West of Scotland Cancer Network

Urological Cancer Managed Clinical Network



Audit Report

Renal Pelvis and Ureter Cancers Key Outcome Measures

Clinical Audit Data: 1st January - 31st December 2018

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1. Introduction

This report contains an assessment of the performance of West of Scotland (WoS) urological cancer services using clinical audit data relating to patients diagnosed with renal pelvis and ureter (RPU) cancers in Year 8, between 1st January - 31st December 2018.

RPU cancers are not part of the national QPI development programme therefore, in 2011; a core review group was initiated by the West of Scotland Cancer Network (WoSCAN) to develop key outcome measures (KOMs) making use of existing RPU data in the region. These KOMs were developed and agreed by the WoSCAN Urological Cancers Advisory Board. Five years of data, from 2014 to 2018 (Years 4-8), are presented within this report.

2. Methodology

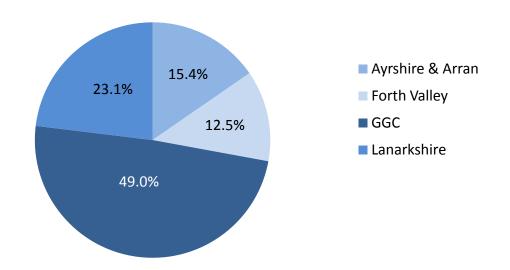
Further detail on the audit and analysis methodology and data quality is available in the meta data within Appendix 1.

3. Background

There were 104 new diagnoses of RPU cancer captured by audit in the WoS in 2018 (Year 8). Distribution by health board of diagnosis is shown below in Figure 1. The ratio of male to female cases is 1.04:1 with 53 men and 51 women diagnosed with RPU cancer in 2018 (Fig 3.).

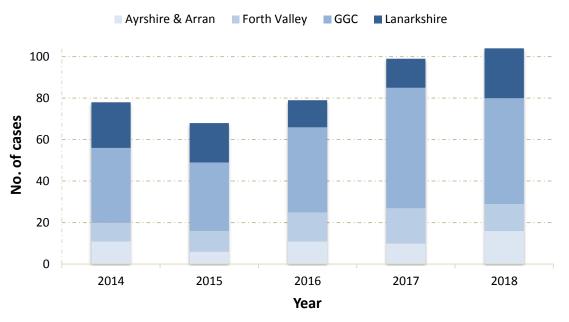
Number of cases diagnosed in 2018 (RPU 1)

Fig 1: Proportion of patients in WoScan diagnosed with RPU cancer by NHS Board of diagnosis in 2018.



	AA	FV	GG&C	Lan	WoScan
No. of cases	16	13	51	24	104
%	15.4%	12.5%	49.0%	23.1%	-

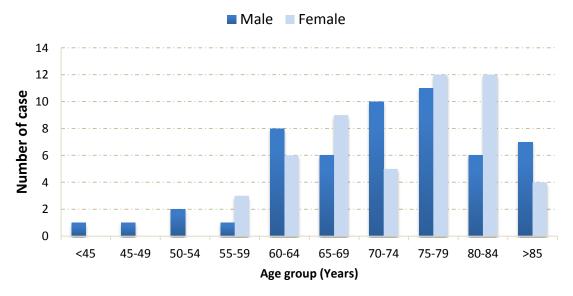
Fig 2: Trend in number of patients in WoS diagnosed with RPU cancer: 2014 - 2018



	2014	2015	2016	2017	2018
A & A	11	6	11	10	16
FV	9	10	14	17	13
GG&C	36	33	41	58	51
Lan	22	19	13	14	24
WoSCAN	78	68	79	99	104

The overall number of cases diagnosed in WoSCAN has increased by 25% since 2014 to 2018.

Fig 3: Number of patients diagnosed with RPU cancer in 2018 in WoS by age group, sex.



	<45	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>85	All ages
M	1	1	2	1	8	6	10	11	6	7	53
F	-	-	-	3	6	9	5	12	12	4	51

In 2018, nearly two thirds (64.4%) of cases of RPU cancers are in the aged 70 and over age categories. The greatest frequency of new diagnoses occurs between the ages of 75 - 79 years for men and in both 5-year age groups between 75 - 84 years for women

4. Key Outcome Measures

Patients Discussed at Multidisciplinary Team (MDT) Meeting (RPU 2)

RPU 2: Proportion of patients discussed at Multidisciplinary Team (MDT) Meeting

Numerator: Number of patients discussed by a multidisciplinary team

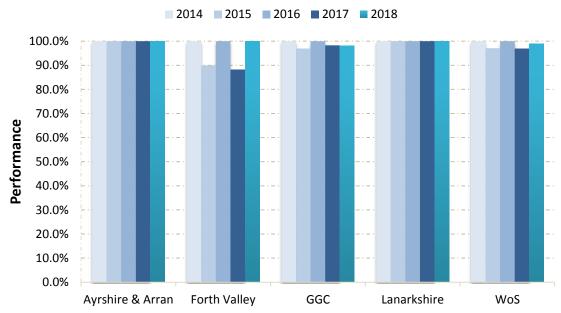
Denominator: All renal pelvis/ ureter cancer patients diagnosed in year

Exclusions: None

As with all other urological cancers, patients diagnosed with RPU cancers are discussed and managed by multidisciplinary teams (MDTs). The configuration of weekly urological cancer MDTs in the region during the reporting period (2018) is set out below. It should be noted that a regional renal MDT was established in February 2019 and it is anticipated that this will result in an improvement in the number of cases discussed at MDT going forward.

MDT	Constituent Hospitals
Ayrshire & Arran (AA)	Crosshouse Hospital, Ayr Hospital
	(i) Glasgow Royal Infirmary, Stobhill Hospital
Pan Glasgow	(ii) Queen Elizabeth University Hospital, Victoria Infirmary, Gartnavel General Hospital
Clyde	Royal Alexandria Hospital, Inverclyde Royal Hospital, Vale of Leven
Forth Valley (FV)	Forth Valley Royal Hospital
Lanarkshire (Lan)	Monklands District General, Wishaw General Hospital, Hairmyres Hospital

Fig/table 4: Proportion of patients diagnosed with RPU cancer discussed at MDT by NHS Board, 2014 - 2018



	Ayrshire	e & Arran	Forth	Forth Valley		GC	Lana	rkshire	WoS		
	Ν	%	N	N %		%	N	%	N	%	
2014	11	100.0%	9	100.0%	36	100.0%	21	100.0%	77	100.0%	
2015	6	100.0%	9	90.0%	32	97.0%	19	100.0%	66	97.1%	
2016	11	100.0%	14	100.0%	41	100.0%	13	100.0%	79	100.0%	
2017	10	100.0%	15	88.2%	57	98.3%	14	100.0%	96	97.0%	
2018	16	100.0%	13	100.0%	50	98.0%	24	100.0%	103	99.0%	

Source: RPU 2

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Of the 104 cases of RPU cancer in the WoS in 2018, 103 were discussed at MDT giving a performance of 99.0%. Board performance ranged from 98.0% for NHS Greater Glasgow & Clyde to 100.0% for the remaining NHS Boards in WoS. The single case in NHSGGC which was not discussed at MDT has been audited by the board and detailed sufficient commentary provided. The performance of this KOM has remained consistently high over the 5 years.
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Clinical TNM recorded (RPU 3)

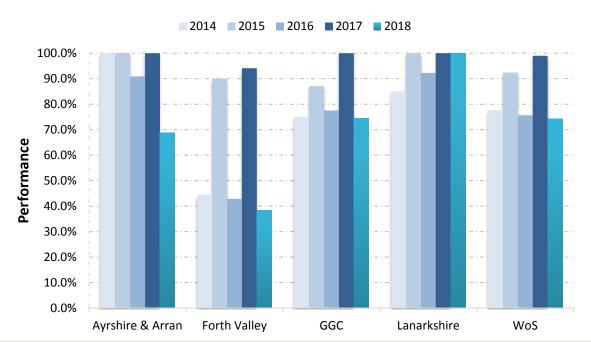
RPU 3: Proportion of patients clinically staged using TNM Numerator: Number of patients clinically staged using TNM

Denominator: All renal pelvis/ureter cancer patients diagnosed in year

Exclusions: Patients who have died before first treatment

Staging of patients at diagnosis aids treatment decision making and can be an indicator of prognosis.

Fig/table 5: Proportion of patients diagnosed with RPU cancer with TNM recorded by NHS Board, 2014 – 2018



	Ayrshire & Arran		Forth Valley		G	GC	Lana	rkshire	W	oS
	N	%	N	%	N	%	N	%	N	%
2014	11	100.0%	4	44.4%	27	75.0%	17	85.0%	59	77.6%
2015	6	100.0%	9	90.0%	27	87.1%	19	100.0%	61	92.4%
2016	10	90.9%	6	42.9%	31	77.5%	12	92.3%	59	75.6%
2017	10	100.0%	16	94.1%	58	100.0%	14	100.0%	98	99.0%
2018	11	68.8%	5	38.5%	38	74.5%	21	100.0%	75	74.3%

N - No. Cases with TNM recorded

Source: RPU 3

Clinical TNM staging information was recorded for 74.3% of RPU diagnoses in 2018. This shows a drop of 25 percentage points when compared to 2017 (99.0%). In 2018, all Boards showed a drop over the past year excluding NHS Lanarkshire, which remained at 100%.

In NHSGGC 13 cases had TNM missing or not fully recorded. It should be noted that a number of RPU patients will not be deemed fit for investigation or treatment and therefore may not be staged. Stage is routinely recorded at the regional MDT therefore improvements are anticipated going forward.

Actions:

 NHS Ayrshire & Arran, NHS GGC and NHSFV to ensure all relevant patients have clinical stage recorded.

Surgeons Performing Nephroureterectomy (RPU 6 & 7)

RPU 6: Type surgical procedures performed

Numerator: Number of patients receiving each type of procedure as their main surgery

Denominator: Patients having surgery

Exclusions: Patients who refused all treatment, patients who refused surgery and patients who

died before treatment

There is a relationship between improved surgical outcomes and volume of cases performed. The number of nephroureterectomies performed by surgeons in the WoS for patients diagnosed in 2018 is shown below.

Table 6: Trend in nephroureterectomies performed in the WoS by NHS Board of diagnosis and diagnosis year, 2014 – 2018.

	20)14	2015		20	16	20	17	20	18
	N	%	N	%	N	%	N	%	N	%
A&A	7	100.0%	3	60.0%	7	100.0%	5		11	100.0%
FV	7	100.0%	4	50.0%	6	66.7%	6	85.7%	4	66.7%
GG&C	17	77.3%	13	81.3%	16	84.2%	27	77.1%	28	84.8%
LAN	11	100.0%	7	100.0%	6	100.0%	8	100.0%	11	91.7%
WoScan	31	89.4%	27	75.0%	35	85.4%	46	83.6%	54	87.1%

Source: RPU 6

For those diagnosed in 2018, 62 surgical procedures were carried out with 54 (87.1%) of these procedures being nephroureterectomies (Table 6).

RPU 7: Surgeons performing nephroureterectomy

Numerator: Number of nephroureterectomies performed by each surgeon

Denominator: Patients having nephroureterectomy as main type surgery and surgery performed in

year

Exclusions: None

Table 7 shows the number of procedures performed by each NHS Board within the WoS by the year in which they were performed. A patient can be diagnosed in a previous year from when they receive their surgery. 43 nephroureterectomy procedures were performed in 2018 regardless of year of diagnosis. Of these 43, 58.1% (25) were performed in NHSGGC.

Table 7: Trend in nephroureterectomies performed in the WoS by NHS Board of diagnosis and year performed, 2014 – 2018.

	20	14	2015		20	16	20	17	2018	
	N	%	N	%	N	N %		%	N	%
A&A	7	22.6%	1	3.3%	8	21.1%	4	9.1%	8	18.6%
FV	6	19.5%	4	13.3%	6	15.8%	7	15.9%	3	7.0%
GG&C	14	45.2%	13	43.3%	17	44.7%	20	45.5%	25	58.1%
LAN	4	12.9%	12	40.0%	7	18.4%	8	18.2%	7	16.3%
WoScan	31	-	30	-	38	-	44	-	43	-

Source: RPU 7

Table 8 shows the number of procedures performed by individual surgeons within each NHS Board in the WoS.

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Table 8: Number of nephroureterectomies performed by surgeons in the WoS in 2018, by NHS Board of diagnosis.

NHS Board	A 8	& A	FV			GG	&C				Lan				
Surgeon	Α	В	С	D	D E F G H I						K	L	Total		
No. of cases	3	5	3	1	1	2	3	2	16	1	2	4	43		

Source: RPU7

Actions:

• NHS Greater Glasgow & Clyde and Lanarkshire to provide feedback where a surgeon has performed a single surgical case.

Thirty-day mortality following nephroureterectomy (RPU 8)

RPU 8: 30 day mortality for nephroureterectomy patients

Numerator: Number of patients who died within 30 days of undergoing nephroureterectomy

All renal pelvis/ureter cancer patients diagnosed in year and undergoing radical Denominator: nephroureterectomy

None

Treatment related mortality is a marker of the quality and safety of the whole service provided by the Multi Disciplinary Team (MDT). This KOM is intended to ensure treatment is given appropriately.

There were 54 nephroureterectomy procedures carried out across WoS NHS Boards for patients diagnosed in 2018. Of all patients diagnosed with RPU cancer in 2018, 51.9% (54/104) had a nephroureterectomy performed. There was one death (1.9%) within 30 days of nephroureterectomy.

Fig 8: Number of patients who died within 30 days of nephroureterectomy performed in WoS, by NHS Board & year of diagnosis.

		2014		2015			2016			2017			2018		
	N	D	%	N	D	%	N	D	%	N	D	%	N	D	%
A&A	-	7	-	-	3	-	-	7	-	-	5	-	-	11	-
FV	-	7	-	-	4	-	-	6	-	-	6	-	-	4	-
GGC	-	17	-	-	13	-	-	16	-	1	27	3.7%	1	28	3.6%
Lan	-	11	-	1	7	14.3%	-	6	-	-	8	-	-	11	-
WoS	-	42	-	1	27	3.7%	-	35	-	1	46	2.2%	1	54	1.9%

Source: RPU 8

Exclusions:

N - No. of deaths 30 days after nephroureterectomy

D - Total no. of cases

Conclusions and actions required

Cancer audit data underpins much of the regional development and service improvement work of the MCN and regular reporting of activity and performance is a fundamental requirement of an MCN to assure the quality of care delivered across the region.

The recording of TNM data is fundamental in aiding treatment decision making for patients diagnosed with RPU cancers. In 2018, every board within WoSCAN excluding NHS Lanarkshire, saw a drop in the recording of the TNM stage. Boards have identified improvement actions for the forthcoming year to work towards.

Performance with regards to MDT discussion and 30-day mortality following nephroureterectomy continues to be of a high standard for all boards.

It should be noted that a regional renal MDT was established in February 2019 and it is anticipated that this will result in an improvement number of cases discussed at MDT and the data collected for QPI reporting going forward.

The Urological Cancers MCN Advisory Board will actively take forward any regional actions identified and NHS Boards are asked to develop local Action/Improvement Plans in response to the findings presented in the report. A summary of actions for each NHS Board has been included in Appendix 3.

Actions:

TNM recording (RPU 3)

 NHS Ayrshire & Arran, NHS GGC and NHSFV to ensure all relevant patients have clinical stage recorded. Cases will now be presented at the regional MDT by NHS GGC which should improve clinical stage recording.

Surgeons Performing Nephroureterectomy (RPU 7)

 NHS Forth Valley, Greater Glasgow & Clyde and Lanarkshire to provide feedback where a surgeon has performed a single surgical case.

Completed Action Plans should be returned to WoSCAN within two months of publication of this report.

Progress against these plans will be monitored by the MCN Advisory Board and any service or clinical issue which the Advisory Board considers not to have been adequately addressed will be escalated to the NHS Board Territorial Lead Cancer Clinician and Regional Lead Cancer Clinician.

Additionally, progress will be reported to the Regional Cancer Advisory Group (RCAG) annually by NHS Board Territorial Lead Cancer Clinicians and MCN Clinical Leads, as part of the regional audit governance process to enable RCAG to review and monitor regional improvement.

Acknowledgement

This report has been prepared using clinical audit data provided by the following NHS Boards in the WoSCAN area:

NHS Ayrshire & Arran NHS Forth Valley NHS Greater Glasgow and Clyde NHS Lanarkshire

We would like to thank all members and active participants in the cancer network for their continued support of the MCN, and the many hospitals that are committed to making the audit succeed. We also acknowledge the efforts of the clinical effectiveness staff, nurses, and other service users for their work in ensuring the data are available to enable analysis to take place each year. Without their considerable efforts this level of progress would not be possible.

Glossary

AA	NHS Ayrshire & Arran			
e-CASE	Electronic Cancer Audit Support Environment			
FV	NHS Forth Valley			
GGC	NHS Greater Glasgow and Clyde			
KOM(s)	Key Outcome Measure(s)			
Lan	NHS Lanarkshire			
MCN	Managed Clinical Networks. Linked groups of health professionals and organisations from primary, secondary and tertiary care, working in a co-ordinated manner, unconstrained by existing professional and NHS Board boundaries, to ensure equitable provision of high quality clinically effective services.*			
MDT	A Multidisciplinary Team is a group of professionals from one or more clinical disciplines who together make decisions regarding recommended treatment of individual patients.**			
Nephroureterectomy	The most commonly used operation to treat cancer of the ureter or renal pelvis. The surgeon removes: the kidney, a layer of fat around the kidney, the ureter and an area of tissue where the ureter enters the bladder (bladder cuff). The surgeon may also remove some lymph nodes close to the kidney to check if they contain cancer cells.***			
NHSGGC	NHS Greater Glasgow and Clyde			
RCAG	Regional Cancer Advisory Group			
RPU	Renal pelvis & ureter			
TNM	Tumour, Nodes, Metastases (staging system)			
WoS	West of Scotland			
WoSCAN	West of Scotland Cancer Network			

Sources:
* www.woscan.scot.nhs.uk

^{**} www.datadictionary.nhs.uk

^{***} www.macmillan.org.uk

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Appendix 1: Metadata

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Report Title	Cancer Audit Report: Renal Pelvis and Ureter Cancers Key Outcome Measures					
Time Period	Patients diagnosed between 1st January 2018 - 31st December 2018					
Data Source	Cancer Audit Support Environment (eCASE). A secure centralised webbased database which holds cancer audit information in Scotland.					
Data extraction date	15th January 2020					
Methodology	Analysis was performed centrally for the region by the WoSCAN Information Team. The timescales agreed took into account the patient pathway to ensure that a complete treatment record was available for the majority of patients. Initial results were provided to Boards to check for inaccuracies, inconsistencies or obvious gaps and a subsequent download taken upon which final analysis was carried out.					
	The final data analysis was disseminated for NHS Board verification in line with the regional audit governance process to ensure that the data was an accurate representation of service in each area. Please see info graphic in appendix 2 for a more detailed look at the reporting process.					
Data Quality	Audit data completeness can be assessed by estimating the proportion of expected patients that have been identified through audit compared to the number reported by the National Cancer registry (provided by ISD, National Services Division), this is known as case ascertainment. Figures should only be used as a guide as it is not possible to compare the same exact cohort from each data source. Note that a 5 year average is taken for cancer registry cases to take account of annual fluctuations in incidence within NHS Boards.					
	Ayrshire Forth GGC Lanarkshire WoS					
	Cases from audit	16	13	51	24	104
	Cases from ISD (2012-16)*	11	6	36	13	66
	Case ascertainment 145.5% 216.7% 141.7% 184.6% 157.6%					

Appendix 2: Cancer clinical audit reporting timeline



DIAGNOSIS

Patient is diagnosed, treatment pathway initiated.

DATA COLLECTED

NHS board

cancer audit staff collect, verify & input relevant cancer audit information into eCase*.



e - electronic Cancer Audit Support Environment , a dynamic secure centralised web-based database.



PROVISIONAL SSRS DOWNLOAD**

Data download from eCase SSRS by WoScan information team.



REVIEW & UPDATE PRELIMINARY DATA

Send to NHS Board cancer audit staff to identify any issues, discuss with relevant clinicians & update eCase.



FINAL SSRS DOWNLOAD

Final data download by WoScan information team.



FINAL DATA REPORTS

Woscan information team reproduce excel QPI data tables & report with board performance summaries, highlighting QPI targets not met.



DATA SIGN OFF

Final data reports sent to NHS board cancer audit staff & clinical effectiveness leads to review with clinicians to populate performance summary report with clincal comments & sign data off.



reports providing reasons for why QPI targets not met

AUDIT REPORT PRODUCED

Boards have 4 weeks to complete performance summary

Woscan information team use clincal commentary from board performance summary report to complete audit report in conjunction with MCN manager/lead clinicians.





AUDIT REPORT PUBLISHED

Includes regional analysis, board comments & action plan template for NHS boards to complete.



Regional/NHS Board action plans for the year ahead completed by NHS boards, reviewed by MCN Manager/lead clinicians to identify priority areas.



Boards have 2 months to generate action plans from when audit report published.



PROGRESS MONITORED

Progress monitored through NHS board leads at MCN advisory boards and regular updates are provided to RCAG.



NHS Board responsibility WoScan information team responsibility

Appendix 3: NHS Board Action Plans RPU KOMs

A summary of actions for each NHS Board has been included within the following Action Plan templates. Completed Action Plans should be returned to WoSCAN within two months of publication of this report.

Area:	NHS Ayrshire and Arran
Action Plan Lead:	
Date:	

KEY (Status)				
1	Action fully implemented			
2	Action agreed but not yet implemented			
3	No action taken (please state reason)			

КОМ	Action Required	Health Board Action	Timescales		Lood	Dragger / Action Status	Status
KOW		Taken	Start	End	Lead	Progress/Action Status	(see Key)
	Ensure actions mirror those detailed in Audit Report.	Detail specific actions that will be taken by the NHS Board.	Insert date	Insert date	Insert name of responsible lead for each specific action.	Provide detail of action in progress, change in practices, problems encountered or reasons why no action taken.	Insert No. from key above.
TNM recording (RPU 3)	To ensure that TNM to be recorded in future.						

Area:	NHS Forth Valley
Action Plan Lead:	
Date:	

KEY (Status)				
1	Action fully implemented			
2	Action agreed but not yet implemented			
3	No action taken (please state reason)			

КОМ	Action Required	Health Board Action	Timescales		Lood	Drogramme / Action Status	Status
KOW		Taken	Start	End	Lead	Progress/Action Status	(see Key)
	Ensure actions mirror those detailed in Audit Report.	Detail specific actions that will be taken by the NHS Board.	Insert date	Insert date	Insert name of responsible lead for each specific action.	Provide detail of action in progress, change in practices, problems encountered or reasons why no action taken.	Insert No. from key above.
TNM recording (RPU 3)	To ensure that TNM to be recorded in future.						

Area:	NHS Greater Glasgow and Clyde
Action Plan Lead:	
Date:	

KEY (Status)				
1	Action fully implemented			
2	Action agreed but not yet implemented			
3	No action taken (please state reason)			

KOM	Action Described	Health Board Action Taken	Timescales		Lood	Business / Astisus Otatus	Status
KOM	Action Required		Start	End	Lead	Progress/Action Status	(see Key)
	Ensure actions mirror those detailed in Audit Report.	Detail specific actions that will be taken by the NHS Board.	Insert date	Insert date	Insert name of responsible lead for each specific action.	Provide detail of action in progress, change in practices, problems encountered or reasons why no action taken.	Insert No. from key above.
TNM recording (RPU 3)	To ensure that TNM to be recorded in future.						
Surgeons Performing Nephroureterectomy (RPU7)	Provide feedback where a surgeon has performed a single surgical case.						

Area:	NHS Lanarkshire
Action Plan Lead:	
Date:	

KEY (Status)					
1	Action fully implemented				
2	Action agreed but not yet implemented				
3	No action taken (please state reason)				

KOM	Action Required	Health Board Action Taken	Timescales		Lood	Dragrace/Action Status	Status
KOW			Start	End	Lead	Progress/Action Status	(see Key)
	Ensure actions mirror those detailed in Audit Report.	Detail specific actions that will be taken by the NHS Board.	Insert date	Insert date	Insert name of responsible lead for each specific action.	Provide detail of action in progress, change in practices, problems encountered or reasons why no action taken.	Insert No. from key above.
Surgeons Performing Nephroureterectomy (RPU7)	Provide feedback where a surgeon has performed a single surgical case.						