

Snapshot of partial nephrectomy in the UK Audit - STUKA partial -

On behalf of BAUS section of oncology

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Introduction

Partial nephrectomy (PN) numbers have increased in the UK in recent years, with the number of new cases added to the BAUS Complex Operations Database more than doubling from 2007 to 2011. In particular, the elective use of PN for the treatment of smaller renal tumours has expanded. There has also been an increase in the use of minimally-invasive techniques to perform PN, including both conventional and robot-assisted laparoscopy. This audit utilises the same methodology as the previous STUKA audit of transurethral resection, with the intention of retrospectively identifying one new case from every surgeon undertaking PN in the UK. The aims are to produce a snapshot of current UK practice and outcomes, and provide a tool for quality improvement.

Methodology

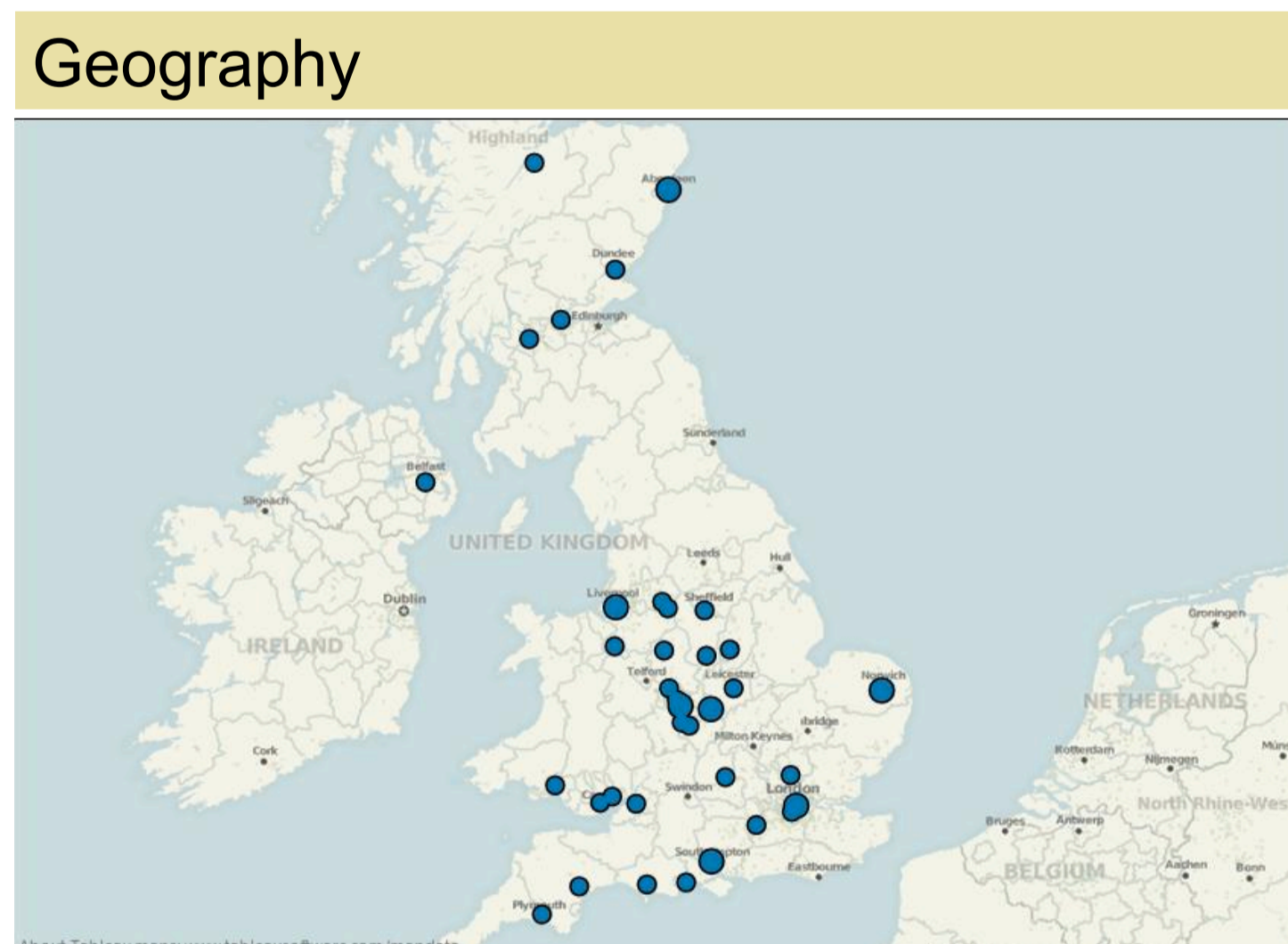
Retrospective review of single a case from every urologist in the country identifying their first partial nephrectomy performed after the 10th October, 2011. Study launch date 1st June 2012, with data to be entered by 31st July, 2012. Urologists to complete the STUKA proforma from case notes. Data entry online via BAUS audit system: <https://audits.baus.org.uk>

Results

816 consultants approached by email. 90 consultants responded, 24 to confirm that they do PN. 45 consultants actually entered data. 89% of data fields completed.

1. Patient demographics

	n (45)	%
Gender		
Male	24	(53%)
Female	19	(42%)
Not recorded	2	(4%)
Age		
Median (range)	52 (25-80)	
ECOG Status		
0	30	(67%)
1	12	(27%)
2	2	(4%)
Not recorded	1	(2%)
Age-adjusted Charlson Score		
<2 (young, few comorbidities)	20	(44%)
2-5	11	(24%)
>5 (older, multiple comorbidities)	4	(9%)
Not recorded	10	(22%)
Presentation		
Incidental finding:	34	(76%)
Acute med/surgical admission	4	(9%)
Outpatient assessment of:		
Other cancer	6	(13%)
Other urology problem	7	(16%)
Non-urology problem	17	(38%)
Visible Haematuria	3	(7%)
Non-visible haematuria	1	(2%)
Pain	2	(4%)
Follow-up for previous RCC	3	(7%)
Von-Hippel Lindau	2	(4%)



Returns to STUKA partial from UK Centres

Small circles = Single return from a centre

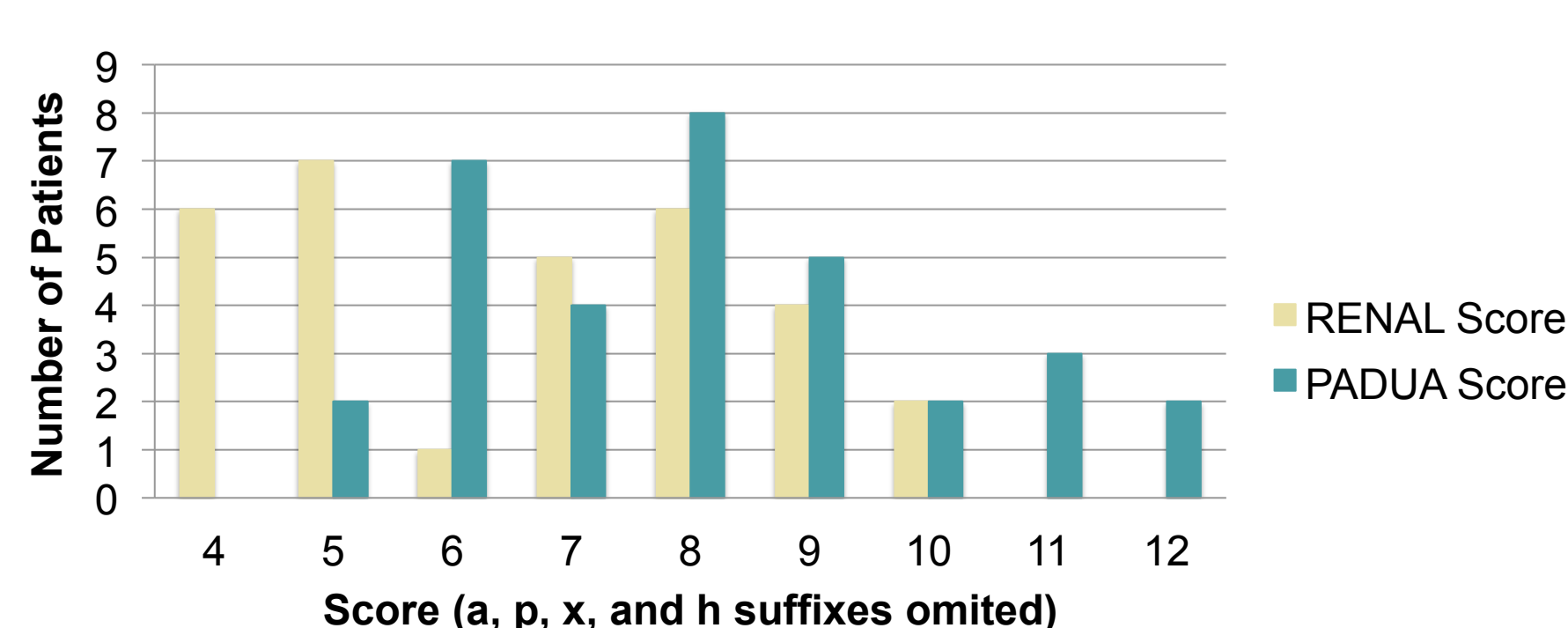
Large circles = 2 returns from a centre

2. Preoperative Characteristics

Indications			Pre-op Biopsy		
Elective - <4.5cm	25	(56%)	No biopsy	41	(91%)
Elective - >4.5cm	5	(11%)	Biopsy		
Relative (non VHL)	4	(9%)	RCC	3	(7%)
Relative (VHL)	3	(7%)	Inconclusive	1	(2%)
Imperative	7	(16%)			
Not Recorded	1	(2%)			

Max. Diameter		
0-2cm	3	(7%)
2-4cm	26	(58%)
4-7cm	13	(29%)
7-10cm	0	(0%)
>10cm	2	(4%)
Not recorded	1	(2%)

PADUA and RENAL Nephrometry Scores



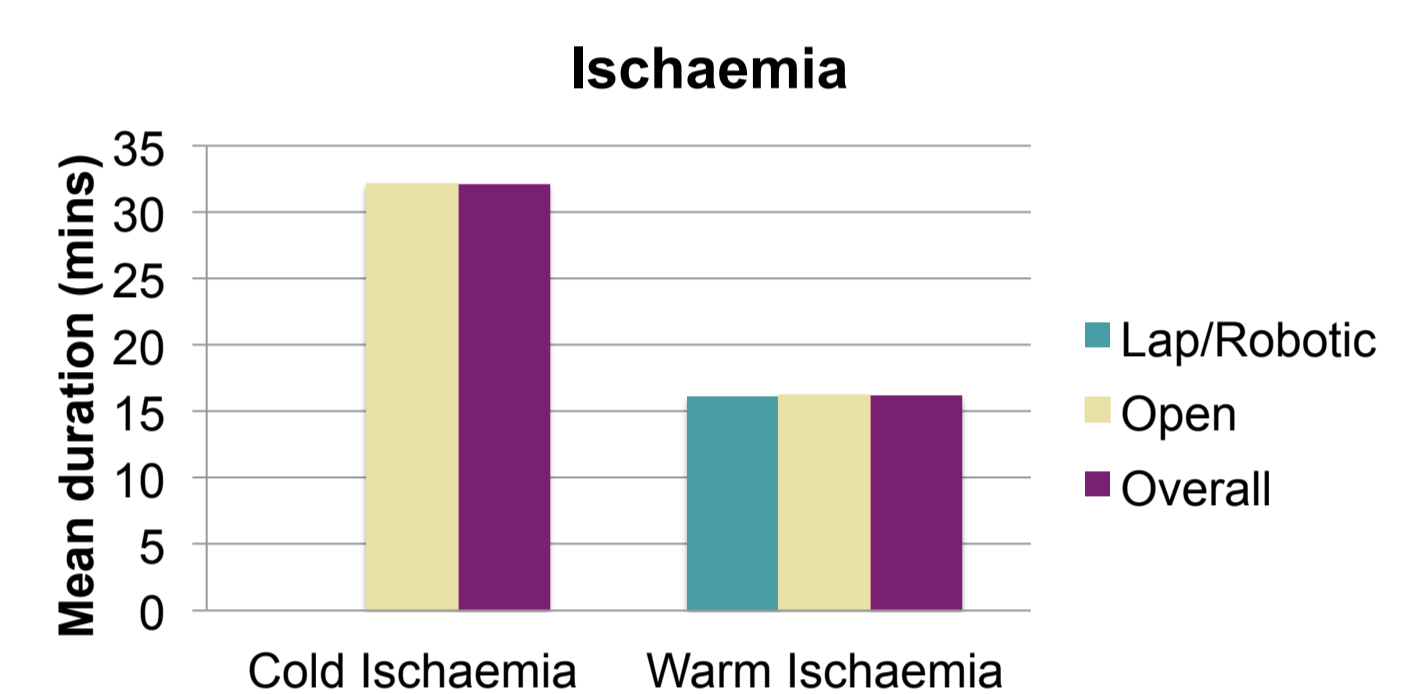
3. Surgical Technique and Quality

3a. Processes

Median time from decision to treatment 39 (10-241)

Procedure performed by:
 Consultant 42 (93%)
 SpR (under supervision) 3 (7%)

3c. Intraoperative details

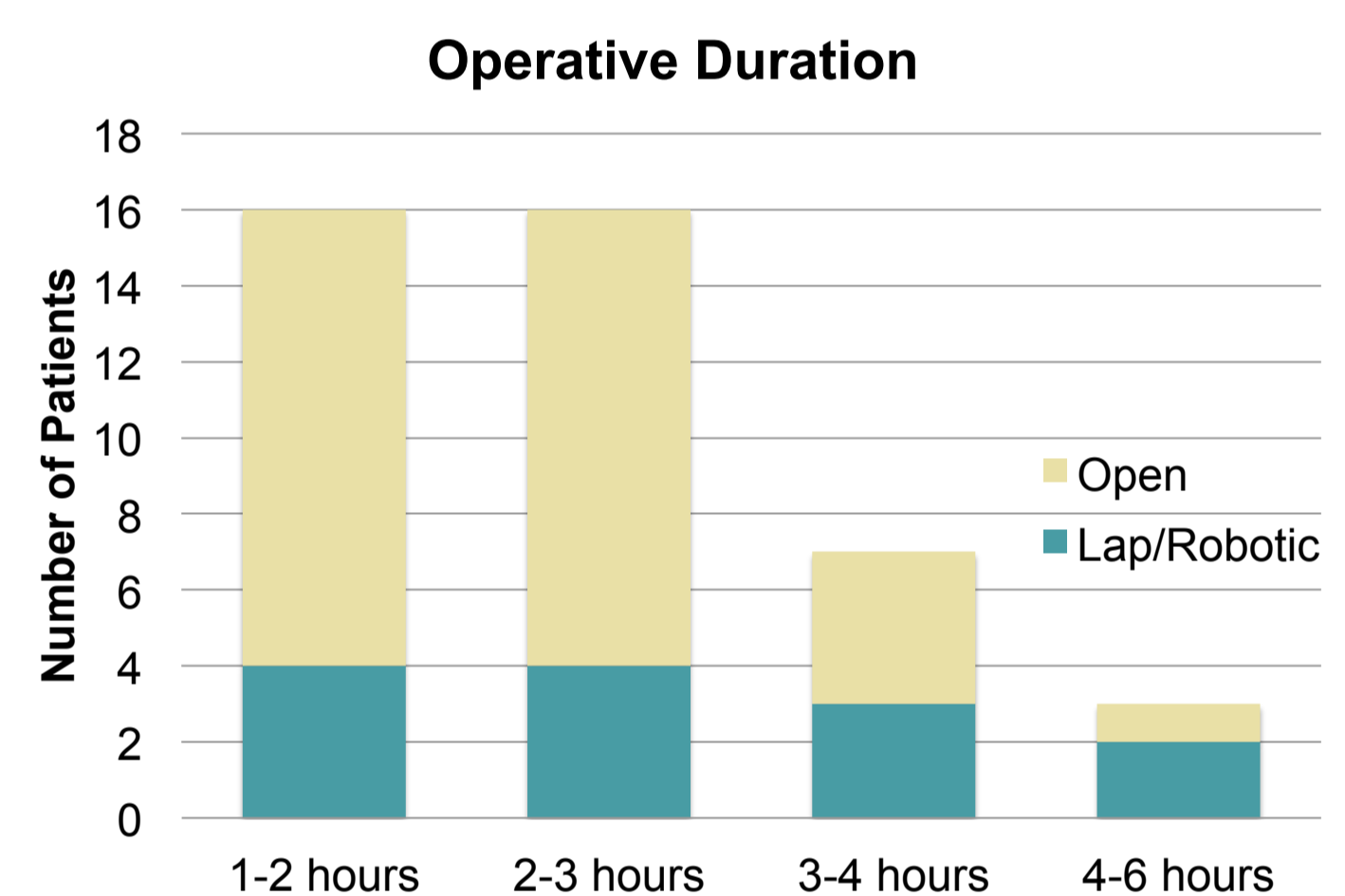


Warm Ischaemic times ranged from 6 to 40 mins (lap/robot) and 10-27 mins (open). 7 cases were performed without ischaemia, and 7 had incomplete data.

3b. Surgical Approach

	n	%
Open	31	(69%)
loin	29	(64%)
anterior	2	(4%)
Laparoscopic	11	(24%)
standard trans	10	(22%)
hand-assisted	1	(2%)
Robotic	3	(7%)
trans	2	(4%)
retro	1	(2%)

Median tumour diameter = 3.3cm Open vs. 2cm lap/robotic
 Median RENAL score = 8 Open vs 5 lap/robotic
 Median PADUA score = 8 Open vs 6.5 lap/robotic



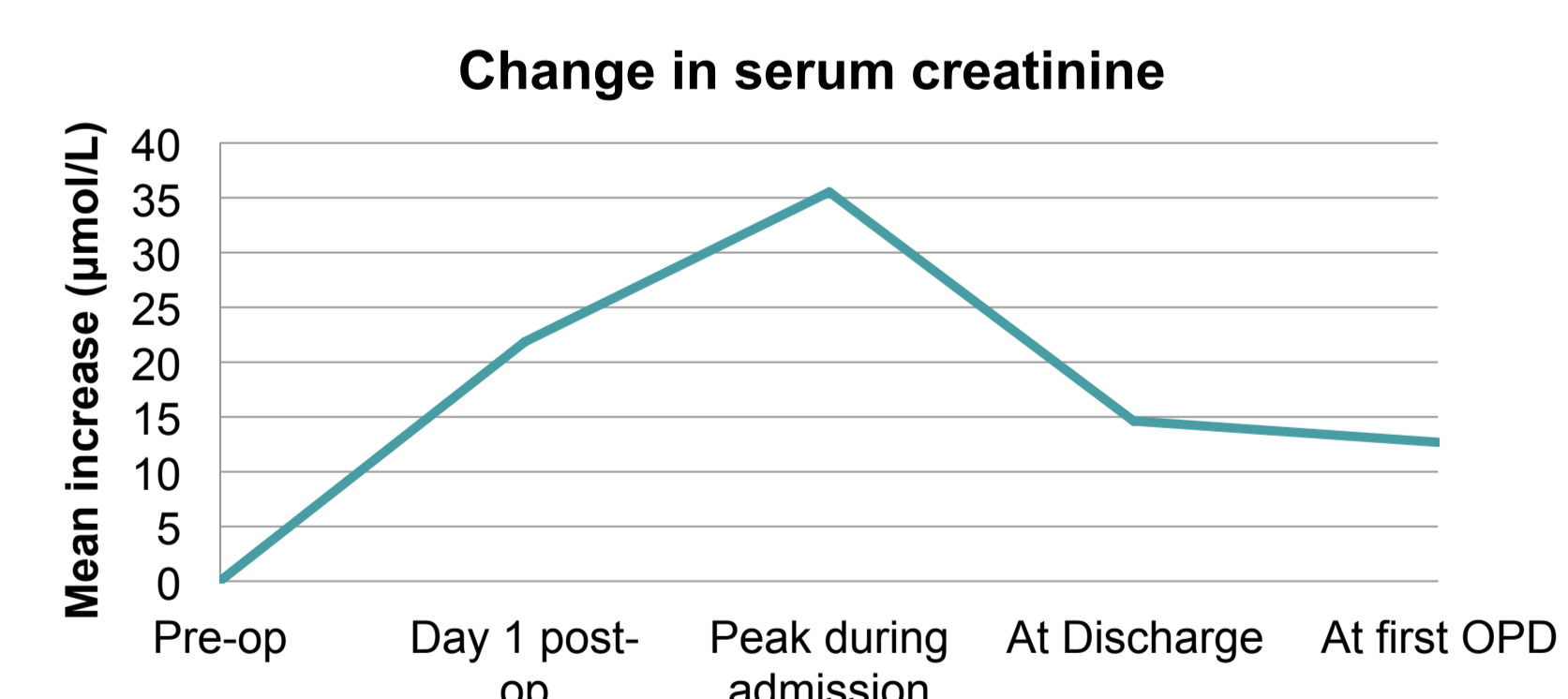
No conversions (lap/open or partial/radical)
Blood loss <500mls except n=3 (<1000mls)
Only 1 intraoperative transfusion (<2 units)
2 frozen sections from margins, both negative

3d. Early Complications - Modified Clavien-Dindo

Grade 0	30 (67%)	Grade IIIa	1 (2%)
Grade I	7 (16%)	Grade IIIb	0 (0%)
Grade II	4 (9%)	Grade IVa	1 (2%)
Unclassified complications	6(3%)		

4. Outcomes

	n	%
Final Pathology		
Malignant	39	(87%)
Clear cell	29	(74%)
Papillary	8	(21%)
Not spec.	2	(5%)
G1	10	(26%)
G2	18	(46%)
G3	8	(21%)
G4	1	(3%)
Not spec.	2	(5%)
Benign	5	(11%)
(2 AMLs, 1 oncocytoma, 1 scar)		



- 4 patients had late complications (bleeding, pleural effusion, wound pain, renal failure)
- Positive surgical margin rate = 2/39 (5%)
- No tumour recurrences at 6/12 follow-up reported (data available for n=26)
- No deaths reported

Key Findings

- Data interpretation is limited by a relatively small number of returns
- 45 data submissions from 816 consultants in the UK, but not all consultant urologists perform PN
- The quality of PN performed in the UK appears high
- 76% were performed for elective indications
- Few patients undergoing PN in the UK have a biopsy prior to surgery (9%)
- 31% of cases were performed minimally invasively
- 11% of lesions were benign on final histology