

Quality Performance Indicators Audit Report



Tumour Area:	Bladder Cancer
Patients Diagnosed:	1 st April 2016 – 31 st March 2017
Published Date:	26 th March 2019
Clinical Commentary:	Comments collated from all NHS Boards in the North of Scotland

1. Bladder Cancer in Scotland

Latest available cancer registration figures indicate that with 870 cases recorded during 2016, bladder cancer is the 9th most common types of cancer in Scotland, with incidence rates changing little over the past 10 years¹.

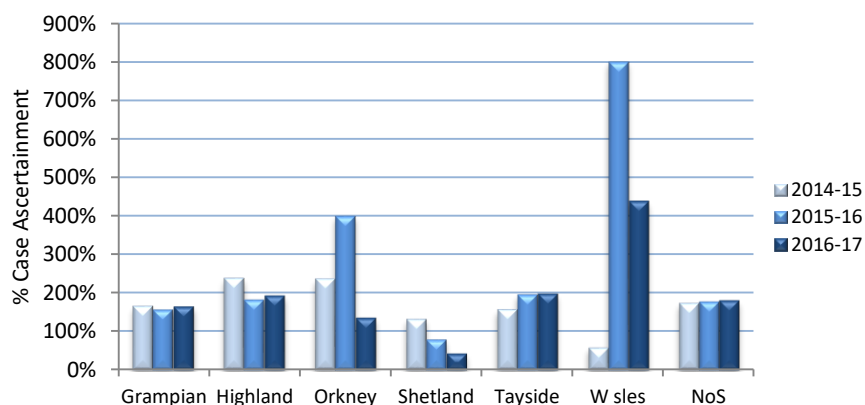
Survival from bladder cancer is lower than the average for all malignant neoplasms, with a one year age-standardised relative survival for 2007-2011 of 74.6% and 5-year survival of 49.1% for men and considerably lower survival rates for women. Survival from bladder cancer appears to have decreased considerably since 1987-1991, however this is an artefact of changes in the coding of bladder cancers between the two periods². 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 bladder cancer in Scotland at 1 year and 5 years showing percentage change from 1987-1991 to 2007-2011².

Sex	Relative survival at 1 year (%)		Relative survival at 5 years (%)	
	2007-2011	% change	2007-2011	% change
Male	74.6%	- 6.7%	49.1%	- 14.2%
Female	63.3%	-9.5%	36.2%	-22.0%

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

Between 1st April 2016 and 31st March 2017 a total of 367 cases of bladder cancer were diagnosed in the North of Scotland and recorded through audit. Overall case ascertainment was very high at 181%, similar to the 2015-16 figure of 179%. The reason for this high case ascertainment is due to differences between the way in which bladder cancer is defined through SCR and the QPI datasets. As such, total case ascertainment it not particularly meaningful for this tumour group however comparisons between Boards and years are of interest and suggest that patients with bladder cancer are well captured by cancer audit across the North of Scotland.

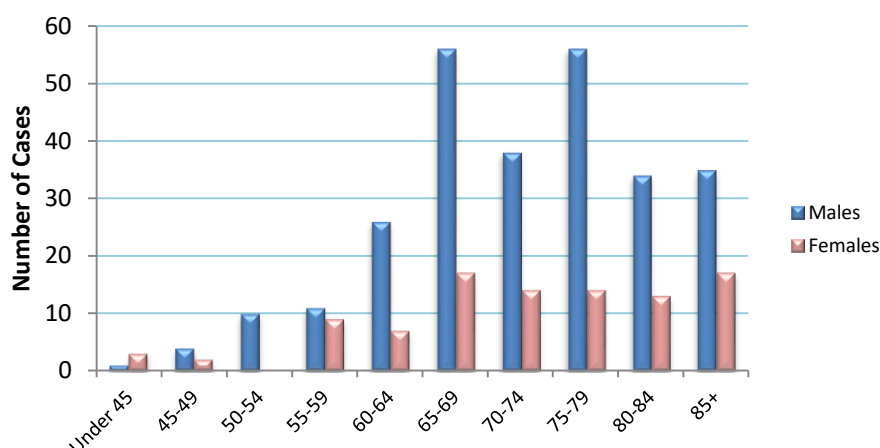


Case ascertainment by NHS Board for patients diagnosed with bladder cancer in 2014-2017.

	Grampian	Highland	Orkney	Shetland	Tayside	W Isles	NoS
No. of Patients 2016-17	142	64	3	2	149	7	367
% of NoS total	38.7%	17.4%	0.8%	0.5%	40.6%	1.9%	100.0%
Mean ISD Cases 2012-16	86.0	33.0	2.2	4.6	75.0	1.6	202.4
% Case ascertainment 2016-17	165.1%	193.9%	136.4%	43.5%	198.7%	437.5%	181.3%

3. Age Distribution

The figure below shows the age distribution of patients diagnosed with bladder cancer in the North of Scotland in 2016-17, with numbers of patients diagnosed highest in the 65-69 age bracket.



Age distribution of patients diagnosed with bladder cancer in North of Scotland 2016-2017.

QPI calculations based on data captured are considered to be representative of all patients diagnosed with bladder cancer during the audit period. In previous years the absence of recording of information on some aspects of surgical care across all of NHS Boards has had a significant effect on the QPI results. This reflects the complex nature of the bladder cancer QPI dataset, which includes a lot of details information around TURBT and cystectomy that has not been routinely collected previously. While there has been a considerable improvement in the completeness of some of these data for the 2016-17 audit period, for some QPIs it is not always known if patients should be excluded from a QPI. Unless there is adequate data to inform their exclusion, patients default to being included within the QPI calculation. This lack of information on whether patients should be excluded affected 20-30% of patients for QPI's 2 and 4.

In 2016-17 missing data was most notable for patients from NHS Grampian. Missing data items that most greatly affected QPI results were Intent of Surgery (TURBT) and Tumour Size at TURBT.

4. Performance against Quality Performance Indicators (QPIs)

Definitions for the QPIs reported in this section are published by Health Improvement Scotland³, while further information on datasets and measurability used are available from Information Services Division⁴. Data for most QPIs are presented by Board of diagnosis; however QPIs 2, 4, 6 and 11 (surgical mortality) are presented by Hospital of Surgery and QPI 8 is presented by the NHS Board of the surgeon performing surgery. The clinical trials QPI reports patients recruited into clinical trials in 2016 and is reported by the patients NHS Board of residence.

5. Governance and Risk

Governance is defined as the combination of structures and processes at all levels to lead on North quality performance 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

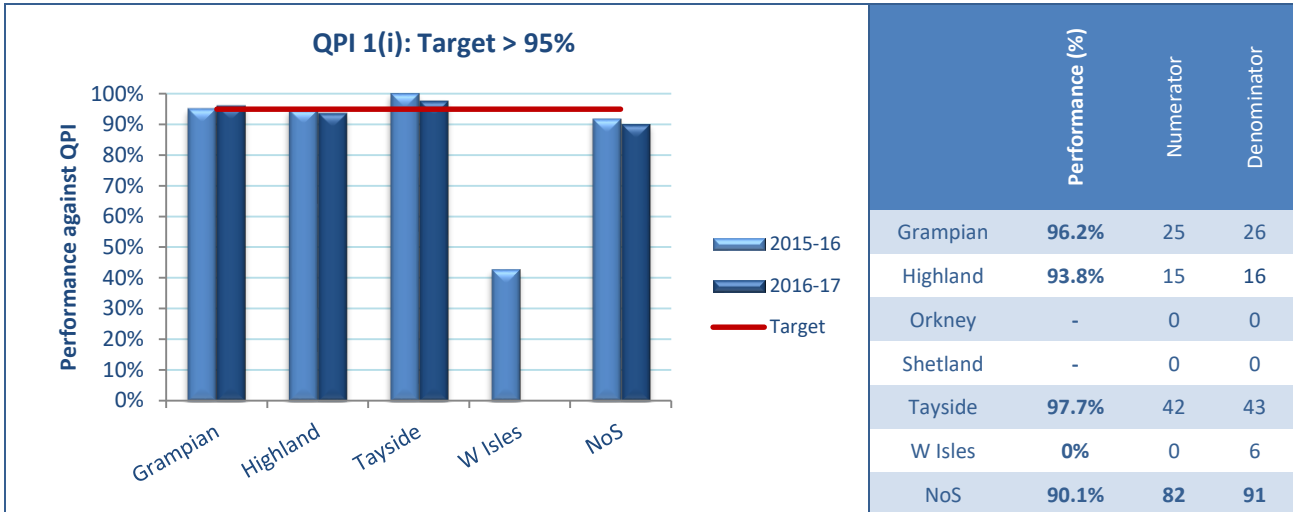
Our current governance structure provides assurance to the boards that risks associated QPIs are being addressed as an alliance. Clinical risks are discussed at the North Cancer Upper GI Pathway Board (NCUGIPB) and North Cancer Clinical Leadership Group (NCCLG). Risk levels are jointly agreed. The NCCLG are presented with all available evidence and actions so they have all the information to define the risk in a collaborative way.

- **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 RCCLG 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.

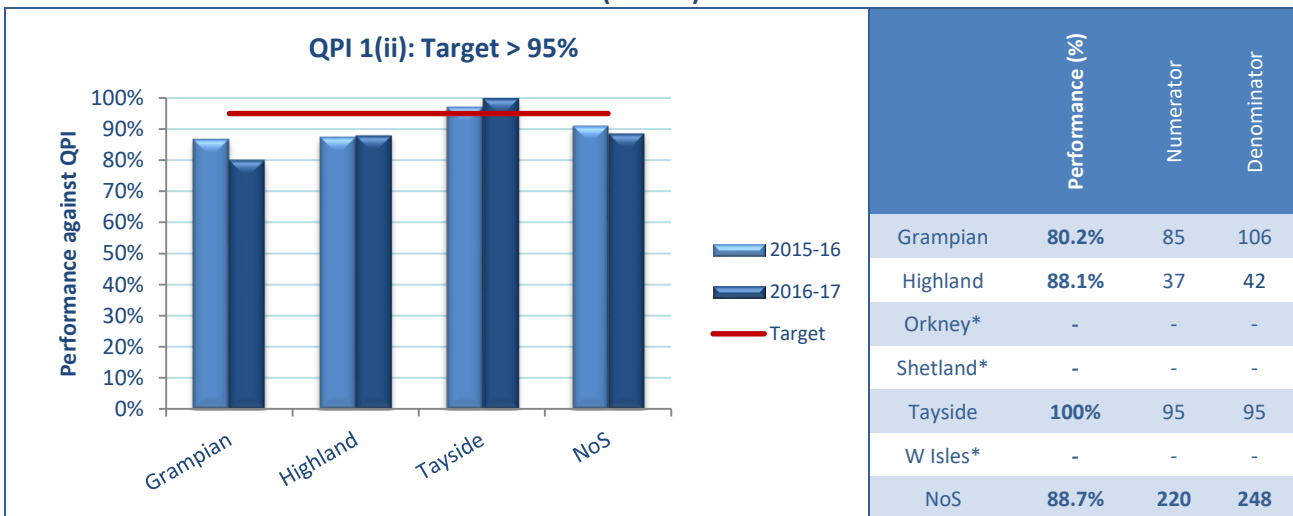
The full governance document on risk should be referred to in conjunction with this summary, which is available on the NCA website⁵.

QPI 1	Multi-Disciplinary Team Meeting Discussion
Proportion of patients with bladder cancer who are discussed at MDT meeting before definitive treatment.	

Specification (i) Patients with Muscle Invasive Bladder Cancer (MIBC) discussed at MDT before definitive treatment



Specification (ii) Patients with Non Muscle Invasive Bladder Cancer (NMIBC) discussed at MDT following initial transurethral resection of bladder tumour (TURBT)

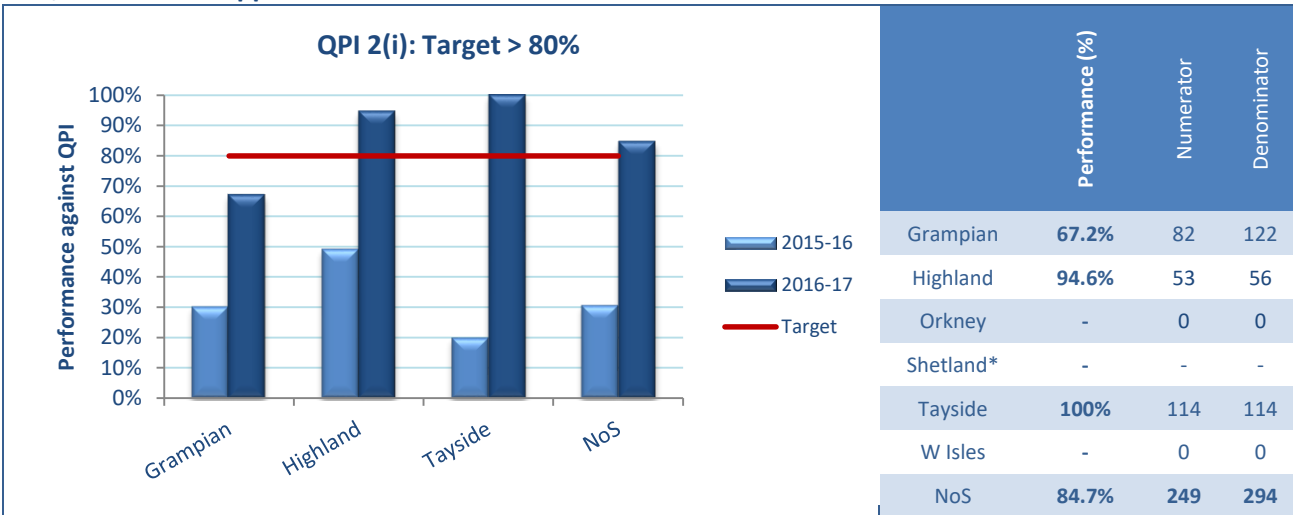


*Where the number of cases per Board is between one and four, this is excluded from charts and tables to minimise the risk of disclosure. However, these excluded Board numbers are included within the total for the North of Scotland.

Clinical Commentary	Historically some patient with superficial bladder cancer (NMIBC) were not always brought to the MDT in NHS Grampian however MDT time has now been lengthened so patients can now be discussed. In NHS Tayside work is ongoing to create a new MDT form for bladder cancer patients and this will be tested during June and implemented during summer 2018. It was also noted that some complex patients with NMIBC may be discussed at MDT prior to TURBT and spec (ii) has been amended so that in future years it will measure the proportion of patients having MDT discussion following histological confirmation of diagnosis rather than following TURBT.
Actions	<ol style="list-style-type: none"> 1. Nursing provision to be reviewed throughout Scotland to ensure 1:1 nursing support per oncologist. 2. Issues to be highlighted at North Cancer Nurse Consultants group.
Risk Status	Escalate

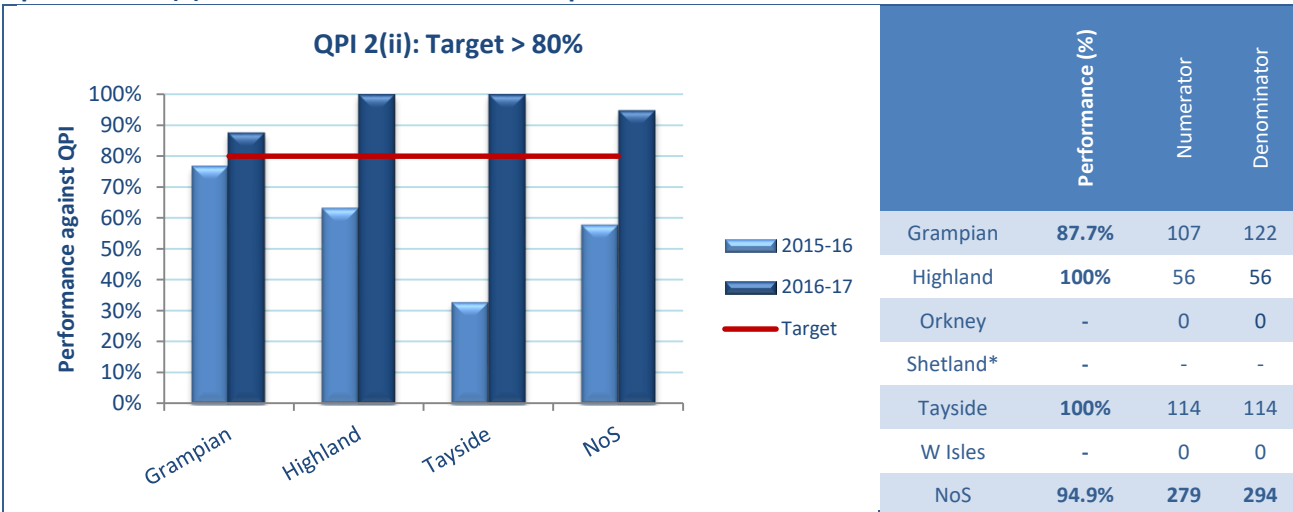
QPI 2	Quality of Transurethral Resection of Bladder Tumour Recording
Proportion of patients with bladder cancer who undergo good quality TURBT. The specifications of this QPI are separated to ensure clear measurement of the following at initial resection:	
(i) Use of a bladder diagram / detailed description with documentation of tumour location, size, number and appearance;	
(ii) Whether the resection is complete or not; and	
(iii) Whether detrusor muscle included in the specimen.	

Specification (i) Use of a bladder diagram / detailed description with documentation of tumour location, size, number and appearance



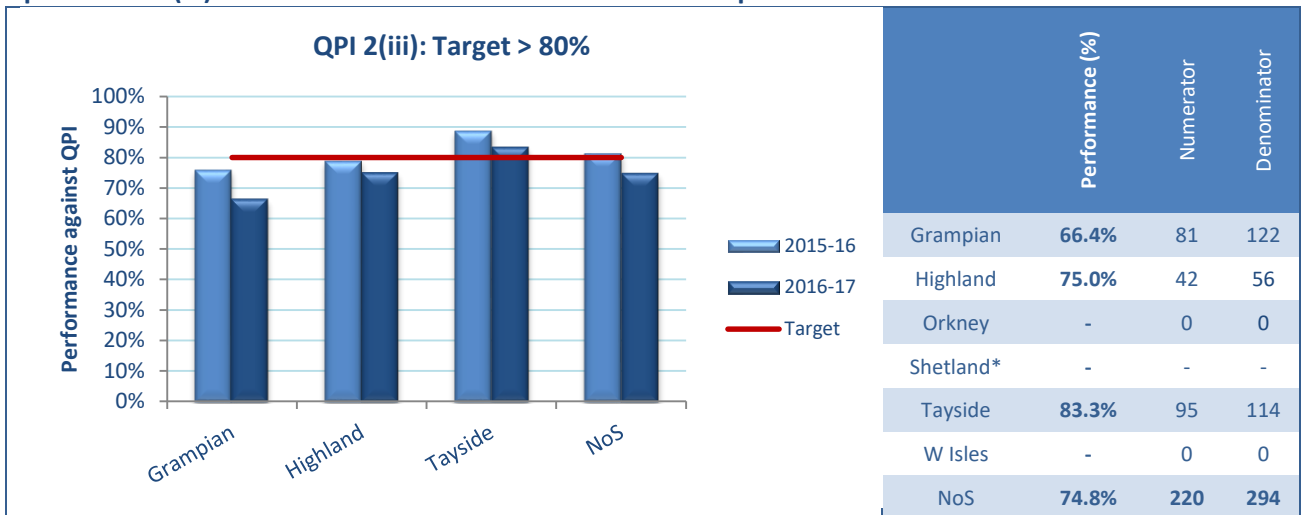
*Where the number of cases per Board is between one and four, this is excluded from charts and tables to minimise the risk of disclosure. However, these excluded Board numbers are included within the total for the North of Scotland.

Specification (ii) Whether the resection is complete resection or not



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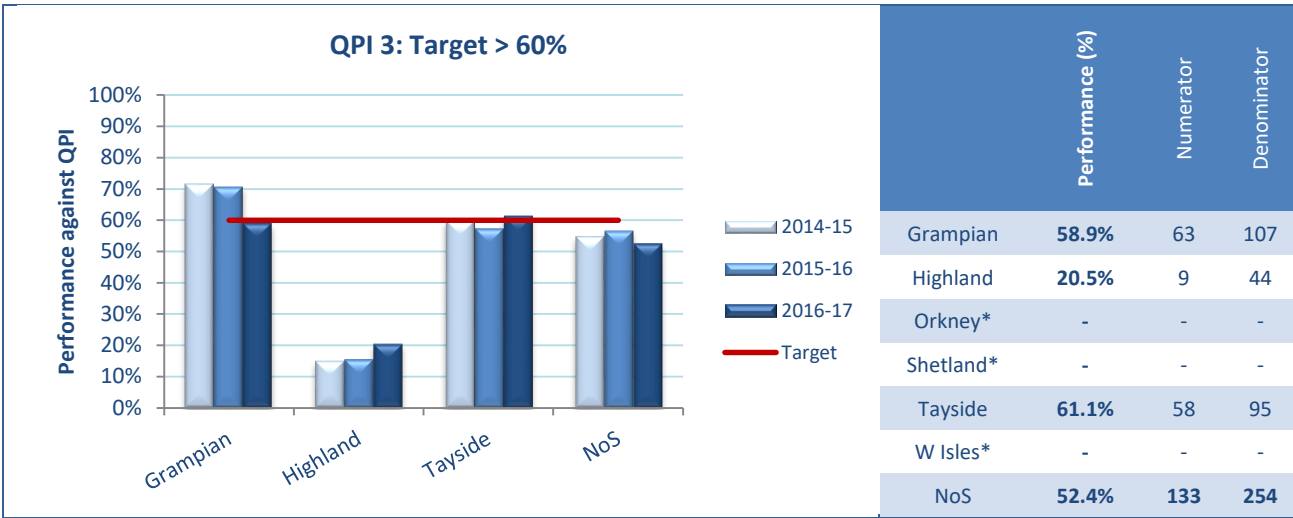
Specification (iii) Whether detrusor muscle included in the specimen



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Clinical Commentary	Performance should improve with pathology consensus on achieving this QPI.
Actions	1. NHS Grampian clinicians to be reminded to sample detrusor muscle where safe and possible to do so.
Risk Status	Mitigate

QPI 3	Mitomycin C Following Transurethral Resection of Bladder Tumour (TURBT)
Proportion of patients with NMIBC who undergo TURBT who receive a single instillation of mitomycin C within 24 hours of resection.	

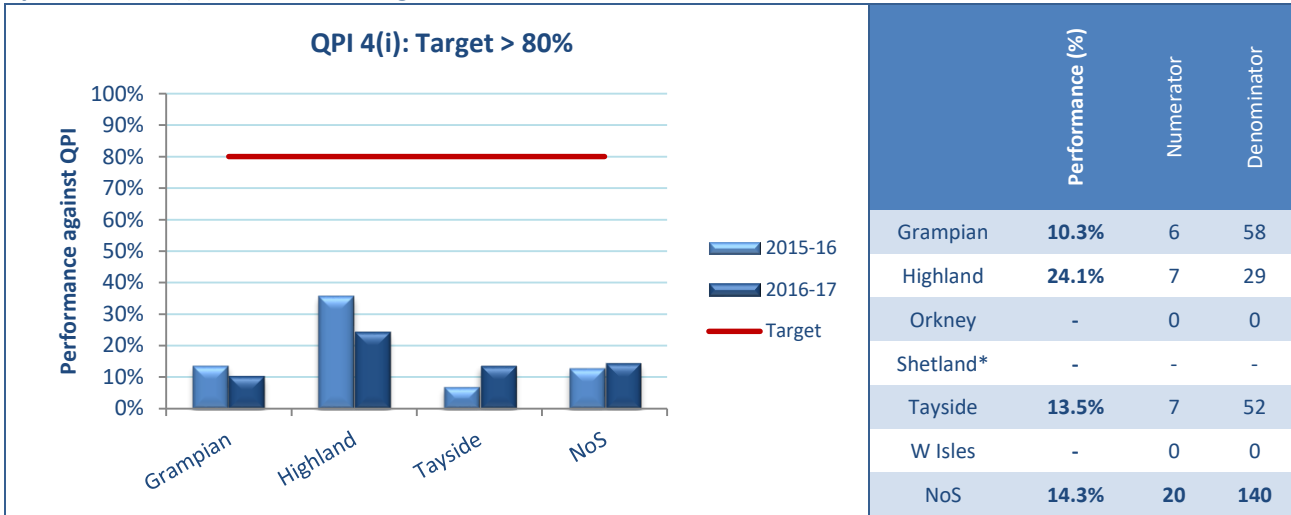


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Clinical Commentary	As in previous years, there is geographical variation in performance across the North of Scotland with performance against this QPI being much lower in NHS Highland. NHS Highland now have MMC stocked in theatre, a theatre SOP is being finalised by Mr Douglas and recovery staff are to be advised and trained. Full compliance is not expected in Highland as not all urologists believe that the reduction in recurrence rate with MMC outweighs the potential side effects. Performance should improve with pathology consensus.
Actions	1. Review performance and take action should performance not improve in line with Surgery Case for Change programme.
Risk Status	Mitigate

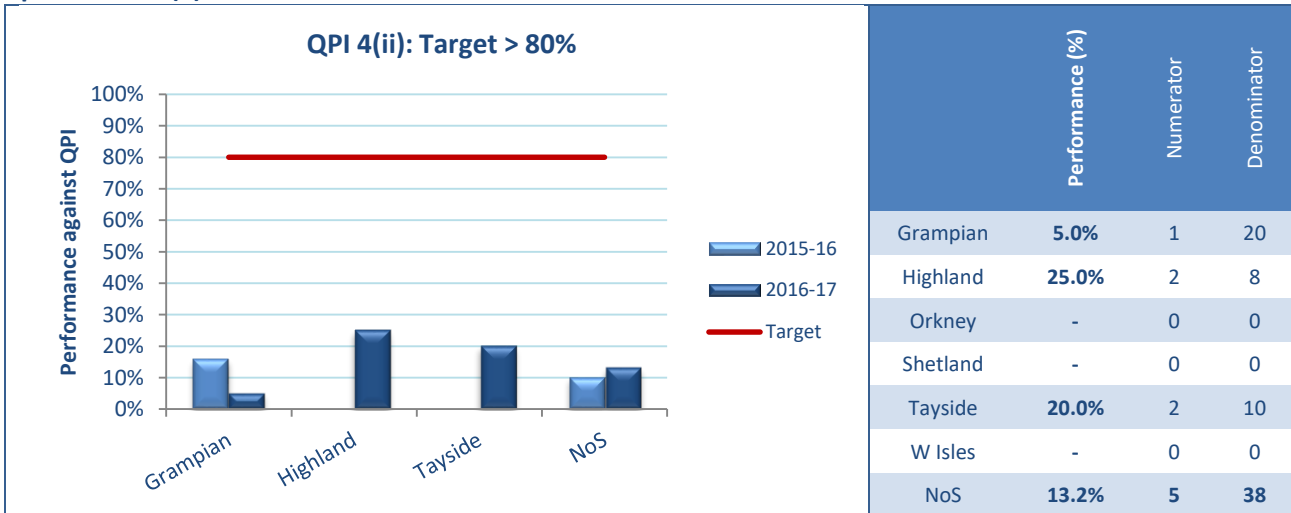
QPI 4	QPI 4: Early Re-Transurethral Resection of Bladder Tumour (TURBT)
Proportion of patients who have undergone TURBT with high risk NMIBC, where detrusor muscle is absent from specimen or initial resection is incomplete, who have a second resection or early cystoscopy (± biopsy) within 6 weeks of initial TURBT.	

Specification (i) Patients with High Risk NMIBC

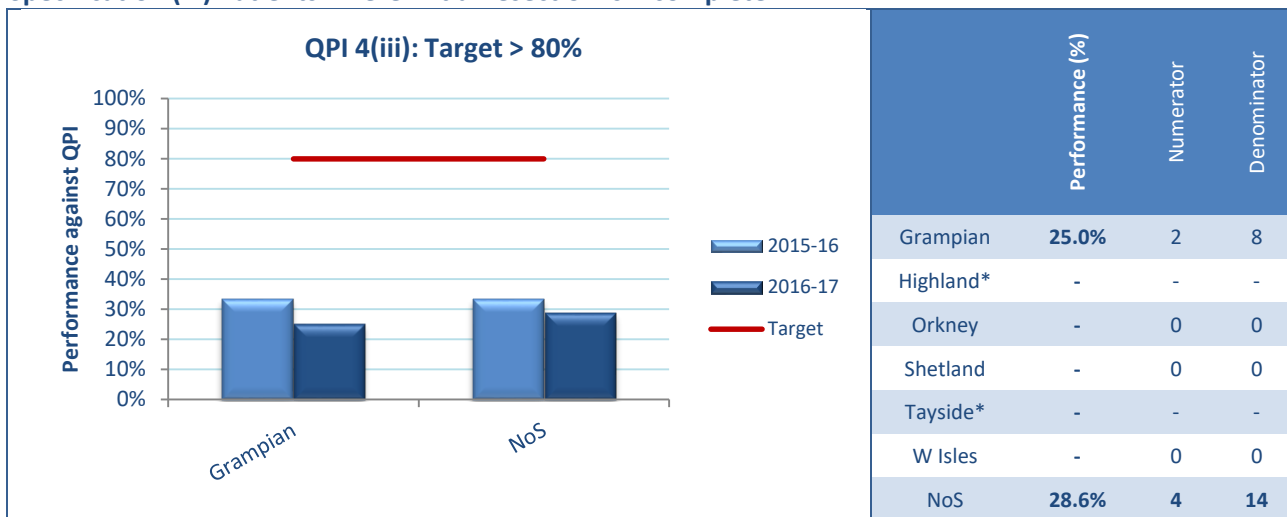


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Specification (ii) Patients where detrusor muscle absent



Specification (iii) Patients where initial resection is incomplete.



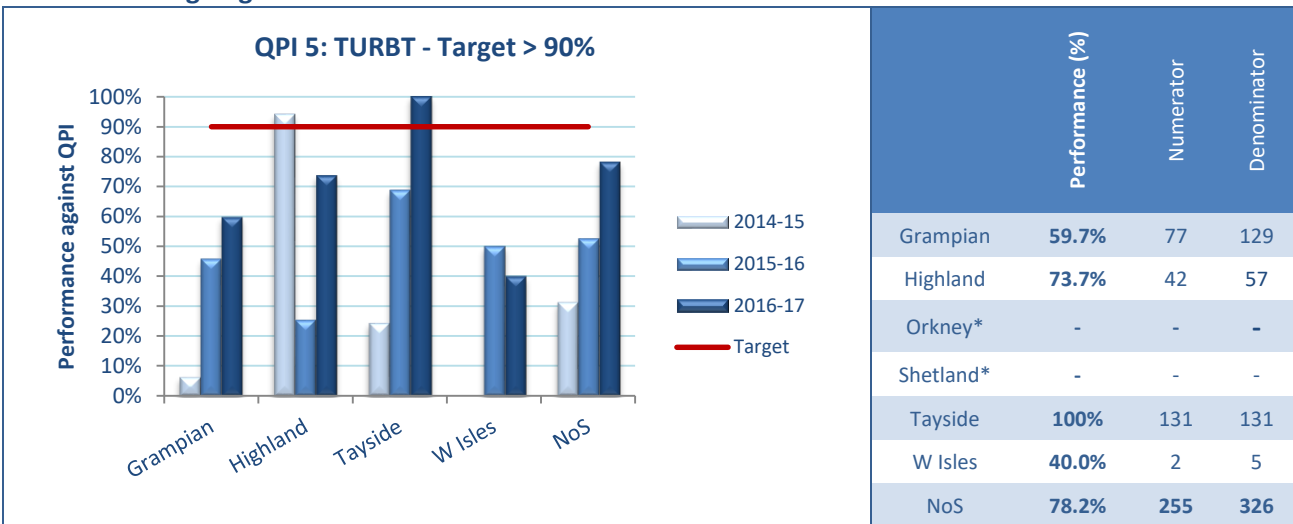
	Performance (%)	Numerator	Denominator
Grampian	25.0%	2	8
Highland*	-	-	-
Orkney	-	0	0
Shetland	-	0	0
Tayside*	-	-	-
W Isles	-	0	0
NoS	28.6%	4	14

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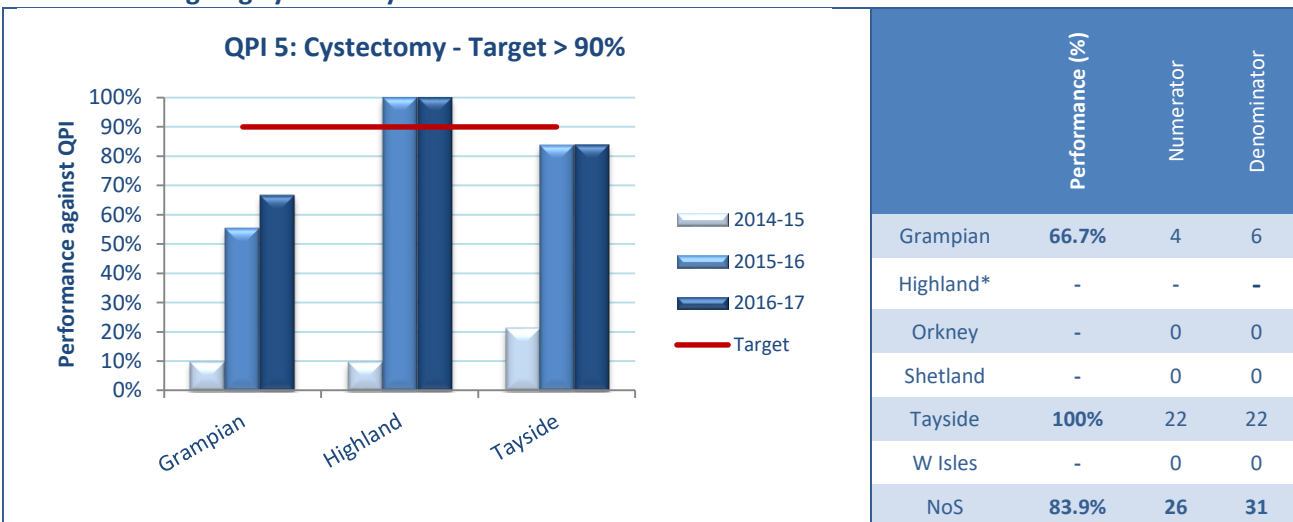
Clinical Commentary	<p>Although the majority of patients did get re-resection it was not within 6 weeks. Logistical issues such as shortages of hospital beds, theatre cancellation etc. remain a major challenge and prevent cancer centres from achieving the target. Theatre capacity has been raised as a concern by NHS Tayside and North Cancer Alliance help has been requested to tackle issues at a management level.</p> <p>Early re-resection in Primary CIS is not recommended as per European Association of Urology guidelines, in addition some patients would not require re-resection due to comorbidities or advanced stage of tumour. During the formal review the cohorts for all 3 specifications of this QPI are being amended so that they are more clinically appropriate.</p>
Actions	<ol style="list-style-type: none"> All NHS Boards to work to improve availability of both beds and theatre time for patients requiring early re-TURBT including considering: <ul style="list-style-type: none"> Adding patients to the MDT immediately after TURBT, rather than waiting for pathology results. The MDT co-coordinator should be involved in this process so that the patient can be added to the final MDT list immediately once pathology results are available. Reserving small numbers of theatre slots each month in anticipation of patients requiring early re-resection. North Urology collaborative to undertake investigations into available time in the North for theatre and surgery. North Urology collaborative to review workforce and agreement of the dataset to be reported at the MDT to ensure consistency in the North.
Risk Status	Escalate

QPI 5	Pathology Reporting
Proportion of patients with bladder cancer who undergo TURBT or cystectomy reported according to the guidelines provided by the Royal College of Pathology for the reporting of these specimens.	

Patients undergoing TURBT

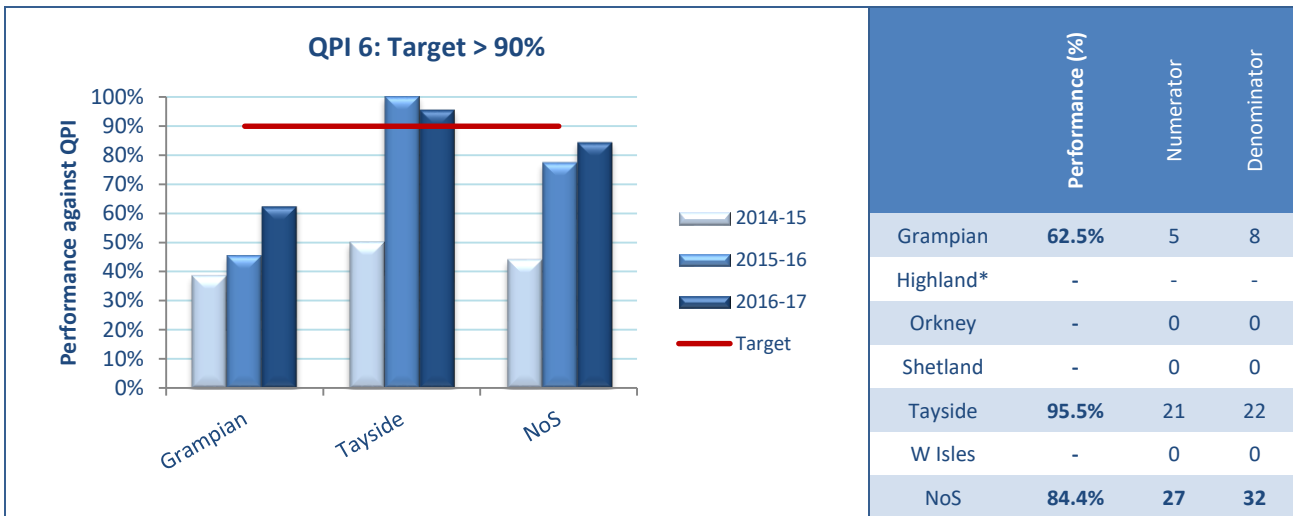


Patients undergoing cystectomy



Clinical Commentary	<p>There has been a considerable improvement in performance against this QPI for TURBTs, most notably in NHS Tayside where pathologist reports are now provided in a proforma format. Changed to pathology reports were also made in summer 2017 in NHS Highland and should show improvements in performance for the next reporting cycle. In NHS Grampian pathologists have not historically stated negatives but are considering moving to proforma reporting.</p> <p>Following concern from pathologists about the definition of this indicator, the way that this QPI is calculated has recently been amended so that in future years a restricted number of data items will need to be reported within pathology reports to meet this QPI.</p>
Actions	<p>1. All three North cancer centres to adopt a standard pathology proforma for reporting bladder cancer across the North of Scotland. This should improve performance in future years.</p>
Risk Status	Mitigate

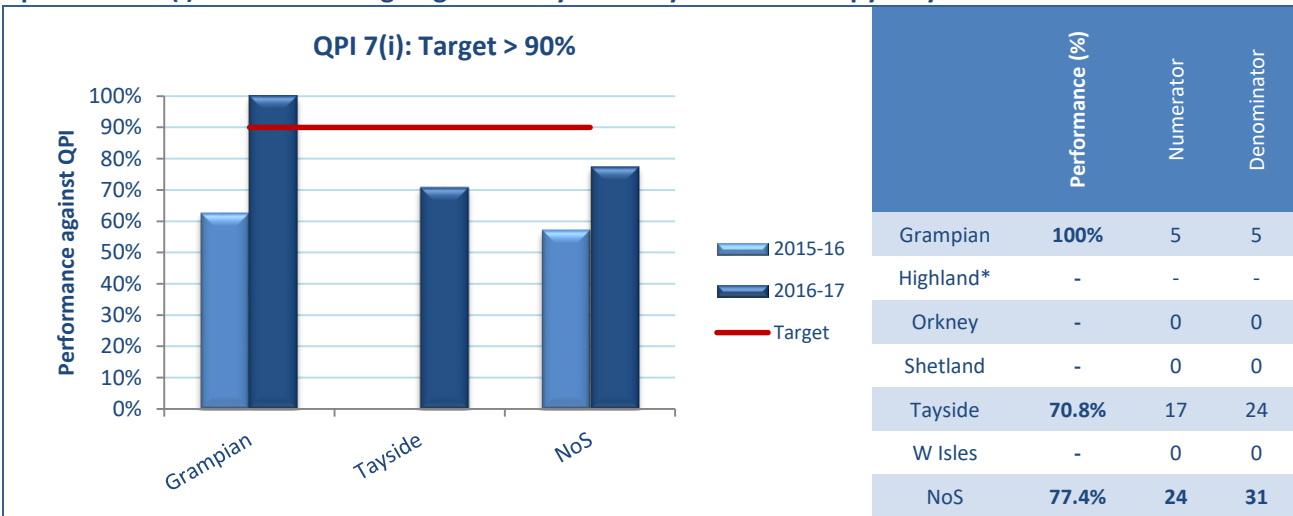
QPI 6	Lymph Node Yield
Proportion of patients with bladder cancer who undergo primary radical cystectomy where ≥ 10 lymph nodes are resected and pathologically examined.	



Clinical Commentary	The QPI definition has changed which will result in a change to how this QPI is reported in future years. Performance against the new QPI is to be monitored and reviewed as part of the formal QPI review cycle.
Actions	1. The issue of cystectomies will be examined under the Surgery Case for Change programme as part of the North Cancer Alliance work plan.
Risk Status	Mitigate

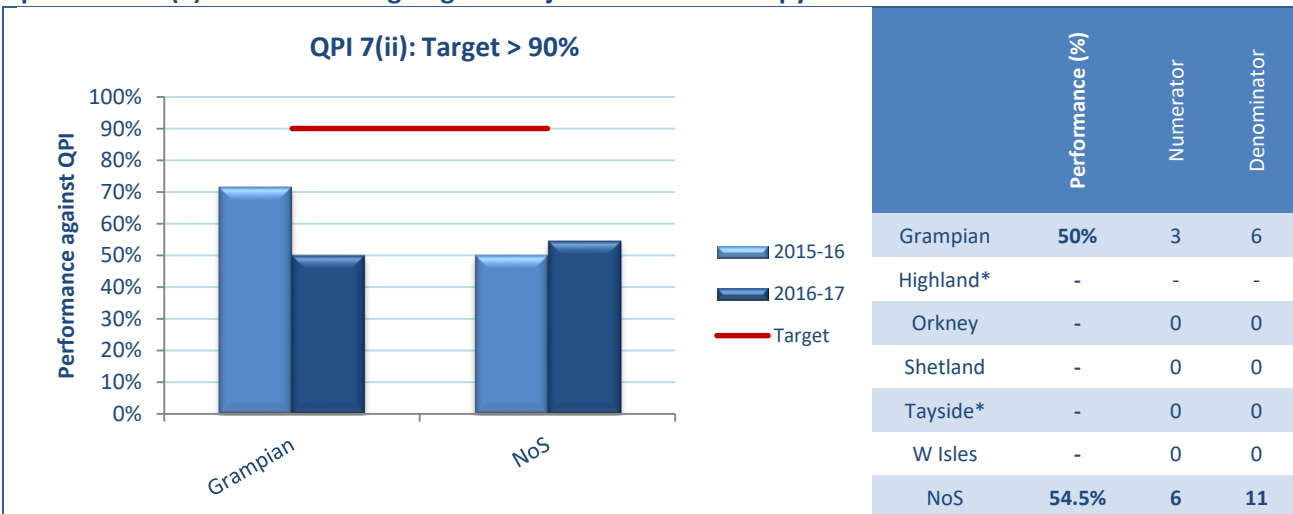
QPI 7	Time to Treatment
Proportion of patients with MIBC who commence radical treatment within 3 months of their diagnosis of MIBC, or within 8 weeks of treatment where patients are undergoing neoadjuvant chemotherapy.	

Specification (i) Patients undergoing radical cystectomy or radiotherapy only



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Specification (ii) Patients undergoing neo-adjuvant chemotherapy



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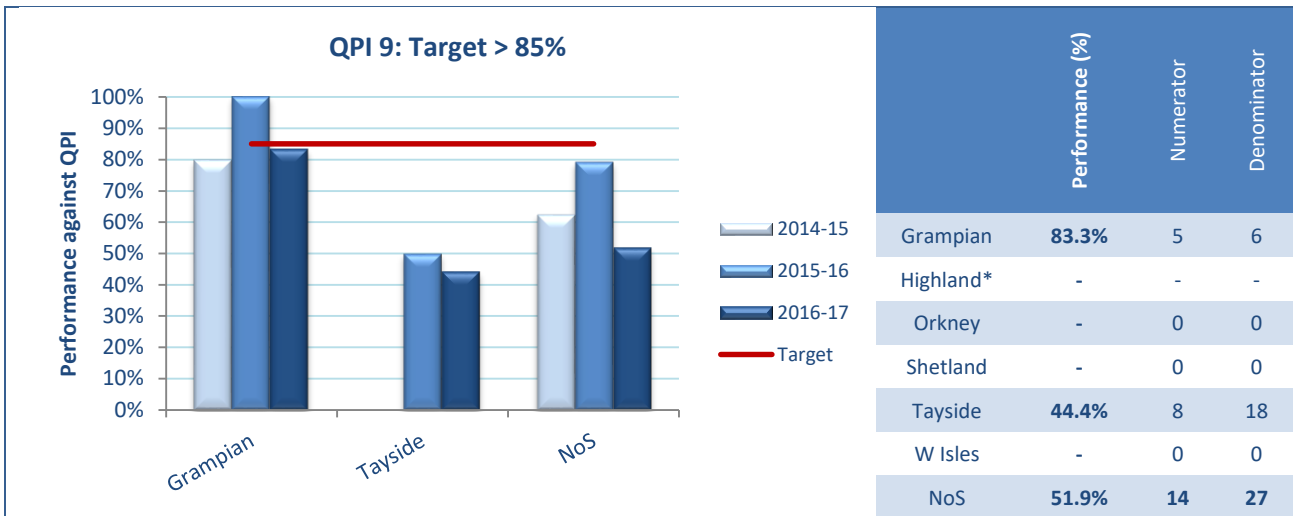
Clinical Commentary	Small numbers in this QPI.
Actions	1. North of Scotland boards to investigate small numbers of patients not meeting this QPI and provide update to NCCLG.
Risk Status	Mitigate

QPI 8	Volume of Cases per Surgeon
Number of radical cystectomy procedures performed by each surgeon over a 1 year period. Results show numbers of patients having surgery within the audit period and are derived from SMR01 data.	

Target: Minimum 10 procedures per surgeon		
NHS Board of Surgeon	Surgeon	Number of Cases
Grampian	1	12
Highland*	1	7
Tayside*	1	28

Clinical Commentary	The provision of radical cystectomies in the North of Scotland is changing and there is now greater regionalisation of the service, for example patients from Highland travelling to Aberdeen for surgery. QPI was reviewed as part of formal review cycle with new QPI measures to be reported in future years.
Actions	1. Surgical service in the North will be looked at as part of the Surgery Case for Change Programme as part of the North Cancer Alliance work plan.
Risk Status	Escalate – further action required to mitigate

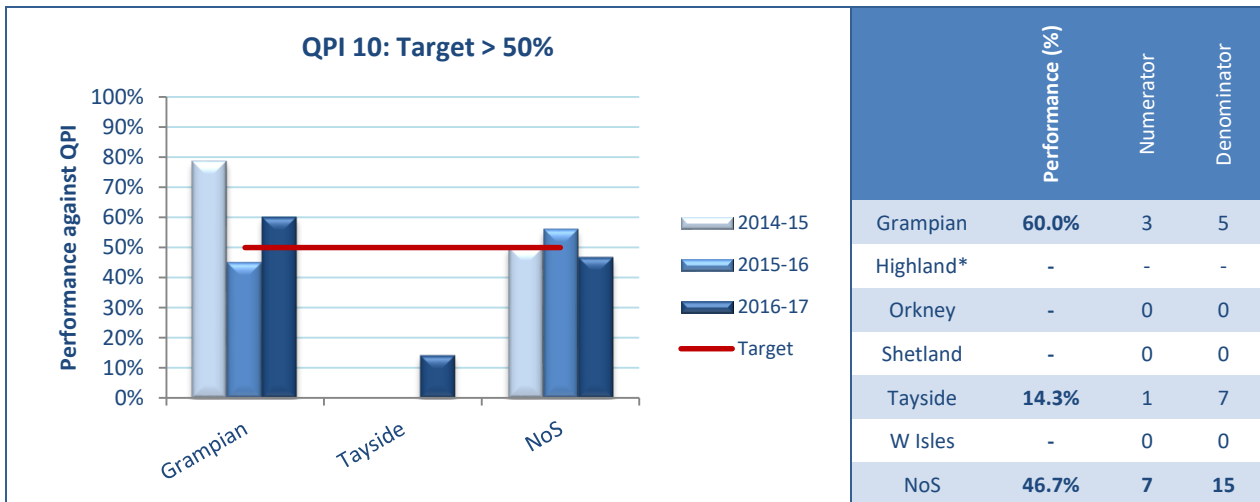
QPI 9	Oncological Discussion
Proportion of patients with MIBC who had radical surgery who met with an oncologist prior to radical cystectomy.	



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Clinical Commentary	NHS Tayside and NHS Grampian highlighted that the patients that were not seen by an oncologist were not suitable for chemotherapy or radiotherapy and, while these cases were discussed at MDT, oncological review was not considered necessary. This has now been addressed by all Boards, with the majority of patients being seen prior to treatment. This should improve performance in future years.
Actions	<ol style="list-style-type: none"> 1. This will be monitored in line with Surgery Case for Change programme as part of the MDT review and additional nursing workforce required to support. 2. Agenda item for first meeting of North Cancer Urology Pathway Board (NCUPB) meeting in 2019.
Risk Status	Tolerate

QPI 10	Radical Radiotherapy with Chemotherapy
Proportion of patients with transitional cell carcinoma of the bladder (T2-T4) undergoing radical radiotherapy receiving concomitant chemotherapy.	



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Clinical Commentary	The number of patients in this group is small and the target narrowly missed (it was met last year). NHS Tayside noted that comorbidities precluded chemotherapy for patients not meeting the target. NHS Boards should continue to document the reasons for those patients who are not given chemotherapy.
Actions	No actions identified
Risk Status	Tolerate

QPI 11	30 / 90 Day Mortality after Treatment for Bladder Cancer
Proportion of patients with bladder cancer who die within 30/90 days of treatment with curative intent (radical cystectomy, radiotherapy and chemotherapy) for bladder cancer.	

30 and 90 day mortality	Radical cystectomy			Radiotherapy			Chemotherapy		
	Performance (%)	Numerator	Denominator	Performance (%)	Numerator	Denominator	Performance (%)	Numerator	Denominator
Target <5%									
Grampian	0%	0	8	0%	0	6	0%	0	9
Highland*	-	-	-	-	-	-	-	-	-
Orkney	-	0	0	-	0	0	-	0	0
Shetland	-	0	0	-	0	0	-	0	0
Tayside*	0%	0	22	0%	0	7	-	-	-
W Isles	-	0	0	-	0	0	-	0	0
NoS	0%	0	32	0%	0	16	0%	0	15

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Clinical Commentary	There were no 30/90 day mortalities in this period.
Actions	No actions identified
Risk Status	Tolerate

Clinical Trials Access QPI

Proportion of patients with bladder cancer who are enrolled in an interventional clinical trial or translational research. Results presented are for patients enrolled into trails in 2016 and have been provided by the Scottish Cancer Research Network (SCRN).

	Interventional Trials Target > 7.5%			Translational Research Target > 15%		
	Performance (%)	Numerator	Denominator	Performance (%)	Numerator	Denominator
Grampian	8.8%	8	91	0%	0	91
Highland	0%	0	31	0%	0	31
Orkney*	-	-	-	-	-	-
Shetland*	-	-	-	-	-	-
Tayside	1.4%	1	71	117%	83	71
W Isles*	-	-	-	-	-	-
NoS	4.5%	9	201	41.3%	83	201

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Clinical Commentary	All cancer patients that pass through each of the three cancer centres in North of Scotland are considered for potential participation in the open trials currently available. However, consequent to the demise of larger general trials and the advent of genetically selective trials that only target small populations of patients, many of the bladder cancer trials that are currently open to recruitment in the North of Scotland have very select eligibility criteria. Consequently they will only be available to a small percentage of the total number of people who were diagnosed with bladder cancer.
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	Mitigate

References

1. Information Services Division. Cancer in Scotland, April 2018. http://www.isdscotland.org/Health-Topics/Cancer/Publications/2018-04-24/Cancer_in_Scotland_summary_m.pdf
2. 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>
3. Scottish Cancer Taskforce, 2016. Bladder Cancer Clinical Performance Indicators, Version 2.0. Health Improvement Scotland. <http://www.healthcareimprovementscotland.org/his/idoc.ashx?docid=1d5bd547-316d-49b0-8948-e2aed407a660&version=-1>
4. <http://www.isdscotland.org/Health-Topics/Cancer/Cancer-Audit/>

Appendix 1: Clinical Trials into which patients were recruited in the North of Scotland in 2016

Trial	Principle Investigator	Trial Type
MCM5 performance evaluation in bladder	Ghulam Nabi (Tayside)	Translational
Open label phase II trial with a pan-FGFR Tyrosine Kinase Inhibitor	Paddy Niblock (Tayside)	Interventional
POUT	Neil McPhail (Highland) Emma Brown (Tayside)	Interventional
The PHOTO Trial	Sarfraz Ahmed (Grampian) Ghulam Nabi (Tayside)	Interventional