Quality Performance Indicators Audit Report

Tumour Area:	Renal Cancer
Patients Diagnosed:	1st January – 31st December 2018
Published Date:	26th November 2020
Clinical Commentary:	Dr. Gordon Urquhart NCA Renal Cancer lead

1. Renal Cancer in Scotland

Cancers of the kidney ranked as the seventh most common cancer type in Scotland in 2017[1] with a 17% increases in incident rates over the last 10. The reason for this increase is not clear. Established risk factors include obesity and smoking, however advances in medical imaging may also have led to an increase in incidental diagnosis of some tumours. Incidences of renal cancer are predicted to continue to increase by 72% between 2008-2012 and 2023-2027[2].

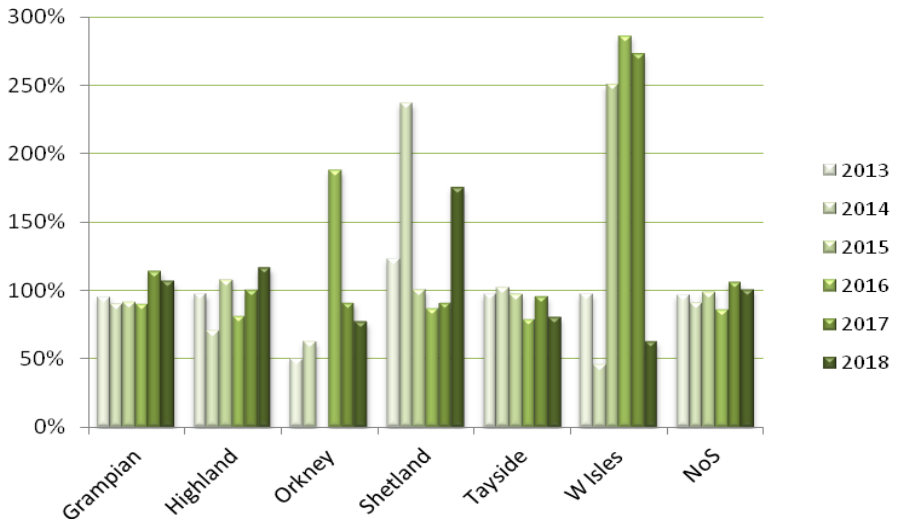
Relative survival from renal cancer is increasing[3]. The table below details the percentage change in 1 and 5 year relative survival for patients diagnosed 1987-1991 to 2007-2011.

Relative age-standardised survival for renal cancer in Scotland at 1 year and 5 years showing percentage change from 1987-1991 to 2007-2011[3].

	Relative survival at 1 year (%)		Relative survival at 5 years (%)	
	2007-2011	% change	2007-2011	% change
Male	71.4%	+17.2%	51.4%	+17.7%
Female	70.6%	+17.4%	56.1%	+18.4%

2. Patient Numbers and Case Ascertainment in the North of Scotland

A total of 244 cases of renal cancer were recorded through audit as being diagnosed in the North of Scotland between 1st January and 31st December 2018. Overall case ascertainment was high at 100.6%. Audit data were considered sufficiently complete to allow QPI calculations, however difficulties with recording of clinical TNM in NHS Grampian has resulted in incomplete datasets. While improvements in recording of clinical TNM can be seen over recent years, as apparent from the results of QPI 3, data capture is still not complete across the North of Scotland. For QPIs 7, 9, 10 and 13 clinical TNM staging data is required to derive results. The absence of these data for some patients has resulted in QPI results not being calculated from information on all patients.

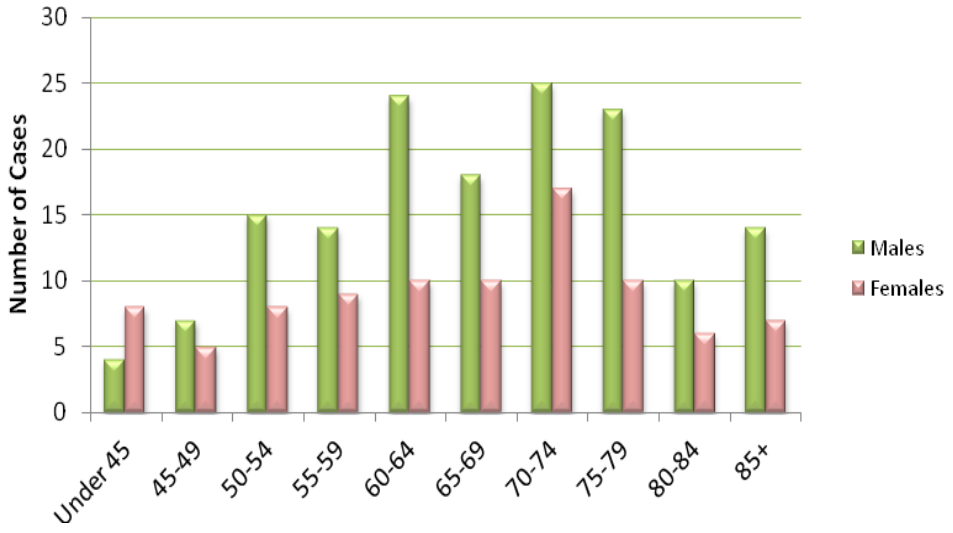


Case ascertainment by NHS Board for patients diagnosed with renal cancer in 2013-2018.

	Grampian	Highland	Orkney	Shetland	Tayside	W Isles	NoS
No. of Patients 2018	111	62	2	7	60	2	**244**
% of NoS total	45.5%	25.4%	0.8%	2.9%	24.6%	0.8%	**100%**
Mean ISD Cases 2013-17	104	53	3	4	75	3	**243**
% Case ascertainment 2018	106.3%	116.1%	76.9%	175.0%	80.0%	62.5%	**100.6%**

3. Age Distribution

The figure below shows the age distribution of patients diagnosed with renal cancer in the North of Scotland in 2018, with numbers highest in the 70-74 year age bracket for men and women.



Age distribution of patients diagnosed with renal cancer in the North of Scotland in 2018.

4. Performance against Quality Performance Indicators (QPIs)

Definitions for the QPIs reported in this section are published by Health Improvement Scotland[4], while further information on datasets and measurability used are available from Public Health Scotland[5]. Data for most QPIs are presented by Board of diagnosis; however QPI 8, relating to surgical mortality, and QPI 11, Leibovich Score, and QPI 13, Trifecta are presented by NHS Board of Surgery. QPI 12, which looks at surgical volumes of individual surgeons is based on the NHS Board of Surgeon while QPI 14 is reported by patients NHS Board of Residence. Please note that where QPI definitions have been amended, results are not compared with those from previous years.

5. Governance and Risk

Governance is defined as the combination of structures and processes at all levels to ensure quality performance and improvement including:

- Ensuring accountability for quality and required standards
- Investigating and taking action on sub-standard performance
- Identifying, sharing and ensuring delivery of best-practice
- Identifying and managing risks to ensure quality of care
- Driving continuous improvement

The North Cancer Alliance governance structure provides assurance to the six North of Scotland NHS boards that QPI risks are being addressed as an alliance.

An assessment of clinical risk for each QPI is made by the tumour-specific Clinical Director and Pathway Board manager upon the availability of data. This is discussed collaboratively within the tumour-specific Pathway Board, achieving consensus on clinical risk status assigned.

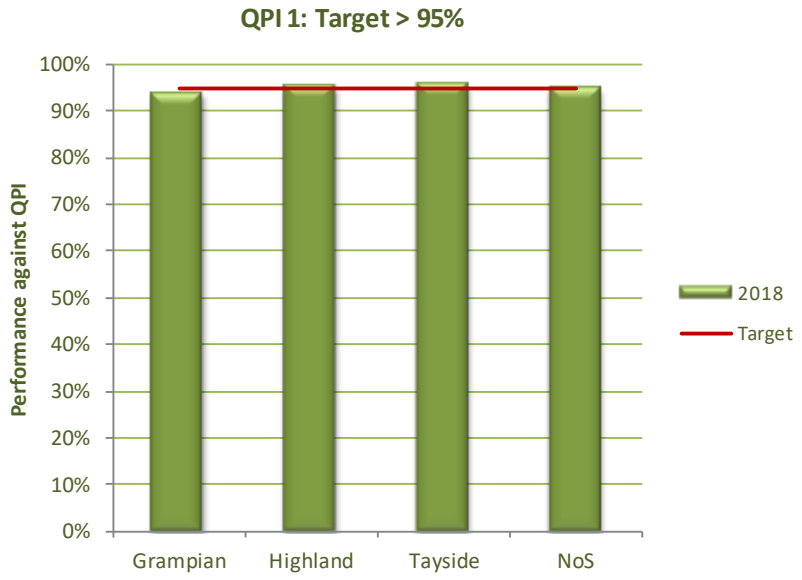
This assessment of clinical risk is then discussed and agreed with the NCA Clinical Director and Regional Cancer Manager who take independent oversight of current QPI performance, mitigation and actions proposed. The NCA Clinical Director or Manager may propose that the risk status requires oversight from the North Cancer Clinical Leadership Group (NCCLG).

NCCLG are presented with all available evidence and actions so they have all the information to define the risk in a collaborative way. NCCLG confirm the risk status of each QPI and ensure QPIs requiring escalation can be directed through the NCA governance structure.

- **Tolerate -** Accept the risk at its current level
- **Mitigate -** Reduce or mitigate the risk, in terms of reducing the likelihood of its occurrence or reducing the severity of impact if it does occur. This can be assessed through the action plans provided or the information provided is appropriate to prevent reoccurrence.
- **Escalate -** Escalate the risk to the appropriate committee and/or take further action as the mitigations were not suitable or there are no actions identified to mitigate the risk. This will be revisited by the NCCLG for further risk discussion.
- **Immediate -** Immediate action is required to prevent the risk reoccurring. This risk will have major impact on patient care delivery and the consequences thereafter. Very few risks should occur in this level.
- **Manage –** The risk is currently being managed through an action plan developed in liaison with the tumour-specific Clinical Director / Pathway Board members. It is likely risks that have previously been escalated will be assigned this risk status until there is evidence of an improvement in QPI compliance.

The full governance document on risk should be referred to in conjunction with this summary, which is available on the NCA website[6].

QPI 1	Radiological Diagnosis
Proportion of patients with RCC receiving active treatment who undergo pre-treatment cross-sectional imaging of the chest, abdomen +/- pelvis.	

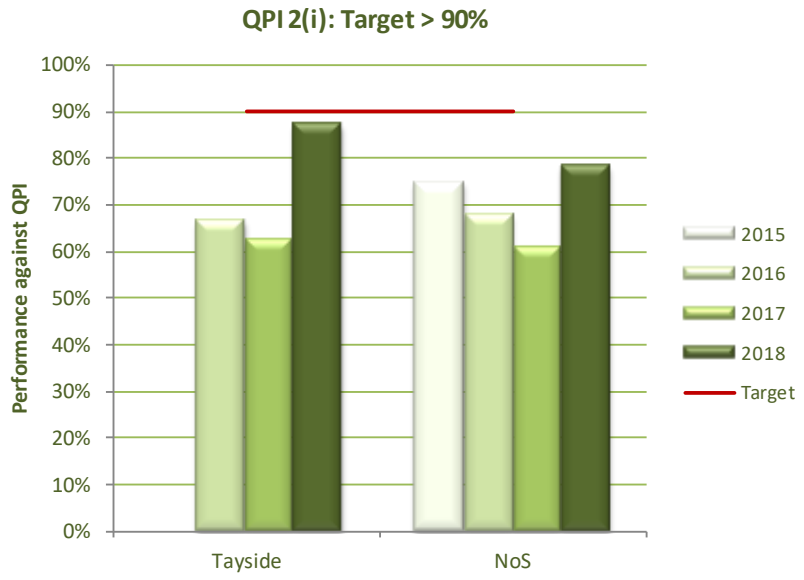


	Performance (%)	Numerator	Denominator
Grampian	**94.0%**	78	83
Highland	**95.3%**	41	43
Orkney*	-	-	-
Shetland*	-	-	-
Tayside	**95.9%**	47	49
W Isles*	-	-	-
NoS	**95.0%**	**172**	**181**

Clinical Commentary	The North of Scotland achieved this QPI target and all patients that did not receive a radiological diagnosis did so for a number of reasons; for example CT chest excluded, pre-surgical diagnosis of Bosniak 3 cyst found to be malignant, and MDT decision-making to proceed without full staging imaging for one patient.
Actions	No action required
Risk Status	Tolerate

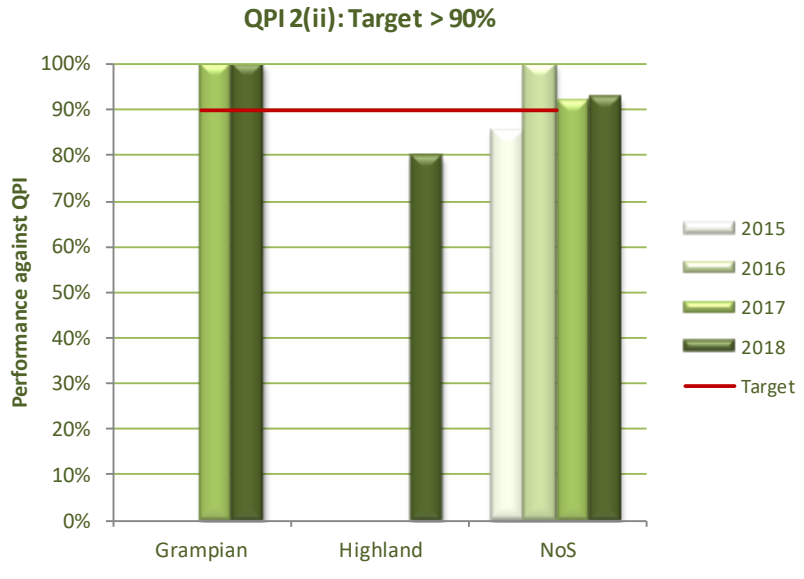
QPI 2	Histological Diagnosis
Proportion of patients with RCC where surgery is not the primary treatment who have a histological diagnosis before treatment, via biopsy.	

Specification (i) Patients undergoing Cryotherapy / Radiofrequency ablation



	Performance (%)	Numerator	Denominator
Grampian*	-	-	-
Highland*	-	-	-
Orkney	-	0	0
Shetland	-	0	0
Tayside	**87.5%**	7	8
W Isles	-	0	0
NoS	**78.6%**	**11**	**14**

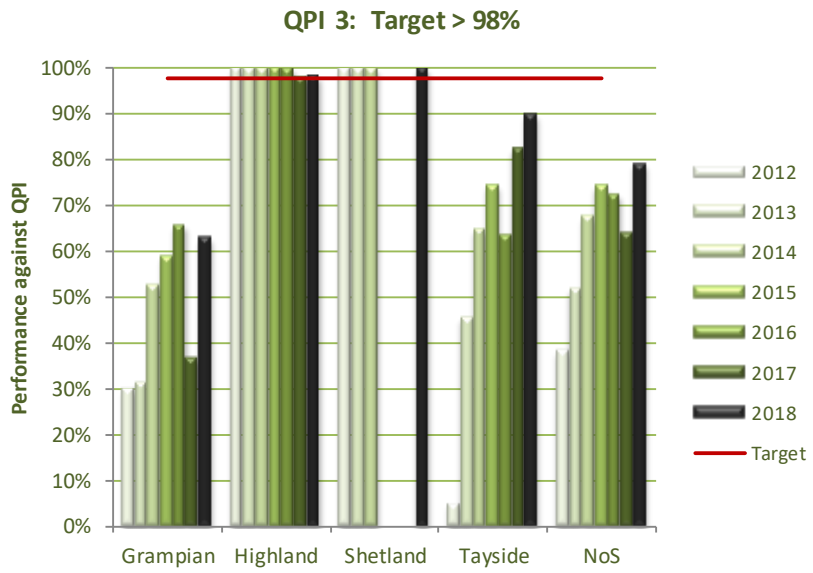
Specification (ii) Patients undergoing Systemic Anti-Cancer Therapy (SACT)



	Performance (%)	Numerator	Denominator
Grampian	**100%**	8	8
Highland	**80%**	4	5
Orkney	-	0	0
Shetland	-	0	0
Tayside*	-	-	-
W Isles	-	0	0
NoS	**92.9%**	**13**	**14**

Clinical Commentary	For specification (i), this is explained by different practices in the North of Scotland boards in terms of timing of biopsy, which has been offered at the same time as Cryotherapy or RFA within NHS Grampian routinely. Patients are offered biopsy and treatment delivered under the same general anaesthetic hospital admission. This variance in practice has been addressed through the development of the NCA Renal Cancer CMG and highlighted through NCA governance structures, and as a result a change in practice will be implemented at NHS Grampian to ensure a histological diagnosis prior to definitive treatment for patients not undergoing surgery.
Actions	1. NCA Renal Cancer CMG reflects the requirement for histological diagnosis prior to definitive treatment, to be approved by Pathway Board. North of Scotland boards will be accountable for the implementation of the CMG.
Risk Status	Manage

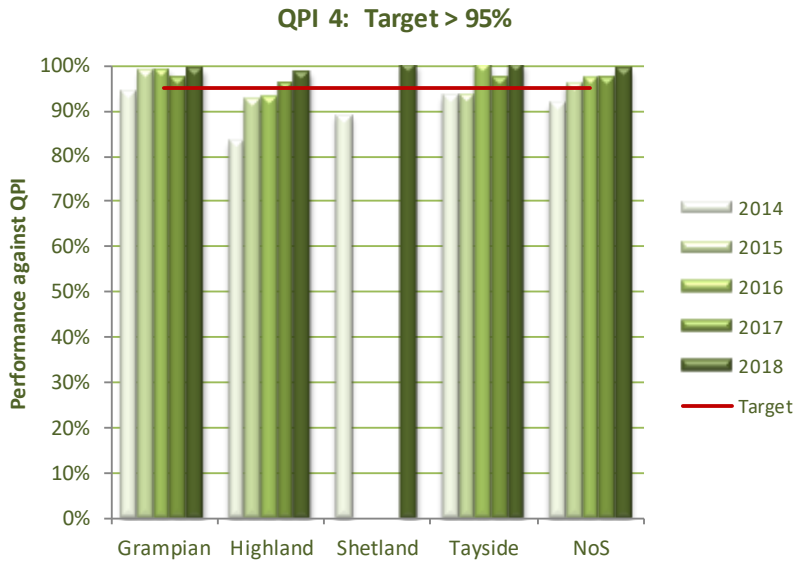
QPI 3	Clinical Staging – TNM
Proportion of patients whose RCC is staged pre-treatment using the TNM staging system.	



	Performance (%)	Numerator	Denominator
Grampian	**63.1%**	70	111
Highland	**98.4%**	61	62
Orkney*	-	-	-
Shetland	**100%**	7	7
Tayside	**90.0%**	54	60
W Isles*	-	-	-
NoS	**79.1%**	**193**	**244**

Clinical Commentary	Results for the North of Scotland improved but still fell short of the 98% target. MDTs are striving to record clinical TNM stage as part of MDT discussions however MDTs continue to have challenges in terms of patient numbers and time required for discussions. Regional MDTs and the use of protocols will be explored through the NCA Urology Pathway Board, however the ability to discuss all patients within current available MDT meeting time is a challenge, and will affect accurate data recording such as clinical TNM staging. Recording of TNM stage has, observationally, improved in recent years at NoS Urology MDTs and it is expected this will be reflected in future years of reporting; however work is required to ensure the effective running of Urology MDT.
Actions	1. NCA Urology Pathway Board to discuss MDT improvements including recording of clinical TNM. 2. NCA to highlight resources available for Urology MDT discussions to North of Scotland boards and support work to improve efficiency of North of Scotland Urology MDTs.
Risk Status	Escalate

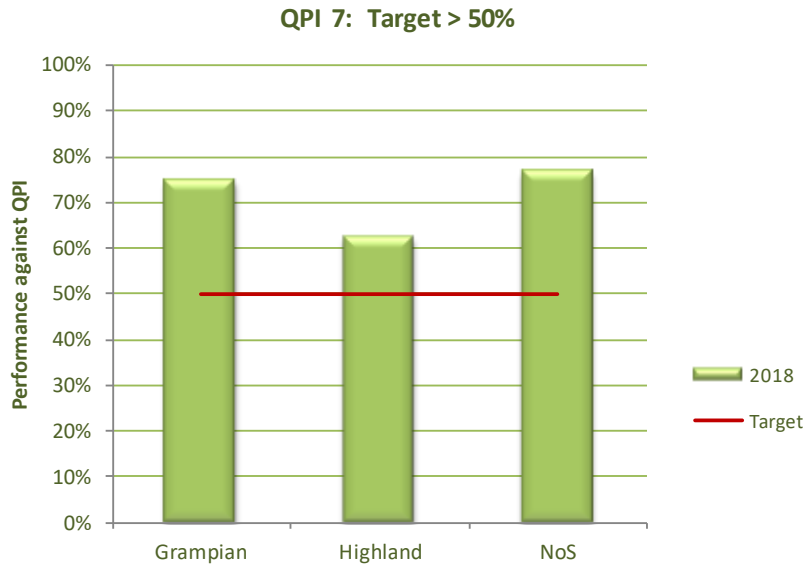
QPI 4	Multi-Disciplinary Team (MDT) Meeting
Proportion of patients with RCC who are discussed at MDT meeting before definitive treatment.	



	Performance (%)	Numerator	Denominator
Grampian	**99.1%**	106	107
Highland	**98.4%**	61	62
Orkney*	-	-	-
Shetland	**100%**	7	7
Tayside	**100%**	56	56
W Isles*	-	-	-
NoS	**99.2%**	**234**	**236**

Clinical Commentary	The North of Scotland achieved this QPI and consideration to archive this measure should be given at the next formal review, due to the consistent achievement of this target over the past four years of reporting.
Actions	1. NCA to propose this QPI is archived as part of next formal review of QPIs, scheduled in summer 2022, due to achievement of this QPI across the North of Scotland.
Risk Status	Tolerate

QPI 7	Nephron Sparing Surgery
Proportion of patients with T1aN0M0 RCC who undergo nephron sparing treatment (cryotherapy, RFA or robotic / laparoscopic / open partial nephrectomy).	



	Performance (%)	Numerator	Denominator
Grampian	**75.0%**	9	12
Highland	**62.5%**	5	8
Orkney	-	0	0
Shetland*	-	-	-
Tayside*	-	-	-
W Isles	-	0	0
NoS	**76.9%**	**20**	**26**

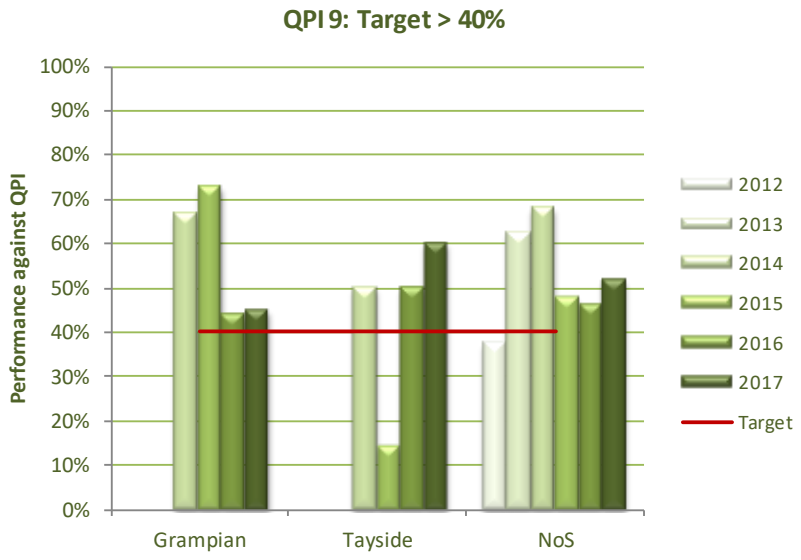
Clinical Commentary	The North of Scotland achieved this target for patients captured as part of the clinical audit. Furthermore, the pathways for nephron sparing treatment are to be agreed as part of the finalisation of the NCA Renal Cancer CMG, scheduled for sign-off by end of 2020. *(Audit Note: For 19 NHS Grampian patients, the lack of TNM recording meant that it was not possible to know if they should be included within this QPI. As such results may not be representative of all patients diagnosed with T1aN0M0 disease.)*
Actions	1. NCA to publish NCA Renal Cancer CMG which incorporates decision-making for nephron sparing treatment, once approved by NCA Urology Pathway Board.
Risk Status	Tolerate

QPI 8	QPI 8: 30 / 90 Day Mortality following treatment for RCC
Proportion of patients who die within 30 or 90 days minimally invasive (RFA, cryotherapy) or operative treatment for RCC.	

30 & 90 day mortality – Target < 2%									
	RFA			Cryotherapy			Surgery		
	Performance (%)	Numerator	Denominator	Performance (%)	Numerator	Denominator	Performance (%)	Numerator	Denominator
Grampian*	-	0	0	-	-	-	**1.3%**	1	77
Highland*	-	-	-	-	0	0	**0%**	0	32
Orkney	-	0	0	-	0	0	-	0	0
Shetland*	-	0	0	-	0	0	-	-	-
Tayside	**0%**	0	8	-	0	0	**0%**	0	39
W Isles	-	0	0	-	0	0	-	0	0
NoS*	**0%**	**0**	**11**	-	-	-	**0.7%**	**1**	**149**

Clinical Commentary	All mortality targets were within tolerances with one patient death after surgery within this patient cohort. The patient was reviewed as per local board morbidity and mortality protocols and learning will be shared through the NCA Urology Pathway Board.
Actions	No action required
Risk Status	Tolerate

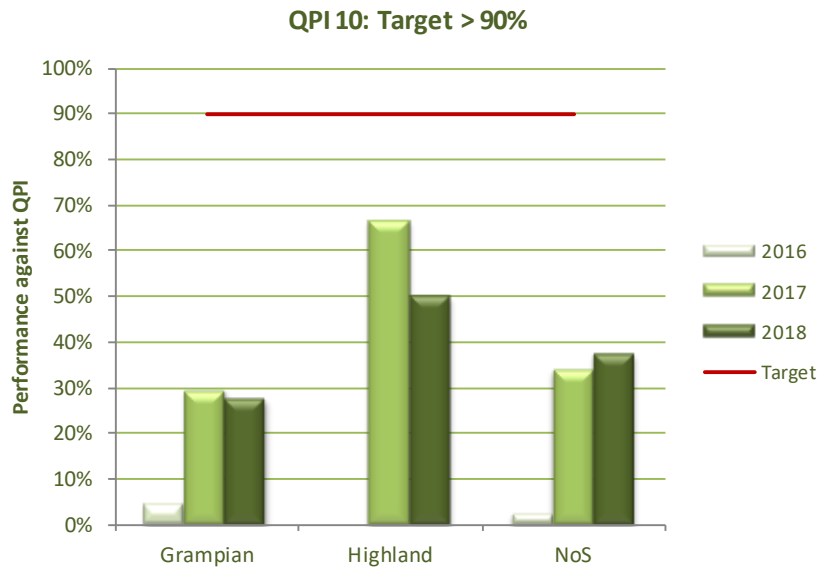
QPI 9	Systemic Therapy
Proportion of patients presenting with advanced and/or metastatic RCC who receive systemic anti-cancer therapy (SACT) for RCC within 12 months of diagnosis. This QPI is reported 1 year in arrears so data presented is for patients diagnosed in 2017.	



	Performance (%)	Numerator	Denominator
Grampian	**45.0%**	9	20
Highland*	-	-	-
Orkney	-	0	0
Shetland	-	0	0
Tayside	**60.0%**	3	5
W Isles	-	0	0
NoS	**51.7%**	**15**	**29**

Clinical Commentary	The North of Scotland continues to achieve this QPI and pathways for systemic therapy. *(Audit Note: This QPI is reported one year in arrears. There are some data recording issues with this figure. Some of the patients reported in this QPI (16pts, 14 in NHS Grampian) did not have performance status recorded and would have been excluded from the QPI if they had PS of 2 or more recorded. It was also unknown whether a further 21 patients should be included within the QPI as staging was not recorded to know if they had advanced or metastatic disease.)*
Actions	No action required
Risk Status	Tolerate

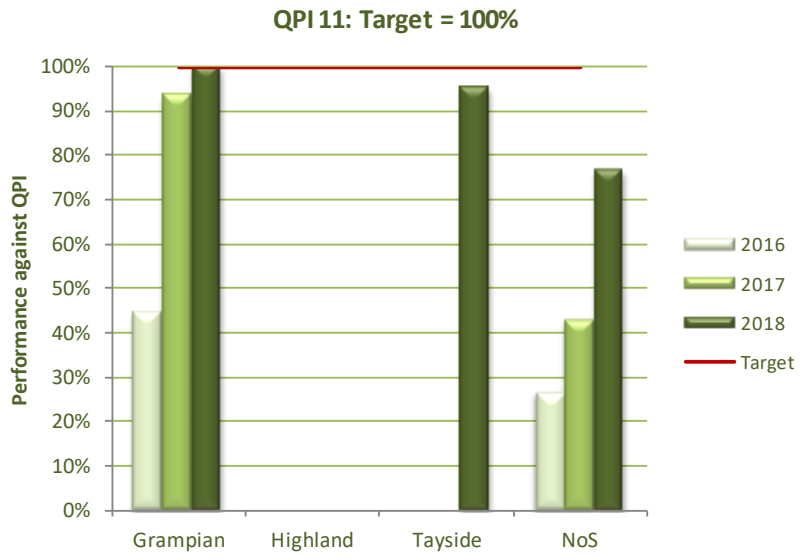
QPI 10	Prognostic scoring in Metastatic Disease
Proportion of patients with metastatic RCC who are assigned a valid prognostic score prior to commencing treatment.	



	Performance (%)	Numerator	Denominator
Grampian	**27.6%**	8	29
Highland	**50.0%**	7	14
Orkney	-	0	0
Shetland*	-	-	-
Tayside*	-	-	-
W Isles	-	0	0
NoS	**37.5%**	**18**	**48**

Clinical Commentary	Performance in the North of Scotland continues to be below the 90% target. In future years of reporting, it will be acceptable to record a prognostic category rather than score, which reflects practice in North of Scotland. Also patients with performance status greater than 2 will be excluded from this QPI, representing patients who are not fit for curative treatment who will never be assigned a prognostic score. Patients who refuse SACT will also be excluded. This will ensure this measure is much more reflective on the patients who should be receiving a prognostic score as part of their care. In analysing this year's results, North of Scotland boards have confirmed that prognostic scoring is not always assigned until after first treatment, which represents a failure against this QPI. The development of the NCA Renal Cancer CMG stipulates that patients are assigned a prognostic score / category prior to first treatment, however in practice not all patients will be seen by an oncologist who undertakes this. NCA to continue to ensure that patients are assigned a prognostic category, and where possible, this is done prior to first treatment. *(Audit Note: For four patients, the lack of recording of clinical "M" stage meant that it was not possible to know if they should be included within this QPI. As such results may not be representative of all patients diagnosed with metastatic disease.)*
Actions	1. North of Scotland boards to ensure implementation of NCA Renal Cancer CMG to ensure prognostic score / category is documented prior to first treatments.
Risk Status	Mitigate

QPI 11	Leibovich Score
Proportion of patients with clear cell RCC who are assigned a Leibovich score following radical nephrectomy.	



	Performance (%)	Numerator	Denominator
Grampian	**100%**	45	45
Highland	**0%**	0	19
Orkney	-	0	0
Shetland*	-	-	-
Tayside	**95.2%**	20	21
W Isles	-	0	0
NoS	**76.7%**	**66**	**86**

Clinical Commentary	The target was not met in the North of Scotland, but this is due to the assignment of a Leibovich category rather than score in NHS Highland. In future years of QPI reporting, these patients will pass this QPI and it is expected that overall performance will improve. It is expected that all patients will be assigned a Leibovich score and category following radical nephrectomy, and pathologists within the North of Scotland are expected to help ensure the North of Scotland remains complaint with this QPI.
Actions	No action required
Risk Status	Mitigate

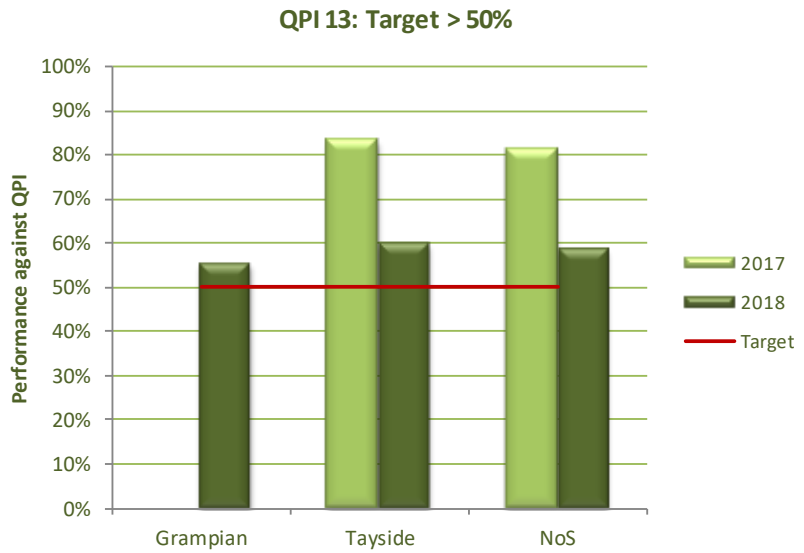
QPI 12	Volume of Cases per Surgeon
Number of renal surgical resections performed by a surgeon over a 1 year period. Target ≥ 15 per surgeon	

Board of Surgery	Surgeon	No. renal surgical resections in 2018
NHS Highland	Surgeon 1	47
NHS Grampian	Surgeon 2	46
	Surgeon 3	32
	Surgeon 4	19
	Surgeon 5	4
NHS Tayside	Surgeon 6	44
	Surgeon 7	8

Data based on SMR01 data and reports surgery undertaken in 2018

Clinical Commentary	Surgical volumes for small volume cancer surgery are to be looked at through an established group across tumour groups in the North of Scotland. Four out of 6 surgeons undertaking renal cancer resections achieved this target for patients diagnosed in 2018. Surgeon 4 was a new consultant and was not employed for the full year – it is expected this surgeon will comply with the target in future years.
Actions	1. NCA Urology Pathway Board to input into the regional work on low volume cancer surgery in the North of Scotland. 2. NCA Urology Pathway Board to consider implementation of regional MDT arrangements as part of low volume cancer surgery programme. 3. NCA Urology Pathway Board to monitor Volume of Cases per surgeon and per centre for escalation if required. 4. NCUPB to input into the NCA Surgery Sub Group and the strategic development of sustainable surgery services for cancer.
Risk Status	Manage

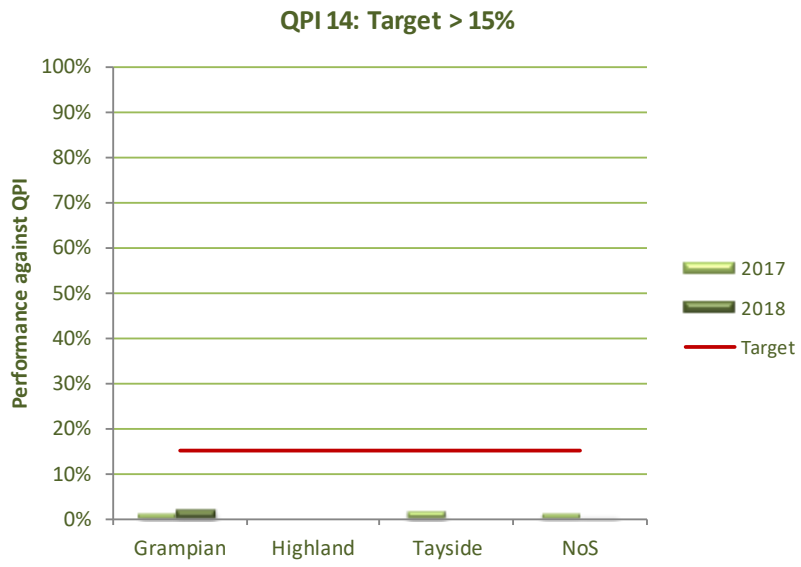
QPI 13	Trifecta Rate
Proportion of patients with T1a RCC undergoing partial nephrectomy who achieve trifecta ischaemia time less than 25 minutes, negative surgical margins and no complications). Target > 50%	



	Performance (%)	Numerator	Denominator
Grampian	**55.6%**	5	9
Highland*	-	-	-
Orkney	-	0	0
Shetland	-	0	0
Tayside	**60.0%**	3	5
W Isles	-	0	0
NoS	**58.8%**	**10**	**17**

Clinical Commentary	The North of Scotland achieved this target for the small number of patients captured within this QPI. *(Audit Note: For seven patients, the lack of recording of clinical T stage meant that it was not possible to know if they should be included within this QPI. This was most notable in NHS Grampian (six patients). As such results may not be representative of all patients diagnosed with T1a disease.)*
Actions	No action required
Risk Status	Tolerate

QPI 14	Clinical Trials and Research Study Access
Proportion of patients with renal cancer who are consented for a clinical trial / translational research. Data reported for patients enrolled in trials in 2018.	



	Performance (%)	Numerator	Denominator
Grampian	**1.9%**	2	104
Highland	**0%**	0	53
Orkney*	-	-	-
Shetland*	-	-	-
Tayside	**0%**	0	75
W Isles*	-	-	-
NoS	**0.8%**	**2**	**243**

Clinical Commentary	Recruitment into clinical trials is a challenge across all tumour groups in the North of Scotland. Work is required to ensure patients are offered the opportunity to join a clinical trial where available. This includes promoting the availability of trials through the North Cancer Urology Pathway Board.
Actions	1. All clinicians should consider opening relevant clinical trials in their tumour areas. When this is not possible patient referrals to other sites for access to clinical trials should be considered.
Risk Status	Tolerate

References

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3. ISD, NHS National Services Scotland. Cancer Survival in Scotland, 1987-2011. 2015. https://isdscotland.scot.nhs.uk/Health-Topics/Cancer/Publications/2015-03-03/2015-03-03-CancerSurvival-Report.pdf

4. Scottish Cancer Taskforce. Renal Cancer Clinical Performance Indicators, Version 4.0. 2019. Health Improvement Scotland. http://www.healthcareimprovementscotland.org/his/idoc.ashx?docid=27c4de77-c45c-4ffd-b8b7-60abfd0337b8&version=-1

5. http://www.isdscotland.org/Health-Topics/Cancer/Cancer-Audit/

6. North Cancer Alliance: QPI Process Explained (August 2020) https://www.nhsscotlandnorth.scot/uploads/tinymce/NCA/NCA%20Governance/NCA_GOV_QPI2_Process_Explained_Final%20(June%202020).pdf

Appendix: Clinical Trials and Research studies for renal cancer open to recruitment in the North of Scotland in 2018

Trial	Principle Investigator	Patients consented
Improving Population Outcomes for Renal Tumours of Childhood (IMPORT)	Hugh Bishop (Grampian)	Yes
RAMPART - Renal Adjuvant MultiPle Arm Randomised Trial	Gordon Urquhart (Grampian)	No