PROCEEDINGS OF THE

WELSH UROLOGICAL SOCIETY

24th and 25th January 2019

@

Metropole Hotel, Temple Street, Llandrindod Wells. LD1 5DY

Welsh Urological Society

Annual Meeting

Sponsored by the pharmaceutical companies

24th & 25th January 2019

Venue: Metropole Hotel, Temple Street, Llandrindod

Chairman:	**Mr Neil Fenn**
Secretary:	**Miss Jane French**
Treasurer:	**Mr Owen Hughes**
Event Organisers:	**Mr Neil Fenn**
	Miss Jane French
	Mr Gareth Brown
	Mr Tim Appanna
Event Co-ordinator:	**Mrs Janine Hillier**

Pharmaceutical companies will be present on the day with exhibition stands

Welsh Urological Society Annual Meeting 24th & 25th January 2019

Academic Programme Thursday 24th January 2019

11:00 WUS Business meeting

12:30 Buffet lunch

12:50 Welcome and Housekeeping

13:00 Outcomes of radical radiotherapy vs radical surgery for Prostate Cancer

Dr Jake Tanguay Clinical Oncologist, Velindre Hospital

Mr Krishna Narahari, Consultant Urologist, UHW

15:00 Re-resection in high-risk non-muscle invasive urothelial bladder tumours

L Osgood11, L Paramore1, G Kandswarmy1
Morriston Hospital Swansea

15:10 Snapshot Audit of the Surgical Management of LUTS/BPH

L Paramore[5] [1], B Mukhtar[1] [2], T Appanna[2], K Wilson[3], C Bates[3], R David[4], A Pandit[4], C Bell[5], I Shergill[1], H Joshi
Cardiff and Vale University Health Board, Cwm Taf University Health Board, Aneurin Bevan University Health Board, Abertawe Bro Morgannwg University Health Board, Betsi Cadwalader University Health Board

15:20 The use of multi-parametric MRI in the diagnosis of prostate cancer: a view from the coal face

Ellul, T, Appanna T

Royal Glamorgan Hospital, Llantrisant, UK

15:30 Robotic Partial Nephrectomy in South Wales – Outcomes from initial case series

Charles Pope, Krishna Narahari

University Hospital of Wales, Cardiff

15:40 Long-term evaluation of local cancer recurrence rate in a large multi-centre cohort of penile cancer patients undergoing intra-operative frozen section during organ sparing surgery

T Ellul[1], P Grice[2], A Mainwaring[3], A Shanahan[1], D Cave[2], J Dormer[2], R Harrison[2], G Brown[1], A Younis[3], P Bose[3], JC Goddard[2], DJ Summerton[2]
Royal Glamorgan Hospital, Llantrisant- UK, University Hospitals of Leicester NHS Trust- UK,Morriston Hospital, Morriston Hospital, ABMU Health Board, Swansea- UK

15:50 The 100 most influential manuscripts in andrology: a bibliometric analysis

Nicholas Bullock, Thomas Ellul, Adam Bennett, Martin Steggall, Gareth Brown

Department of Urology, Cwm Taf University Health Board, Royal Glamorgan Hospital, Llantrisant, CF72 8XR

16:00 Pathological upgrading in prostate cancer treated with surgery between 2011 and 2016 national and regional trends

Nicholas Bullock[1,2], Andrew Simpkin[3], Sarah Fowler[4], Murali Varma[5], Howard Kynaston[1,2], Krishna Narahari[2]

Division of Cancer and Genetics, Cardiff University School of Medicine, Department of Urology, Cardiff and Vale University Health Board, University Hospital of Wales, Cardiff, School of Mathematics, Statistics and Applied Mathematics, National University of Ireland, Galway, Ireland, British Association of Urological Surgeons, London, Department of Cellular Pathology, Cardiff and Vale University Health Board, University Hospital of Wales, Cardiff

16:10 Oncological Outcomes following Robotic-Assisted Laparoscopic Prostatectomy (RALP)

Mohamad Nordin, Haitham Abdelmoteleb, Jon Featherstone, Howard Kynaston, Krishna Narahari

Cardiff University, University Hospital of Wales (UHW)

16:20 Predicting response to neo-adjuvant chemotherapy in muscle invasive bladder cancer

M Jefferies, A Bennett, R David, J Wilson, A Carter, G Kanda-Swamy, P Bose

16:30 Outcomes of patients undergoing MP-MRI and template biopsy of the prostate after previous negative TRUS biopsies

***Bell C*[1,2]**, *Moore SL*[1,2], *Agarwal S*[1], *Obi-Njoku O*[1], *Abdimalik M*[1], *Hughes SF*[2], *Shergill I*[1,2]

[1]*Department of Urology,Wrexham Maelor Hospital, Wrexham, North Wales, UK.*
[2]*North Wales Clinical Research Centre, Wrexham, North Wales, UK.*

16:40	Patient reported experience in a true one-stop clinic for the investigation of elevated PSA **A Bennett,** K Jones, G Boon, N Bullock, J French, T Appanna. Royal Glamorgan Hospital, Cwm Taf University Health Board
16:50	Huw Williams Prize
17:00 – 19:00	Trade Exhibition
19:00	Buffet supper

Academic Programme Friday 25th January 2019

09:00 – 10:00	Recent Advances in Andrology
	Mr David Ralph, Consultant Andrological Surgeon, UCL
10:00 -10:45	NICE update on Prostate Cancer and an Update on NPCA
	Professor Howard Kynaston, Consultant Urologist, UHW
10:45 – 11:45	Coffee and trade exhibition
11:45 – 13:00	Interactive session. Single cancer pathway and Urological cancer pathways in Wales (Welsh Cancer Network)
	Ms Jane French, Welsh Urology Cancer Site Chair, Consultant Urologist
	Mr Gokul KandaSwarmy Urology Cancer, Site Deputy Consultant Urologist
	Mr Gareth Brown, Consultant Urologist, Cwm Taf UHB
13:30	Meeting close

Re-resection in high-risk non-muscle invasive urothelial bladder tumours

L Osgood[11], L Paramore[1], G Kandswarmy[1]
Morriston Hospital Swansea
Correspondence to: Louise Paramore, louise.paramore@wales.nhs.uk

Introduction

The majority of non-muscle invasive bladder tumours are managed by transurethral resection with adjuvant intravesical chemotherapy and/or immunotherapy. However, the risk of residual disease and upstaging to muscle invasive disease (MIBC) is considerable. NICE and EAU guidelines suggest high-risk tumours should undergo re-resection within 6 weeks to ensure no up-staging to MIBC.

Methods

We retrospectively reviewed the histology reports, operation notes and MDT letters for 86 patients identified as having a pT1 urothelial bladder tumour between 2014 and 2017 within the health board. Tumours with no muscle in the specimen were re-categorized as pTx(n=24).

Results

75.6%(n=65) of all tumours were re-resected, of which 41.5%(n=27) showed residual disease, and 9.2%(n=6) were upstaged to MIBC. 45.8%(n=11) of pTx tumours were re-resected: 81.8%(n=9) showed residual disease, and 18.2% (n=2) were upstaged. Macroscopic clearance was commented on in 19 operation notes: 8 of these were incomplete resections. 62.5% (n=5) were re-resected, with 60%(n=3) demonstrating residual disease and 20%(n=1) were upstaged. Two tumours (3.1%) were re-resected within the recommended 6-week interval (range 28-494 days; median 77 days), and 60% within 12 weeks. Of the re-resections done between 6-12 weeks, 35.1% had residual disease and 5.4% were upstaged, compared to 50% and 11.5% respectively for re-resections at >12 weeks.

Conclusion

Compliance with guidelines could be improved: incompletely resected and pTx tumours, and increasing re-resection intervals were more frequently associated with the presence of residual disease and upstaging to MIBC at re-resection. However, the population is small and this should be considered when interpreting the results.

Snapshot Audit of the Surgical Management of LUTS/BPH

L Paramore[5] [1], B Mukhtar[1] [2], T Appanna[2], K Wilson[3], C Bates[3], R David[4], A Pandit[4], C Bell[5], I Shergill[1] , H Joshi

[1] Cardiff and Vale University Health Board
[2] Cwm Taf University Health Board
[3] Aneurin Bevan University Health Board
[4] Abertawe Bro Morgannwg University Health Board [5] Betsi Cadwalader University Health Board

Introduction

We reviewed the Welsh data submitted to the national snapshot audit of surgical management of BPH (AuSuM BPH). This audit looked at selected processes and outcomes in current surgical management.

Method

Patients undergoing surgery for LUTS/BPH from 1st March 2018 to 30th April 2018 in 5 health boards across NHS Wales were included. A proforma was completed at all sites and data analysis performed centrally. The proforma consisted of 2 parts - departmental data to looking at processes (8 items) and patient outcome data (25 items).

Results

103 patients underwent a procedure for LUTS/BPH. Mean age of the cohort was 71 (range 45-90). The indication for surgery was acute retention in 55%. 11 patients had previous procedures (8 TURP, 1 UroLIFT, 2 BNI). Monopolar TURP (61%) was the commonest procedure followed by HOLEP (23%). 16% experienced immediate complications (14% Clavien-Dindo<2, 2% >2) 13% delayed complications (12%<2) and one recorded blood transfusions. Trial without catheter was successful in 84 patients and 62% of patients were discharged at first follow-up. NICE approved treatments were offered often (60%) or always (40%). Patient reported outcome measures were regularly used in 20% of centres. 80% had consultant-led follow-up with all centres reporting that the needs of trainees had no impact.

Conclusion

There are some variations in practice across the NHS Wales however TURP remains the commonest procedure and the majority are followed up in consultant-led clinic. The advent of new technologies and limits to resources raises key questions about how we provide LUTS/BPH surgery.

The use of multi-parametric MRI in the diagnosis of prostate cancer: a view from the coal face

Ellul T, Appanna T

Royal Glamorgan Hospital, Llantrisant, UK

Introduction

There has been a recent paradigm shift in the diagnosis of prostate cancer (PC) with the increasing availability of multi-parametric MRI (mpMRI). The negative predictive value of mpMRI has been reported to be as high as 91% (Hansen et al. 2017), and this raises the question of whether there is justification to proceed to biopsy a patient with a negative mpMRI. This study aimed to assess the concordance between mpMRI and biopsy in our centre.

Patients & Methods

All patients diagnosed with PC between March and August 2018 were identified. Of these, all who underwent mpMRI prior to TRUS biopsy were included. Data were recorded for patient demographics, PSA and PSA density, mpMRI findings including PIRADs score, histology result and whether mpMRI and biopsy results were concordant.

Results

110 patients met the inclusion criteria. Concordance between the MRI and biopsy was found to be 62% (68/110). Of those patients for whom there was discrepancy, 34 had a PIRADs 2 report, 7 had a PIRADs 3 report and 1 had a PIRADs 5 report (with an initially negative biopsy). In the PIRADs 2/3 group, 2 patients (4.9%) had high risk, 14 (34%) had intermediate risk and 25 (61%) had low risk disease (d'Amico criteria).

Conclusion

In our cohort there is a significant (15%) risk of missing clinically significant disease if biopsies are not undertaken in all patients with suspected PC and therefore cannot be justifiably omitted from the PC diagnostic pathway.

References

Hansen, N.L., Barrett, T., Koo, B. et al. The influence of prostate-specific antigen density on positive and negative predictive values of multiparametric magnetic resonance imaging to detect Gleason score 7-10 prostate cancer in a repeat biopsy setting. BJU Int. 2017; 119: 724–73

Title- Robotic Partial Nephrectomy in South Wales- Outcomes from initial case series

Authors- Charles Pope, Krishna Narahari

University Hospital of Wales, Cardiff

Introduction/Aims- Partial Nephrectomy is the gold standard surgical treatment for small renal masses (T1a). This can be performed via open, laparoscopic or robotic techniques. Majority of minimally invasive PN in the UK are now performed using robotic approach.

RPN was introduced at UHW in July 2018. The aim of this study was to review the outcomes from the early case series.

Results – summarized in the table below

	UHW OPN n=30	**UHW LPN n=18**	**UHW RPN n= 20**	**BAUS* RPN (n> 600)**
Operation time (mins)	200	180	170	180-240
PADUA score	7.5	7	7	- -
Post op Transfusion rate	10%	17%	0%	2-5%
Conversion rate	--	2%	0%	2%
Length of stay	6	4	2	2
Complication rate (≥GrIII)	10%*	9%	0%	4%
Margin positivity	3%	4.5%	0%*	≈5%

Conclusions- With in limitations of an initial case series (immature data, selection bias etc) initial results seem favorable and comparable to BAUS datasets.

Long-term evaluation of local cancer recurrence rate in a large multi-centre cohort of penile cancer patients undergoing intra-operative frozen section during organ sparing surgery

T Ellul[1], P Grice[2], A Mainwaring[3], A Shanahan[1], D Cave[2], J Dormer[2], R Harrison[2], G Brown[1], A Younis[3], P Bose[3], JC Goddard[2], DJ Summerton[2]

1. Royal Glamorgan Hospital, Llantrisant- UK
2. University Hospitals of Leicester NHS Trust- UK
3. Morriston Hospital, Morriston Hospital, ABMU Health Board, Swansea- UK

Introduction and Objectives: Local recurrence rate of penile cancer following surgical excision is reported in many series to be between 6 and 29%[1]. Intra-operative Frozen Section (FS) is a useful tool to ensure safe microscopic margins in organ sparing procedures in penile cancer. In this series, we evaluated the impact of intra-operative surgical margin assessment by FS examination during penile-cancer preserving surgery on the local recurrence rate.

Materials and Methods: We analysed all those patients in which intra-operative FS was employed during penile preserving surgery in three tertiary referral centres (catchment of approximately 9 million people) from 2003-2016. The tissue analysed was the urethral margin and corporal or glandular tissue proximal to the resection margin. We looked to see if the use of FS altered the surgical technique and what effect it had on recurrence rates. Median follow-up was 45 (25-147) months, and only patients whose procedure was performed greater than two years previously were included to ensure adequate follow-up time.

Results: Of the total number of 176 patients, 79 (44.9%) had a partial penectomy, 73 (41.5%) a total glansectomy, 9 (5.1%) a wide local excision, 8 (4.5%) a glans-resurfacing, 6 (3.4%) a partial glansectomy, and 1 (0.6%) a circumcision. Intra-operative histological FS examination of the surgical margin was positive in 20 (11.4%) cases mandating further resection under the same anaesthetic. Final paraffin histological examination confirmed cancer-free margins in all but 2 (98.9%) of patients. In total, 10 (5.7%) patients developed local cancer recurrence with a median time to recurrence of 11 months. 9 of those had negative intraoperative FS which were confirmed on paraffin section analysis.

Conclusions: The use of intra-operative frozen section analysis during organ preserving surgery for penile cancer facilitates conservative surgery, reduces the need, distress and expense of further surgery and in this series, contributes to a low rate (5.7%) of local recurrence.

Histology	No of patients (%)
Non-specific type SCC	121 (68.8)
Basaloid variant SCC	23 (13.1)
Keratinising SCC	10 (5.7)
SCC Carcinoma in Situ	6 (3.4)
Sarcomatoid variant SCC	5 (2.8)
Verrocous Carcinoma	5 (2.8)
PeIN	3 (1.7)
Adeno-squamous carcinoma	1 (0.6)
Pseudoepitheliomatous keratotic micaceous balanitis	1 (0.6)
Malignant Melanoma	1 (0.6)
Benign	1 (0.6)

Pathological T-Staging	No of patients (%)
T1	52 (29.5)
T2	75 (42.6)
T3	38 (21.6)
Not assessed* *malignant melanoma and CIS/PeIN repectively	11 (6.3)

Pathological Grading	No of patients (%)
G1	23 (13)
G2	60 (34)
G3	76 (43.1)
G4	7 (4)
Not assessed / Not applicable	9 (5.1)

The 100 most influential manuscripts in andrology: a bibliometric analysis

Authors:

Nicholas Bullock

Thomas Ellul

Adam Bennett

Martin Steggall

Gareth Brown

Institution:

Department of Urology, Cwm Taf University Health Board, Royal Glamorgan Hospital, Llantrisant, CF72 8XR

Presenting author:

Nicholas Bullock

Introduction*:*

Bibliometric analysis involving a citation rank list is an established means by which to identify the published material within a given field that has the greatest intellectual influence. We sought to utilise this approach to identify the 100 most influential manuscripts in the subspecialty of andrology, and in doing so, determine the key research themes that have shaped our contemporary understanding and management of andrological conditions.

Materials and methods:

The Thompson Reuters Web of Science citation indexing database was interrogated using a number of search terms chosen to reflect the full spectrum of andrological practice. Results were ranked according to citation number and further analysed according to subject, first and senior author, journal, year of publication, institution and country of origin.

Results:

The Web of Science search returned a total of 24,128 manuscripts. Citation number of the top 100 articles ranged from 2,819 to 218 (median 320). The most cited manuscript (by Feldman et al., The Journal of Urology 1994; 2,819 citations) reported the prevalence and risk factors for erectile dysfunction (ED) in the Massachusetts Male Ageing Study. The Journal of Urology published the highest number of manuscripts (n=11), followed by the New England Journal of Medicine (n=10). The most common theme represented was ED (n=46), followed jointly by hypogonadism and male factor infertility (n=24 respectively).

Conclusion:

This study provides a list of the most influential manuscripts in andrology and demonstrates that erectile dysfunction should be considered the most widely researched, published and cited theme within the field.

Title:

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

Authors:

Nicholas Bullock[1,2,] Andrew Simpkin[3] Sarah Fowler[4] Murali Varma[5] Howard Kynaston[2] Krishna Narahari[2]

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5. Department of Cellular Pathology, Cardiff and Vale University Health Board, University Hospital of Wales, Cardiff

Presenting author:

Nicholas Bullock

Introduction:

Despite advances in conventional diagnostic techniques, 30-36% of prostate tumours are upgraded after radical prostatectomy (RP). Contemporary modalities such as transperineal template biopsy reduce pathological upgrade rates and may therefore reduce the risk of under-treatment of high risk disease. However, there is currently regional variation in access to these techniques throughout the UK. This study sought to characterise the current state of pathological upgrading after RP in the UK and explore the reasons for any observed regional variation.

Patients and methods:

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

Results:

A total of 17598 patients met full inclusion criteria. Overall 4489 (25.5%) cases were upgraded. Upgrade rate was highest in those with D'Amico low risk compared with intermediate and high risk disease (55.7% versus 19.1 and 24.3% respectively, $P<0.001$). Although rates varied between regions, these differences were not significant after adjusting for other preoperative diagnostic varibles using multivariate logistic regression.

Conclusion:

Upgrade rate after RP in the UK is lower than that reported in other large series. Although rates vary significantly across regions, this can be explained by differences in other preoperative variables, including those that comprise risk stratification.

Title of Presentation

Oncological Outcomes following Robotic-Assisted Laparoscopic Prostatectomy (RALP)

Authors

Mohamad Nordin, Haitham Abdelmoteleb, Jon Featherstone, Howard Kynaston, Krishna Narahari

Institution

Cardiff University, University Hospital of Wales (UHW)

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Introduction: Robotic-Assisted Laparoscopic Prostatectomy (RALP) now accounts for over 80% of Prostate Cancer surgery in the UK. There is however very limited data on medium to long-term oncological outcomes. Both NPCA (National Prostate Cancer Audit) and BAUS RP audit however do not address this in their annual reports. This study aims to evaluate the peri-operative and medium term oncological outcomes of the first 407 RALP performed in a tertiary centre, with emphasis on biochemical recurrence (BCR). Secondary aim was to identify predictors for BCR based on multivariate analyses.

Patients & Methods: Comprehensive analysis of a prospectively maintained RALP database was performed. 407 patients underwent RALP between September 2014 and April 2018, with 386 patients included in the study cohort after exclusions. BCR was defined as PSA>0.2 ng/mL after a previously undetectable PSA post-surgery. BCR free survival (BCRFS) was estimated using Kaplan-Meier method and Cox regression model was utilised to identify predictors of BCR.

Results: BCR rate for the entire cohort is 7.3% (28 patients), at a median follow-up times of 19 months. Median time for BCR is 18 (interquartile range 8-30) months. BCR-free survival for this cohort is 92.7% (358 patients). All cause-mortality rate was 0.8% (3 patients). Significant predictors of BCR include preoperative PSA levels (>10: ≤10 ng/mL, HR 5.2, P <0.001), pathological Gleason score (≥8: ≤6 negative, HR 7.1, P = 0.004; 4+3: ≤6 negative, HR 7.2, P = 0.008) and surgical margin status (positive: negative, HR 4.1, P <0.001).

Conclusion: This study demonstrates good short term biochemical control in patients undergoing RALP for localised prostate cancer. PSA >10 ng/mL, pathological Gleason score and positive surgical margin are predictors of BCR on multivariate analysis in our series.

Variables	Value
Mean (SD)	
Operation time, minutes (n=380)	194.74 (39.97)
Console time, minutes (n=379)	157.98 (36.80)
Estimated blood loss, ml (n=308)	193.30 (158.12)
N (%)	
BCR	28 (7.3)
BCR-free Survival	358 (92.7)
Median (Interquartile range)	
Follow-up time, months	19 (22)
Time to BCR, months	18 (22)

Table 1: Peri-operative details, BCR, BCRFS, follow-up time and time to BCR

Covariate	Hazard Ratio (95% CI)	p value
Preoperative PSA		
≤ 10	Referent	-
> 10	**5.2 (2.3-11.4)**	**<0.001**
Pathological Gleason sum		
≤ 6	Referent	-
3+4	1.9 (0.5-6.9)	0.316
4+3	**7.2 (1.9-27.0)**	**0.004**
≥ 8	**7.1 (1.7-30.2)**	**0.008**
Surgical margin status		
Negative	Referent	-
Positive	**4.1 (2.0-8.6)**	**<0.001**
Lymph node status		
Negative	Referent	-
Positive	**9.5 (3.8-23.3)**	**<0.001**
Not removed	0.5 (0.2-1.5)	0.235

Table 2: Hazard ratios and p value of the predictors of BCR

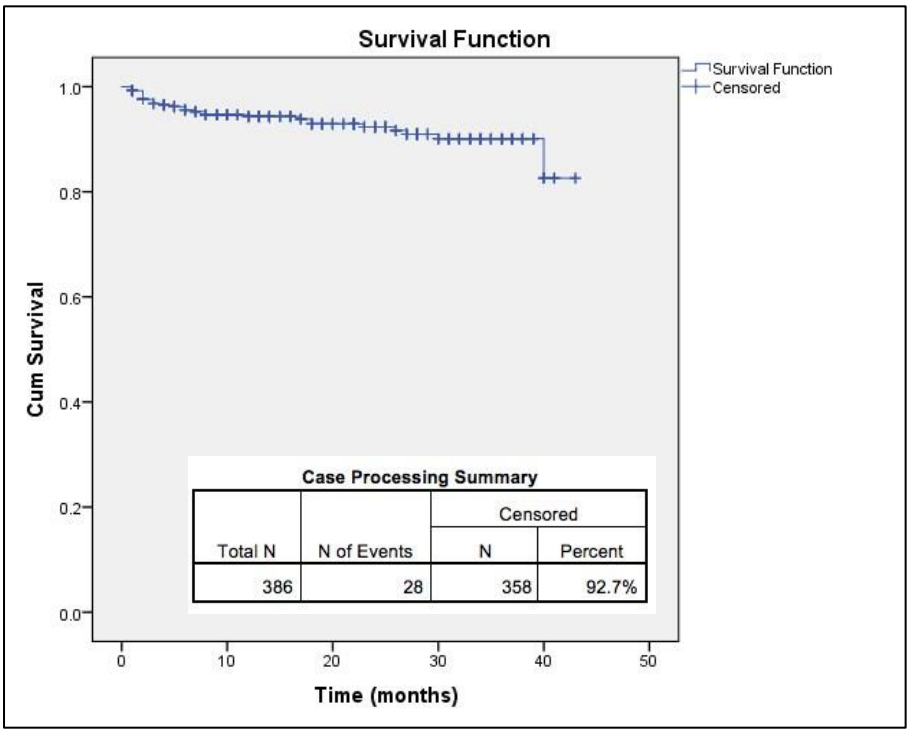
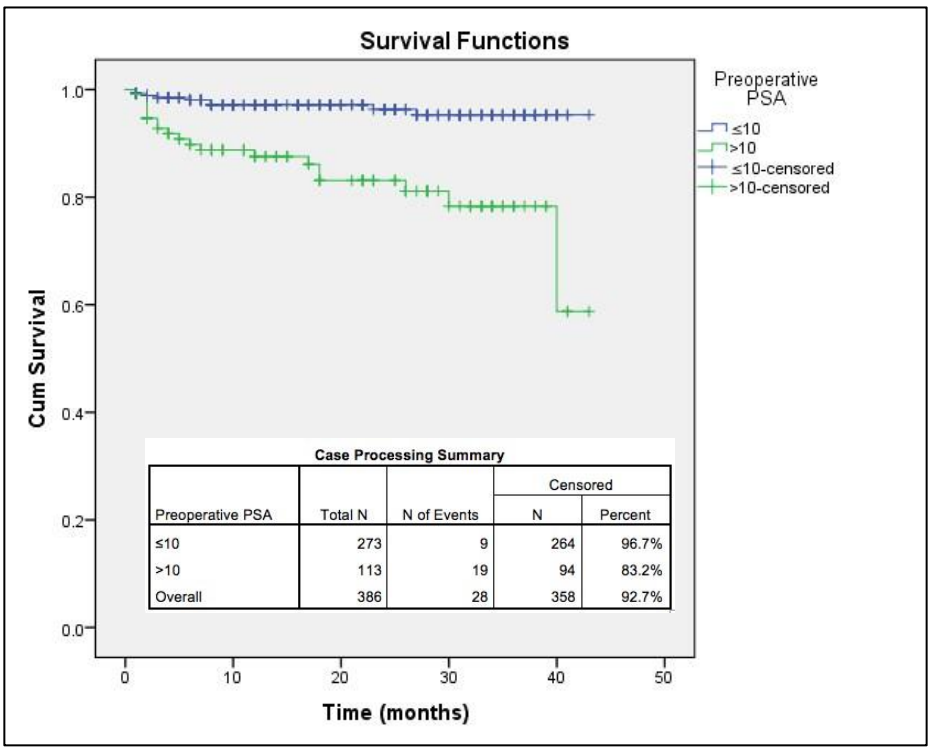


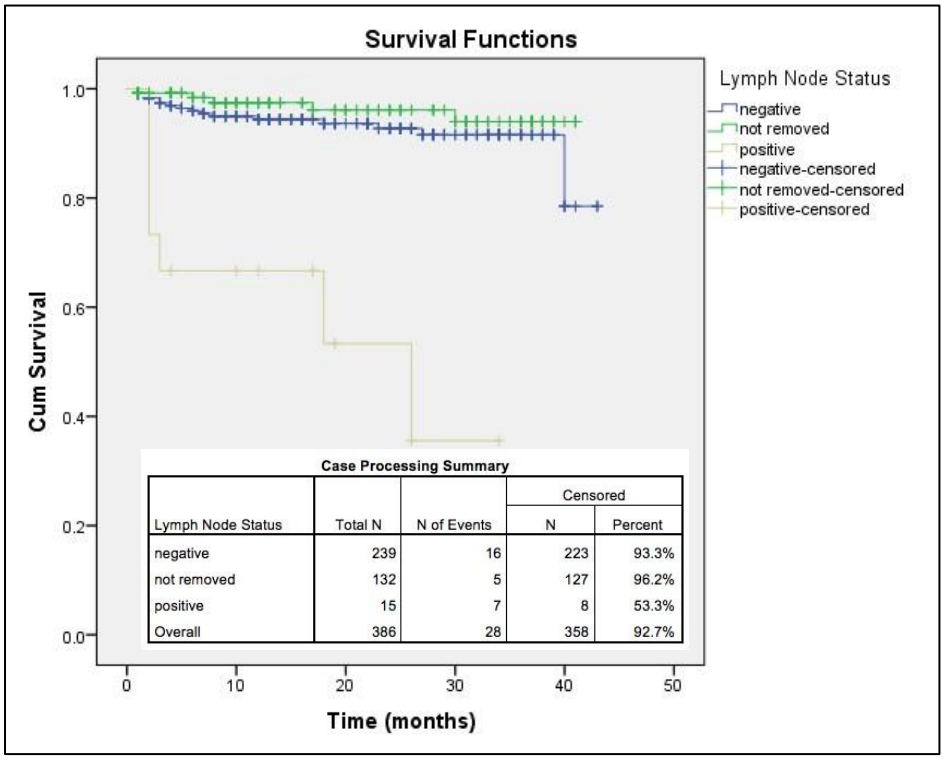
Figure 1: Overall Biochemical Recurrence-Free Survival Function after RALP



Case Processing Summary

Preoperative PSA	Total N	N of Events	Censored N	Censored Percent
≤10	273	9	264	96.7%
>10	113	19	94	83.2%
Overall	386	28	358	92.7%

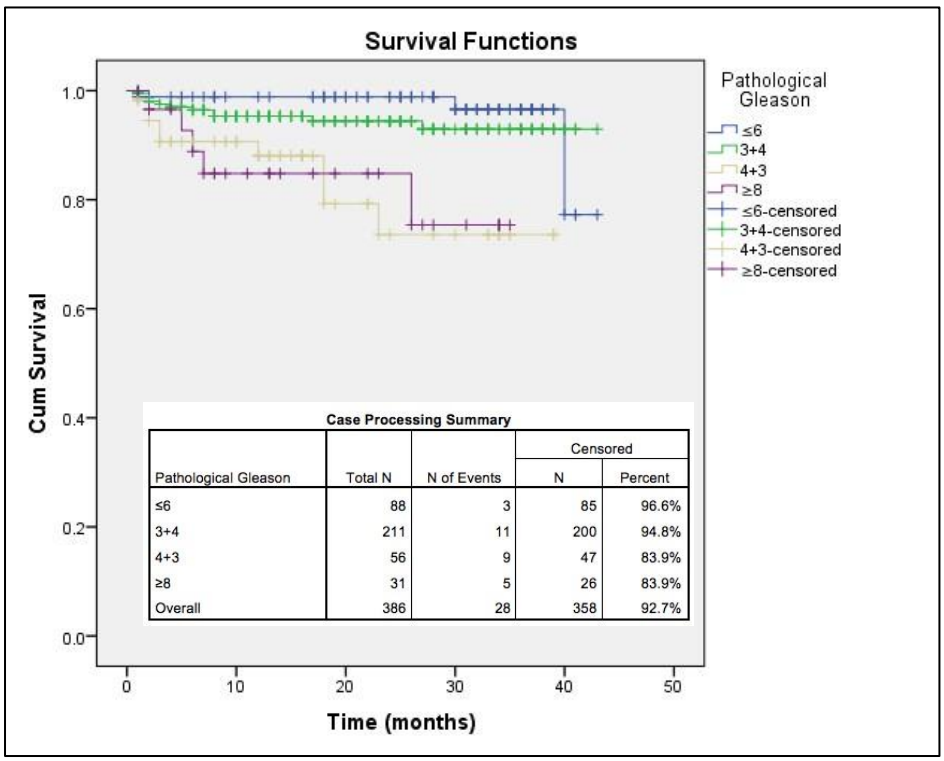
Figure 2: Biochemical Recurrence-Free Survival Function after RALP by Preoperative PSA



Case Processing Summary

Lymph Node Status	Total N	N of Events	Censored N	Censored Percent
negative	239	16	223	93.3%
not removed	132	5	127	96.2%
positive	15	7	8	53.3%
Overall	386	28	358	92.7%

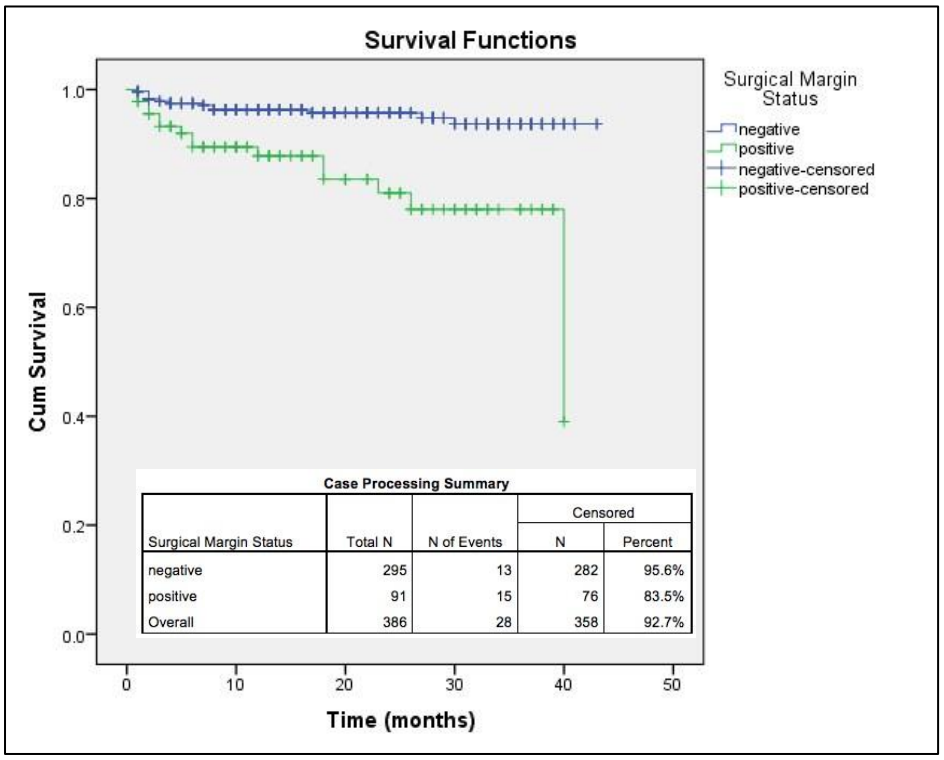
Figure 3: Biochemical Recurrence-Free Survival Function after RALP by Lymph Node Status



Case Processing Summary

Pathological Gleason	Total N	N of Events	Censored N	Censored Percent
≤6	88	3	85	96.6%
3+4	211	11	200	94.8%
4+3	56	9	47	83.9%
≥8	31	5	26	83.9%
Overall	386	28	358	92.7%

Figure 4: Biochemical Recurrence-Free Survival Function after RALP by Pathological Gleason Score



Case Processing Summary

Surgical Margin Status	Total N	N of Events	Censored N	Censored Percent
negative	295	13	282	95.6%
positive	91	15	76	83.5%
Overall	386	28	358	92.7%

Figure 5: Biochemical Recurrence-Free Survival Function after RALP by Surgical Margin Status

Predicting response to neo-adjuvant chemotherapy in muscle invasive bladder cancer

M Jefferies, A Bennett, R David, J Wilson, A Carter, G Kanda-Swamy, P Bose

Introduction & objectives

Neo-adjuvant chemotherapy (NAC) is considered to be the gold standard in patients having radical surgery for muscle invasive bladder cancer offering a ~5% 5-year survival benefit.

Not all patients respond to NAC. Predicting a response is challenging as no reliable radiological or molecular markers exist.

The objectives of this study were to:

1. Assess factors associated with response to NAC.
2. Assess the use and response rate to NAC.
3. Assess the overall survival benefit of NAC.

Materials & methods

A retrospective observational study was conducted across 2 centres on patients undergoing radical cystectomy for cT2-4N0 disease. Data was obtained on pre-operative clinical, radiological and pathological staging and overall survival.

Results

49.5% (54/109) patients received NAC. Renal impairment and poor performance status were the most common reasons for omission. 55.5% (30/54) patients responded to NAC, 35.2% histological complete (T0N0, 19/54) and 20.4% showed a partial (TCIS-T1, 11/54) response. 44.5% (24/54) did not respond: 7.4% (4/54) T2N0, 14.8% (8/54) T3-4N0 and 22.2% (12/54) with nodal positive disease. In the no NAC cohort, 21.8% (12/55) had positive pathological nodal disease.

There were no differences in the pre-operative stage between the NAC responders and non-responders. The mortality rate was 3.3% (1/30, median follow up=27 months [6-77]) in the NAC responders and 50.0% (12/24, median survival=22.1 months, median follow up=21 months [9-49]) in the NAC non-responder. In patients with nodal positive disease the median survival was 19.9 versus 19.3 months, in the NAC and no NAC cohorts, respectively.

The presence of lympho-vascular invasion (LVI) was associated with poor response to NAC, present in 0% (0/30) of NAC responders and 54.2% (13/24) of NAC non-responders final cystectomy pathological specimens. In patient with LVI, 7.7% (1/13) had pT2N0, 30.8% (4/13) had pT3-4N0 and 61.5% (8/13) had pathological nodal positive disease. 5/13 of cases of LVI were present on initial TURBT. Smoking status had weak correlation with response to NAC, with 46.7% of responders versus 33.3% non-responders smoking (p=0.63). The presence of carcinoma in situ, micro-papillary variant, squamous differentiation, perineural invasion, hydronephrosis or tumour location had no correlation with NAC response.

Conclusion

Patients that respond to NAC have an excellent outcome. Those that do not, in particular those with nodal positive disease, do very poorly. The presence of LVI is strongly correlated with poor response to NAC and these patients may be considered for upfront cystectomy.

Response to NAC is not predictable by other histological features or preoperative stage. Future developments in radiological imaging such as PET-CT and molecular markers are essential to identify those patients that will benefit from NAC.

Outcomes of patients undergoing MP-MRI and template biopsy of the prostate after previous negative TRUS biopsies

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Introduction and Aim

The PRECISION trial has provided clarity on the role of multi-parametric MRI (MP-MRI) in biopsy-naive men with suspected prostate cancer, however the use of MP-MRI in men with previous biopsies remains unclear. We assessed MP-MRI's use in detecting significant cancer in patients with a previous negative TRUS biopsy (TRUS-Bx).

Method

All patients who had a negative TRUS-Bx over a 7 month period were identified (n=98). Patients with PI-RADS 1-2 were excluded. 54 patients with PI-RADS score 3-5 underwent transperineal biopsy (TPBx). Data collected included Gleason score, PSA density and prostate volume. The primary outcome was clinically significant cancer, defined as Gleason score ≥7 or 3+3 plus core length >5mm.

Results

Figure 1 demonstrates biopsy results with PI-RADS score; 9/13 (69%) of PI-RADS 4 and 5/17 (29%) of PI-RADS 5 lesions were negative or not clinically significant at biopsy, giving a sensitivity of 76.2% and specificity of 60.0%. Figure 2 highlights the positive predictive value of MP-MRI in PI-RADS 3-5 lesions of 38.9%. By combining PIRADS 3 lesions with a PSA density (PSAd) ≥0.2, sensitivity improved to 95.2%.

Conclusion

Sensitivity and PPV of prostate MP-MRI are reduced where the patient has had a prior negative TRUS biopsy. Our series indicates a potential role for PSAd alongside MP-MRI in determining risk of malignancy and need for TPBx.

	TPBx +ve CS	TPBx +ve not CS	TPBx -ve	Total
PI-RADS 3	5 (20.8%)	4 (16.7%)	15 (62.5%)	24
PI-RADS 4	4 (30.8%)	4 (30.8%)	5 (38.4%)	13
PI-RADS 5	12 (70.6%)	2 (11.8%)	3 (17.6%)	17

Figure 1 – PI-RADS = Prostate Imaging-Reporting And Data System, TPBx = transperineal biopsy, CS = clinically significant

		Template Biopsy – Clinically Significant Cancer		
		Positive	Negative	
MP-MRI – PI-RADS 3-5	Positive	21	33	PPV – 38.9%
	Negative	0	2	NPV – 100.0%

Figure 2 – PPV = positive predictive value, NPV = negative predictive value

Patient reported experience in a true one-stop clinic for the investigation of elevated PSA.

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Introduction

The investigation of patients referred from primary care with an elevated PSA should be streamlined and efficient to enable quick diagnosis and improve patient outcome and experience.

We present patient experience of a truly one stop clinic investigating patients referred from primary care with an elevated PSA.

Methods

General Practitioners are asked to ensure at least two elevated PSA tests are recorded and patients are aware of what investigations they will be offered at their clinic visit.

Patients that meet urgent suspected cancer criteria attend a one stop clinic and are assessed with a focused history and clinical examination. Thereafter, a multi-parametric MRI is performed and reviewed by a consultant radiologist prior to undertaking a TRUS-guided prostate biopsy.

Patients attending the clinic were asked to rate their experience using an online survey. Rating scales of 1- 10 were used (1=very bad, 10=excellent)

Results

36 patient responses were received. 97% knew why they had been referred. Satisfaction scores for MRI service, clinical assessment and the TRUS guided biopsy were between 8-10 in >90% of cases. Overall experience scores between 8-10 were achieved in 97% of cases.

Conclusion

A truly one-stop clinic for the investigation of men with raised PSA has multiple advantages for both patient care and service provision.

It involves significant investment from both primary and secondary care teams but we have shown this process to be highly rated by patients and believe it represents the gold standard investigative pathway.