the bladder may in part be afferent mediated.

U15

Audit of quality control in paediatric urodynamicsS.J. GRIFFIN, R. WRAGG, H.A. STEINBRECHER and P.S. MALONE
*Southampton General Hospital, Southampton, UK***Introduction:** To retrospectively review quality measures in urodynamic traces and prospectively assess the impact that local changes to urodynamic protocol can have on urodynamic quality.**Materials and methods:** Quality control measures were compared to ICS and International Children's Continence Society (ICCS) suggested guidelines in relation to baseline pressure measurements, cough/crede frequency throughout urodynamics and fill rates. Having agreed alterations in local urodynamic protocol, the same criteria were scrutinised prospectively.**Results:** Mean ages were similar in both groups (6.1–6.9 years). Retrospective review of baseline pressures revealed suboptimal line balancing. Isolation of the transducers to atmospheric pressure for line zeroing, lead to a significant improvement (p < 0.0005) in baseline vesical pressures on prospective data. In addition, baseline abdominal pressures were more commonly within recommended ranges (7.5% retrospectively vs. 25% prospectively). Thus, more accurate baseline detrusor pressures (4.0 ± 1.6 cm H₂O [mean±SEM]) were recorded. Improvements in cough/crede test frequency were also noted. Initial appropriate fill rates at 89% improved to 100%.**Conclusions:** Good quality urodynamics are an essential part of management planning for many lower tract disorders. Quality control can be a problem in urodynamic units. Audit of quality criteria allows identification and rectification of problems leading to improved data quality.

Wednesday 25 June, 13.15–13.45

Unmoderated Poster Session 2

U16

The value of negative dipstick for haematuria in patients undergoing surveillance for non-invasive bladder tumours – a prospective clinical study
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Introduction: We previously suggested that patients with low-grade non-invasive bladder tumours who were recurrence free in the first 5 years could be discharged to the GP and referred if dipstick haematuria occurred (J Urol 173:1108–1111, 2005). To confirm the suitability of this policy, we continued to perform cystoscopic surveillance on all patients with low-grade tumours and assessed the value of negative dipstick for haematuria in predicting absence of recurrence in these patients.

Patients and methods: Urine dipstick analysis was prospectively carried out on all patients undergoing surveillance for non-invasive bladder tumours prior to flexible cystoscopy. One investigator, blinded to the dipstick result identified patient and tumour characteristics from our prospective database. Appropriate analysis was carried out.

Results: A total of 603 patients were recruited, of whom 121 (20.1%) had recurrences and dipstick haematuria present in 250 (41.5%). The sensitivity, specificity, positive and negative predictive values for dipstick haematuria detecting recurrence(s) was 47.1%, 59.9%, 22.8% and 81.9%, respectively. The accuracy improved in patients with larger and multiple tumours. Recurrences found in the absence of dipstick haematuria were low grade and small.

Conclusions: The likelihood of significant recurrence in the absence of dipstick haematuria in patients with previous low grade bladder tumour is small.

U17

Electro-motive drug administration (EMDA) of intravesical mitomycin-C in patients with high-risk non-invasive bladder cancer and failure of BCG immunotherapy
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Objectives: Patients with high risk superficial TCC who fail to respond to intravesical BCG, and who are not suitable for radical cystectomy, have limited management options. We have assessed the use of electro-motive drug administration of intravesical mitomycin-C (EMDA-MMC) in this group.

Patients and methods: Over a 15 month period, 13 patients with recurrent CIS or T1G3 TCC following at least one induction course of BCG and were unsuitable for cystectomy, received a 6 week course of weekly EMDA-MMC. Following treatment, patients were re-assessed with cystoscopy, biopsy and urine cytology.

Results: At 3 months, 9/13 patients (69%) were disease free and 6/9 (67%) remained so at 6 months. Four patients remain free of recurrence. Those with recurrent disease at 3 months (4/13) had no evidence of disease progression. The 3 patients who recurred at 6 months had lower grade tumours.

Conclusions: This small, short term study suggests that EMDA-MMC is a promising therapy in patients with high risk, non-invasive transitional cell carcinoma who fail to respond to intravesical BCG and who are unfit for radical cystectomy. It would, therefore, seem to represent a useful option in the otherwise limited list of treatments available for this difficult group of patients.

U18

Performance of EORTC superficial bladder cancer risk tables in a local UK population
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Introduction and objectives: The EORTC risk tables predict risk of recurrence and progression on the basis of tumour characteristics. We examined whether they accurately predict recurrence in our patients.

Patients and methods: We collected primary tumour data from 158 consecutive patients with Ta or T1 bladder cancer attending between January and September 2007. Data was collected on number and size of tumours, concurrent CIS, stage, grade, time to recurrence or progression and recurrence free survival. Risk table performance was assessed using ROC curves. Recurrence free survival was assessed by Kaplan-Meier analysis.

Results: The risk tables predict proportion recurring at 1, 2, 3, 4 and 5 years. ROC curves were generated for each time period with AUC of 0.693, 0.684, 0.695, 0.744 and 0.707 respectively. The risk tables stratify patients into 4 groups with risk of recurrence at 5 years of 31%, 46%, 62% and 78%. Analysis of our patients in these groups showed recurrence at 5 years of 47% (95% CI 32–62%), 64% (50–78%) and 73% (54–91%).

Only 6 patients were in the highest risk group so survival analysis was not performed.

Conclusions: The EORTC superficial bladder cancer risk tables underestimated the risk of recurrence in our cohort.

U19

Enhanced Recovery After Surgery (ERAS) protocol in patients undergoing radical cystectomy for bladder cancer – a prospective controlled study of surgical outcomes
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Introduction: Multimodal perioperative optimization of patients undergoing major abdominal surgery using the ERAS protocol has become established in general surgery and we assessed its benefits in patients undergoing radical cystectomy.

Patients and methods: ERAS protocol, constituting pre-operative carbohydrate loading, limited bowel preparation, no fasting and early post-op feeding was introduced into one surgeon's practice. Prospectively collected peri-operative data from these patients (ERAS group) was compared with similar parameters, prospectively accumulated from a pre-ERAS cohort (control group) operated on by the same surgeon. All other aspects of peri-operative care were similar (including thoracic epidural and early mobilization). Only patients with infra-umbilical incisions and ileal conduits were included in the analysis.

Results: Of the 94 operations carried out over a 2 year period, 63 (32 pre-ERAS and 31 ERAS) were eligible for analysis. Patient and tumour demographics were similar in both groups. The mean surgical time, blood loss and time to discharge were also similar. However, there were significant differences in the duration of intravenous fluid

requirement, time to full diet (measured by tolerance of 3 meals/day) and return of bowel activity between the groups.

Conclusions: The ERAS protocol enhances the recovery of bowel function following radical cystectomy and urinary diversion.

U20

Radical cystectomy for T4 bladder cancer
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and G.R. MUFTI

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Kent, UK*

Introduction: We studied the clinical outcome in patients upstaged to pathological stage T4 (pT4) after radical cystectomy (RC) for bladder cancer.

Patients and methods: Of 235 patients who underwent RC for bladder cancer, a subgroup of 32 (26 men, 6 women) patients with median age of 70 (52–84), had pathological diagnosis of pT4 transitional cell carcinoma. They were studied with particular emphasis on cancer free survival and cancer recurrence pattern.

Results: All patients had ileal conduit diversion. Three had salvage RC and 5 patients received neoadjuvant chemotherapy. Two (6%) patients died within 30 days of surgery (1 due to pulmonary embolism and other due to sepsis). Thirteen (41%) patients had lymph node positive disease. Median follow up (FU) for whole cohort was 14 (2–180) months. Fifteen (46%) patients with median FU of 8 months (2–24) died of metastatic cancer but none had symptomatic local recurrence. One died of non cancer cause. Fourteen (43%) patients with median FU of 40 months (2–180) are alive and cancer free.

Conclusions: In patients with T4 disease, primary RC not only offer chance of cancer free survival but also provide a better palliative outcome, free from troublesome urinary symptoms associated with bladder sparing techniques.

U21

Early re-resection of high risk non muscle invasive bladder cancer – where should we draw the line?

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UK*

Introduction: It is recognised that patients with high risk bladder cancer should undergo early re-resection (ER) to remove residual disease and prevent understaging. The EAU and

BAUS guidelines recommend ER in G3 T1/Ta disease, although evidence suggests any patient with T1 disease should undergo ER. We compared the residual tumour and understaging rates of G3 T1, G2 T1 and G3 T1 tumours.

Materials and methods: The records of all patients undergoing TURBT by a single surgeon over a 6 year period were examined and patients with an initial diagnosis of G3 T1, G2 T1 and G3 Ta were identified. The results of ER were recorded, including residual disease, understaging and upstaging to muscle invasive disease.

Results: A total of 51 patients were identified. Patients with G2 T1 disease have a residual tumour rate similar to G3 T1 tumours at ER (47% cf. 53% respectively). A significant number of patients with G2 T1 disease are understaged at ER (32%), including upstaging to muscle invasive disease (21%). Patients with G3 Ta tumours have a lower residual tumour (33%) and understaging (11%) rates than T1 tumours.

Conclusions: We recommend ER for all T1 tumours irrespective of grade, but not for G3 Ta tumours.

U22

The surgical management of chronic testicular pain

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and N. BARBER

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UK*

Introduction: Chronic testicular pain (CTP) is a common problem and presents a challenge to Urologists as it is often of uncertain aetiology and responds inconsistently to therapies. Surgical management remains controversial.

Patients and Methods: Sixty-one patients with CTP managed surgically over a 5 year period were identified retrospectively. A preceding cause was identifiable in 84% cases (n = 51) including vasectomy (27), trauma (5), previous surgery (10) and infection (9). In 16% cases (10) no cause was found. Surgical management included epididymectomy, testicular denervation and orchidectomy and was undertaken after failure of medical therapy.

Results: Twenty-two patients underwent epididymectomy for CTP following vasectomy which was successful in 15 cases (65%). Seven failures subsequently proceeded to orchidectomy with complete resolution of symptoms. Overall 89% patients with CTP following vasectomy reported complete resolution of symptoms following surgery. Surgery for CTP of other origin was less successful with patients often undergoing

multiple procedures in 41% cases with failure in 26%. Twenty-nine patients (85%) ultimately underwent orchidectomy with successful resolution of symptoms in 76%.

Conclusion: Surgery is an effective means of managing CTP following vasectomy and epididymectomy is the first line treatment. CTP of other origin does less well with surgery, orchidectomy being the treatment of choice.

U23

Developing a strategy to control the blockage of urinary catheters: randomized cross-over study

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Introduction: The pH at which Ca and Mg come out of urine to form crystals is known as nucleation pH (pHn). If the safety margin between voiding pH (pHv) and pHn can be increased, it raises the possibility of an alternative to trying to control the activity of urease-producing bacteria as a strategy for controlling catheter encrustation.

Methods: Twenty-four patients with catheter blockage were randomized into Increased fluid intake (IF), lemon juice (Lemon) and potassium citrate (PC). At the end of each intervention patients were crossed-over to another group until all three strategies had been tried. Urine samples were analysed for pHv, pHn, Ca, Mg and citrate.

Results: Mean(SD) pHn increased from 7.45(0.60) to 7.85(0.46), 7.79(0.57) and 7.93(0.54) in the Lemon, IF and PC groups respectively. Mean(SD) safety margin (pHn-pHv) increased from 0.02(0.60) to 0.85(0.57) in the Lemon group in comparison to 0.59(0.74) in the IF group and 0.43(0.53) in the PC group (p = 0.0005). Mean urinary citrate concentration increased significantly in the Lemon and PC groups. Non-significant changes were observed in the urinary calcium and magnesium.

Conclusions: Increased fluid intake with lemon may provide a simple, inexpensive and effective strategy for reducing the rate of catheter encrustation.

U24

Does allowing men to watch their video flexible cystoscopy influence pain experienced during the procedure?

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Introduction: We assessed whether pain scores of men who watched their video flexible cystoscopy on the monitor were significantly different to pain scores of men who did not see the monitor.

Patients and method: All men who underwent video flexible cystoscopy by a single surgeon using 16.2 Fr Olympus® Visera video scopes (Oo) from July to December 2005 completed a questionnaire which included a visual analogue pain score (VAS). All patients received 11 ml of sterile intra-urethral Instillagel®. Patients who required additional procedures were excluded. Each operation list was randomised to monitor visible or not visible to the patient.

Results: In all men ($n = 111$) VAS decreased with age ($p < 0.001$). Men with previous experience of the procedure experienced significantly less pain than men attending for the first time (first flexi ($n = 43$) mean VAS 24.4 (CI 17.1–31.7) v previous flexi ($n = 68$) mean VAS 13.1 (CI 9.2–16.9); $p = 0.001$). Men who were able to see the monitor reported significantly less pain than men who could not see the monitor (monitor visible VAS 13.8 vs. monitor not visible VAS 20.1; $p = 0.036$).

Conclusion: Younger men having a video flexible cystoscopy for the first time experience less pain if allowed to watch the monitor during the procedure.

U25

A long-term indwelling thermo-expandable metal stent (Memokath® 051CW) in the treatment of chronic ureteric strictures

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Objective: We present our experience with the Memokath® 051CW, which is a novel permanent indwelling thermo-expandable metallic ureteric stent in the treatment of ureteric strictures.

Patients and methods: Forty-two Memokath stents were inserted in 33 patients with ureteric strictures 28 patients had benign strictures (mainly iatrogenic injury after gynaecological surgery, retroperitoneal fibrosis, severe pelvic inflammatory disease and endometriosis) and malignant in the other five (cancers causing external com-

pression). 3 patients had strictures in kidney transplant ureters. The patients were followed-up for a mean of 13 months (Range 1–24 months). Follow-up included renal ultrasound and X-ray KUB at 2 weeks, 3 months and every 6 months thereafter.

Results: There were no immediate complications or side-effects with any of the procedures.

The average hospital stay was 1.5 days (1–3).

Four patients developed uncomplicated UTI during follow-up. Four patients developed stent encrustation and blockage necessitating stent removal and open reconstructive surgery. One of these was a transplant patient who had an unnoticed stent migration resulting in deterioration of kidney function. Four patients had stent migration. 23 patients (70%) had no complications.

Conclusion: The Memokath 051 is a valuable minimally invasive tool in the management of ureteric benign and malignant strictures including renal transplants.

U26

Prospective randomised trial comparing the Bard Inlay™ ureteric stent with the Boston Scientific Polaris™ ureteric stent using the validated ureteric stent symptom questionnaire

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Introduction: It is recognised that ureteric stents cause side effects in the majority of patients. Much work has been performed to identify a stent material which will minimise these symptoms. The aim of this study was to compare patient symptoms and quality of life with two different ureteric stents using the validated ureteric stent symptom questionnaire (USSQ).

Patients and methods: One hundred and fifty five patients requiring temporary stent insertion for benign disease were randomised to receive the Bard Inlay™ or Boston Scientific Polaris™ ureteric stent. Patients completed the USSQ 2 weeks following stent insertion and 1 week after removal. 98 patients completed the study.

Results: There were no significant differences between the two groups for any health domain assessed. In both groups the total urinary symptom score was higher with the stent *in situ*. 91% of the Inlay™

group experienced pain with the stent *in situ* as compared with 94% of the Polaris™ group. This reduced to 36% vs. 43% following stent removal.

Conclusion: Ureteric stents continue to have significant impact on patient quality of life. Despite being specifically designed to improve side effects, this prospective trial has shown that these stents continue to have similar detrimental effects on patient quality of life.

U27

Initial experience with BackStop – preventing retropulsion during ureteroscopy

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Introduction and objective: We present the first clinical series using BackStop™ (Pluromed Inc, Woburn, USA), a CE marked novel reverse thermosensitive water soluble polymer which rapidly transitions to a high viscosity gel at body temperature to occlude the ureter. After fragmentation is completed and concretions extracted, conventional irrigation with saline dissolves the polymer, which is then flushed out.

Patients and methods: BackStop was used in 17 patients undergoing ureteroscopic stone fragmentation. Intracorporeal lithotripsy was carried out using either pneumatic or laser energy. The degree of retropulsion, if any, ease of use, volume used, visibility of gel, stone free rate & ease of removal of BackStop were recorded.

Results: Retropulsion was prevented in all patients with adequate gel instilled. Occlusion of the ureter depended on the size of the ureter and the amount of BackStop used. Fragment migration through the gel occurred in 1 patient. Retrieval of fragments distal to and embedded within the gel was straight forward. BackStop dissolved with saline irrigation at the end of every procedure.

Conclusions: The use of BackStop seems an effective way of reducing retrograde movement of stone fragments during intracorporeal lithotripsy, providing recommended volumes are used. More studies are needed to quantify this observation.