

Quality Performance Indicators Audit Report

Tumour Area:	Bladder Cancer
Patients Diagnosed:	1 st April 2018 – 31 st March 2019
Published Date:	11th January 2021
Clinical Commentary:	Mr. Ghulam Mustafi Nandwani, NCA Bladder Cancer Clinical Lead



1. Bladder Cancer in Scotland

Latest available cancer registration figures indicate that with 830 cases recorded during 2017, bladder cancer is the 10th most common type of cancer in Scotland. Incidence has decreased by 4.6% from 2007 to 2017¹.

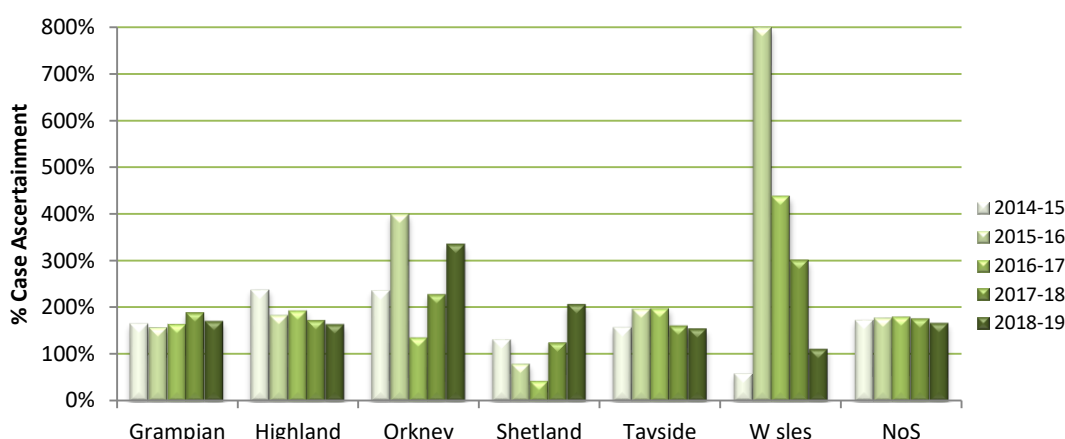
Survival from bladder cancer is lower than the average for all malignant neoplasms, with a one year age-standardised relative survival for 2007-2011 of 74.6% and 5-year survival of 49.1% for men and considerably lower survival rates for women at 36.2%. Survival from bladder cancer appears to have decreased 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 2007-2011³.

	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 2018 and 31st March 2019 a total of 352 cases of bladder cancer were diagnosed in the North of Scotland and recorded through audit. Overall case ascertainment was very high at 166%, as in previous years. The reason for this high case ascertainment is due to differences between the way in which bladder cancer is defined through the Scottish Cancer Registry and the QPI datasets. As such, total case ascertainment is 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.

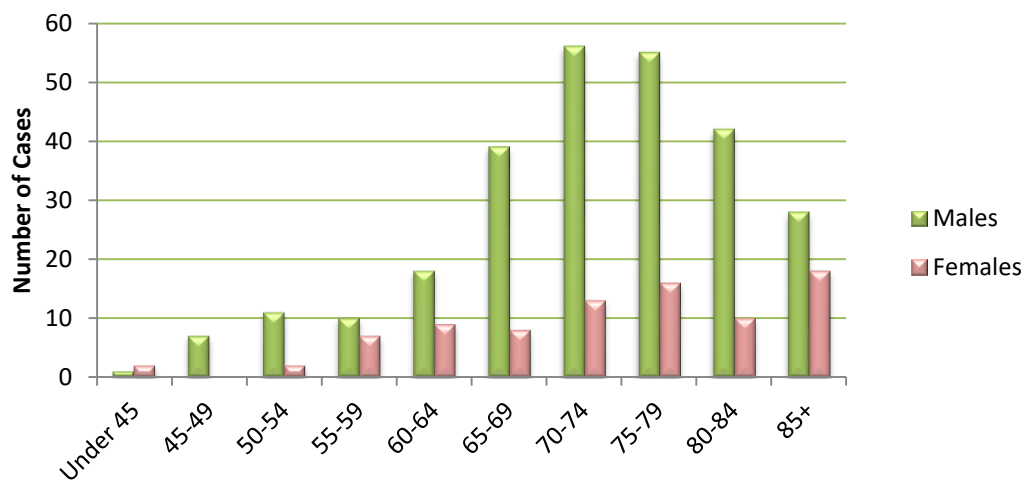


Case ascertainment by NHS Board for patients diagnosed with bladder cancer in 2014-2018.

	Grampian	Highland	Orkney	Shetland	Tayside	Wales	NoS
No. of Patients 2018-19	153	64	12	7	114	2	352
% of NoS total	43.5%	18.2%	3.4%	2.0%	32.4%	0.6%	100%
Mean ISD Cases 2014-18	89.8	39.2	3.6	3.4	74.0	1.8	211.8
% Case ascertainment 2018-19	170.4%	163.3%	333.3%	205.9%	154.1%	111.1%	166.2%

3. Age Distribution

The figure below shows the age distribution of patients diagnosed with bladder cancer in the North of Scotland in 2018-19, with numbers of patients diagnosed highest in the 70-74 age bracket for men and 85 years + age category for women.



Age distribution of patients diagnosed with bladder cancer in North of Scotland 2018-2019.

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 detailed information around TURBT and cystectomy. While there has been a considerable improvement in the completeness of some of these data over recent years, for some QPIs missing data does affect QPI performance figures. Unless there is adequate data to inform their exclusion, patient's default to being included within the QPI calculations. A lack of information on whether patients should be excluded affected 16% of patients for QPI 2. In 2018-19 missing data was most notable for patients from NHS Grampian where the lack of recording of 'Intent of Surgery (TURBT)' and 'Tumour Size at TURBT' affected QPI results. It should be noted however that this has improved since 2017-18 where 22% of the North of Scotland patient results were affected. Missing data for 2018-19 has also impacted QPI 4, with between 13% and 16% of patients affected.

4. Performance against Quality Performance Indicators (QPIs)

Definitions for the QPIs reported are published by Health Improvement Scotland⁴, while further information on datasets and measurability used are available from Public Health Scotland⁵. 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. QPI 12 reports patients consented for clinical trials or research studies in 2018 and is reported by the patients NHS Board of residence.

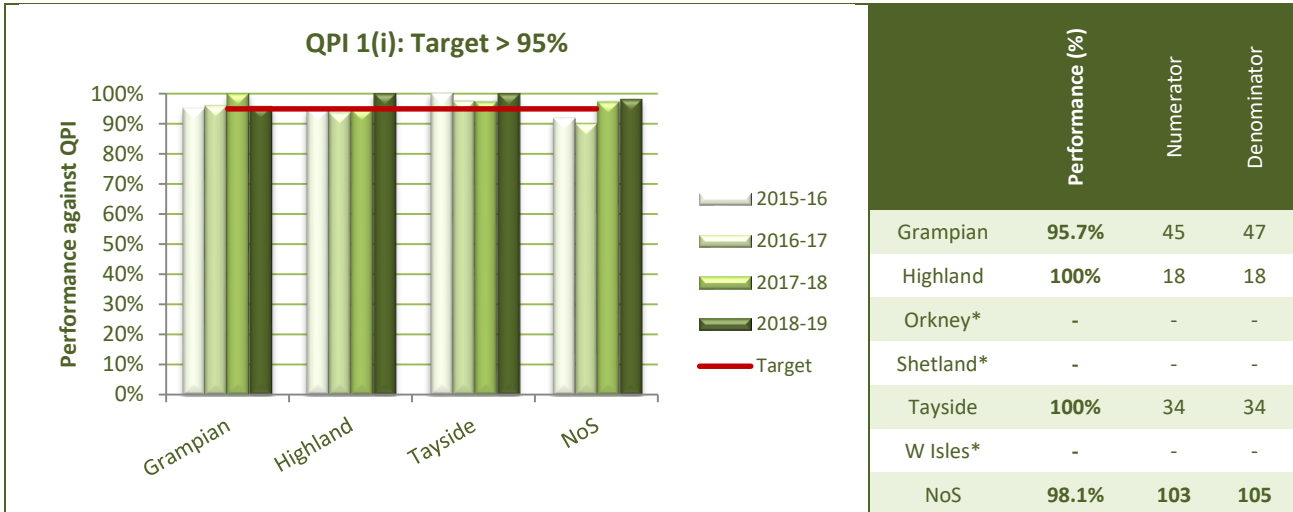
5. Governance and Risk

QPI performance is overseen by the North Cancer Alliance and its constituent groups, with an assessment of clinical risk and action planning undertaken collaboratively and reporting at board and regional level. Actions will be overseen by the Pathway Boards and reported concurrently into the NCA governance groups and the Clinical Governance committees at each North of Scotland health boards.

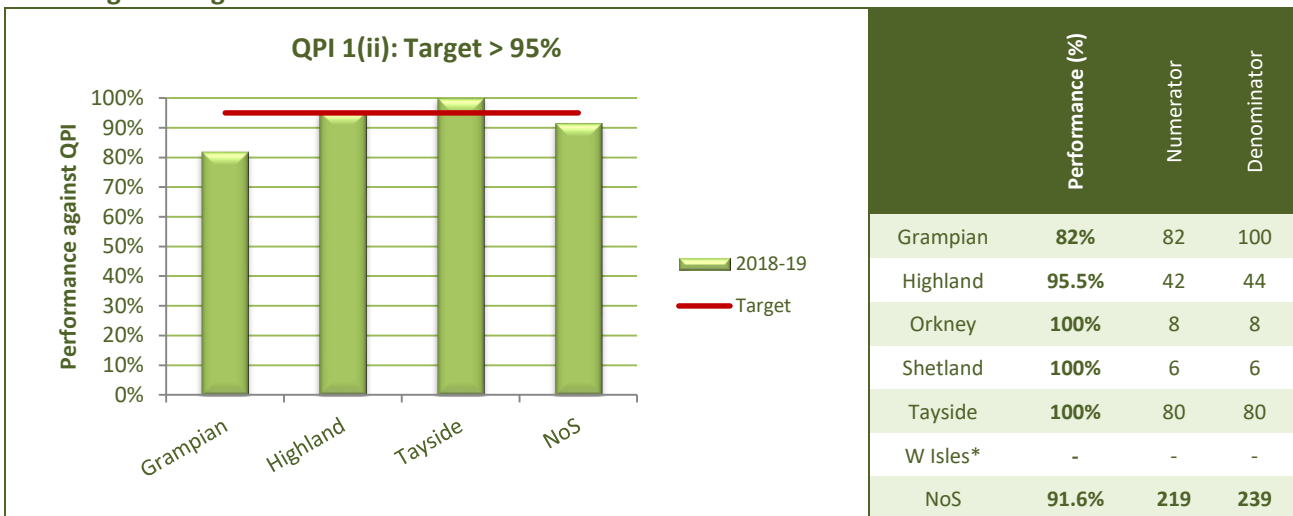
Further information is available [here](#).

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



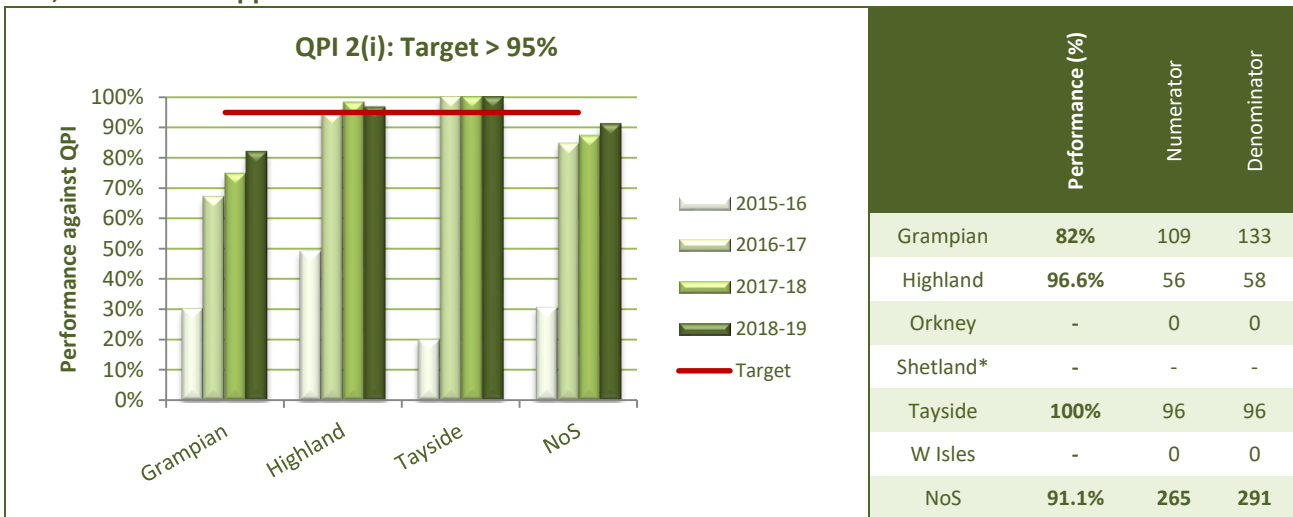
Specification (ii) Patients with Non Muscle Invasive Bladder Cancer (NMIBC) discussed at the MDT following histological confirmation of bladder cancer



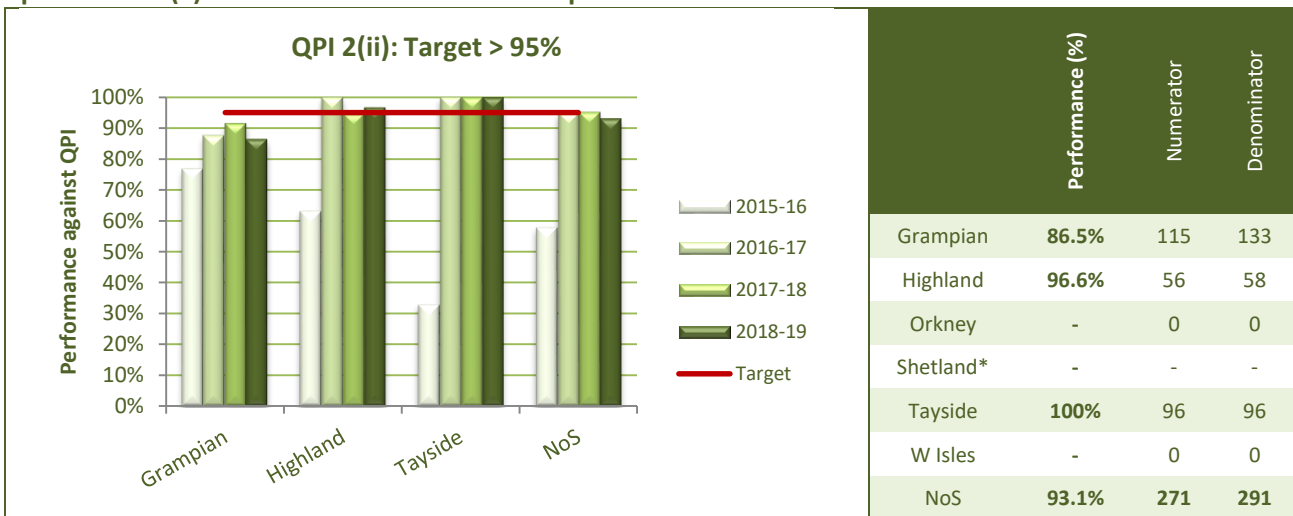
Clinical Commentary	The North of Scotland results improved again overall for the third year in a row with most boards achieving 100%, although the North of Scotland did not meet the target for specification (ii). Patients not meeting specification (ii) are managed by agreed clinical management protocol in NHS Grampian with a cystoscopy check at 3 months and management is not discussed at MDT, whereas all patients are discussed at MDT in other North of Scotland boards.
Actions	<ol style="list-style-type: none"> 1. NCA to escalate to individual boards performance for specification (ii) to ask for actions to improve compliance to this QPI. 2. NCA Urology Pathway Board to consider which NMIBC patients can have management determined by protocol and agree consensus on approach to MDT discussion of these patients.
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.	

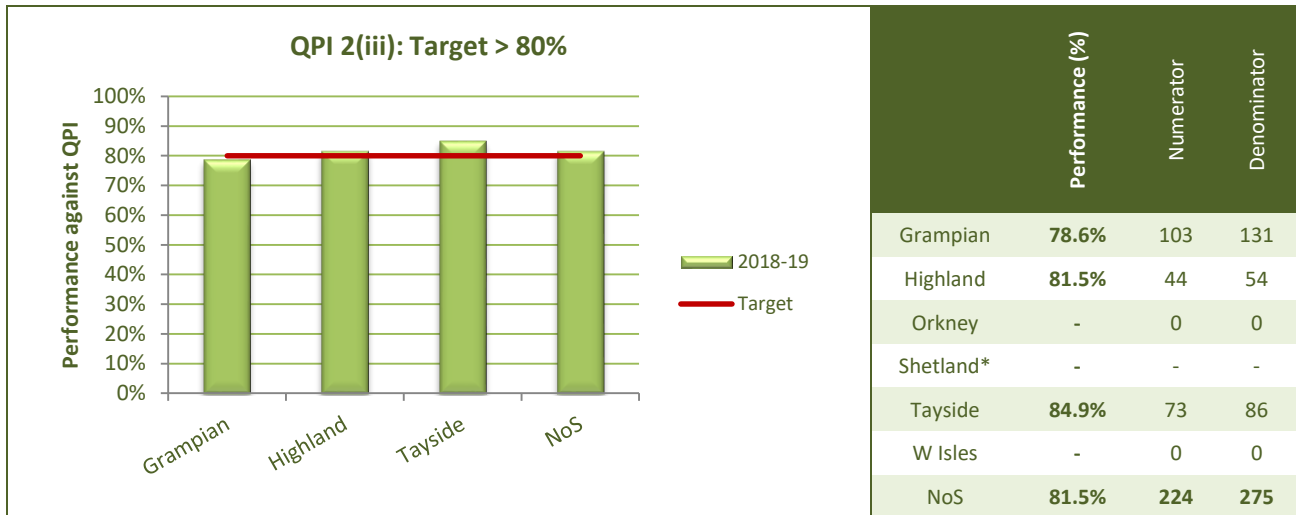
Specification (i) Use of a bladder diagram / detailed description with documentation of tumour location, size, number and appearance



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

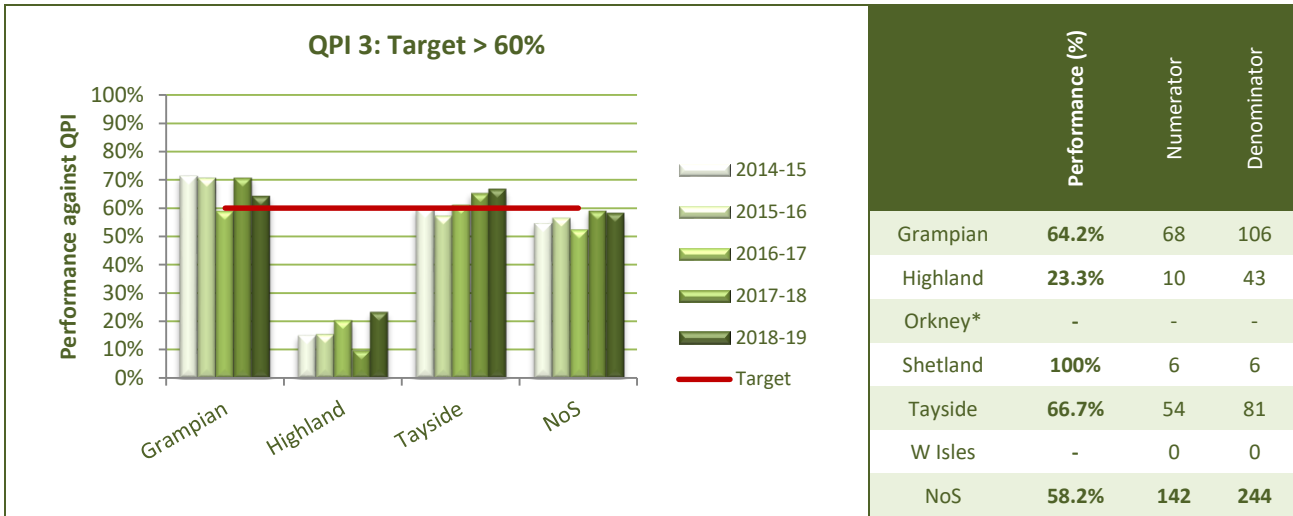


Specification (iii) Whether detrusor muscle included in the specimen



Clinical Commentary	<p>Recording of TURBT is still an issue but performance continues to improve in those boards that do not meet the standard, while NHS Tayside achieves 100% for specification (i).</p> <p>Specification (ii) was narrowly missed due to the agreed proforma not being utilised with all fields completed within the record in NHS Grampian.</p> <p>Specification (iii) is reported for the first time and was achieved within the North of Scotland.</p>
Actions	<ol style="list-style-type: none"> 1. NCA to escalate the use of agreed proforma for TURBT to North of Scotland boards. 2. NCA Urology Pathway Board to monitor future performance and escalate as required to ensure compliance with this QPI. 3. NHS Boards to undertake an action plan to improve the availability of operation notes and diagrams to allow for improved quality of recording.
Risk Status	Escalate

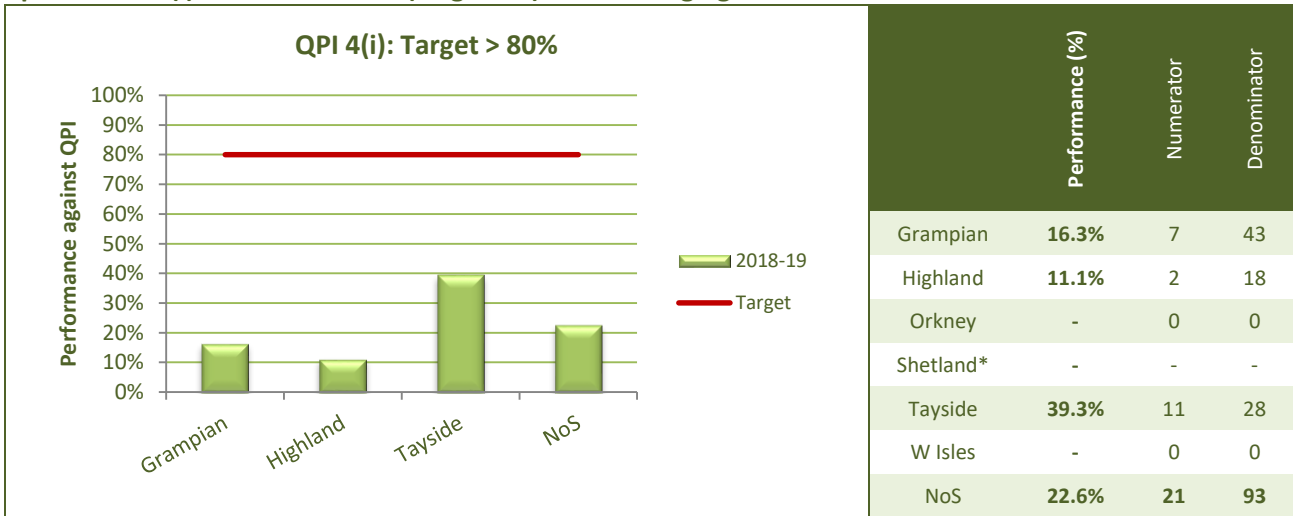
QPI 3	Mitomycin C Following Transurethral Resection of Bladder Tumour (TURBT)
Proportion of patients with NMIBC who undergo TURBT who receive a single instillation of mitomycin C within 24 hours of resection.	



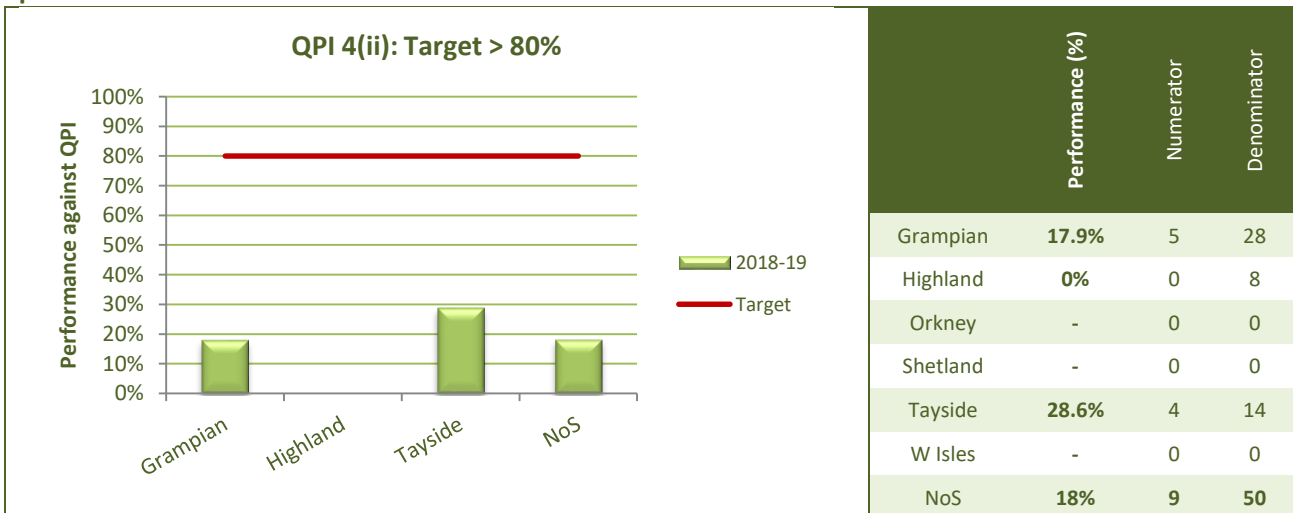
Clinical Commentary	<p>This target was narrowly missed for patients diagnosed in 2018/19 due to performance in NHS Highland. However, MMC has been stored in theatre since 07/03/19 in NHS Highland and this should result in compliance across the North in future years of reporting.</p> <p>Nationally there have been shortages of mitomycin c and this was formally reported in September 2019 and an alternative management protocol agreed with Scottish Government. Results in future years will be carefully analysed as part of this QPI process and risk assessed on this basis.</p>
Actions	<ol style="list-style-type: none"> NHS Highland to monitor performance against the QPI and once compliance achieved, this risk can be considered for de-escalation.
Risk Status	Escalate

QPI 4	QPI 4: Early Re-Transurethral Resection of Bladder Tumour (TURBT)
Proportion of patients who have undergone TURBT with high grade and/ or T1 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.	

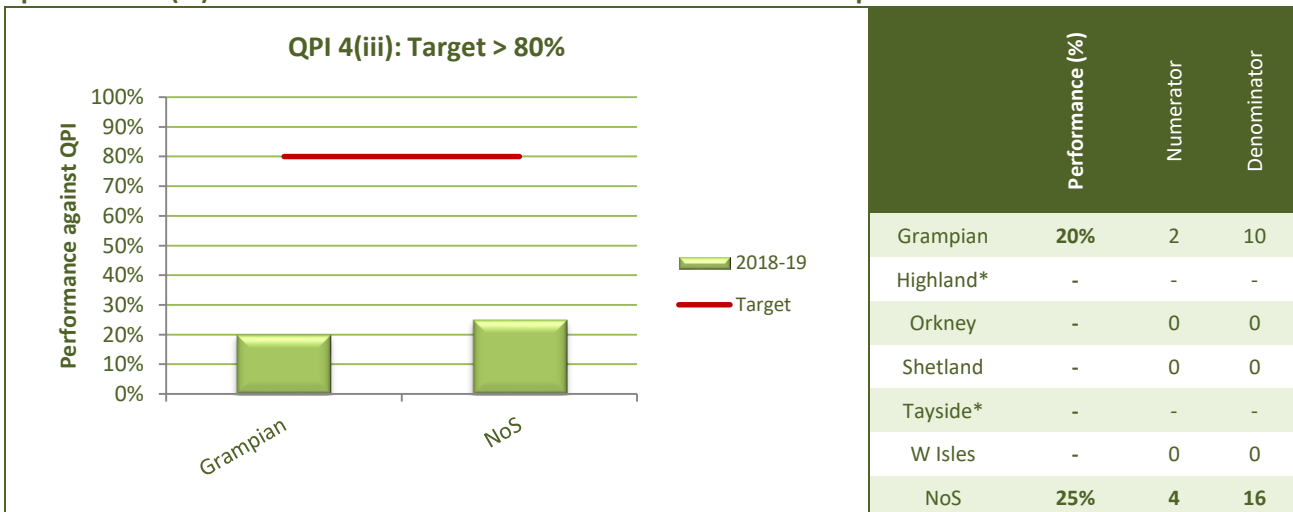
Specification (i) Patients with T1 (all grades) or select high grade Ta* NMIBC



Specification (ii) Patients with high grade or low grade G2 NMIBC where detrusor muscle absent from specimen



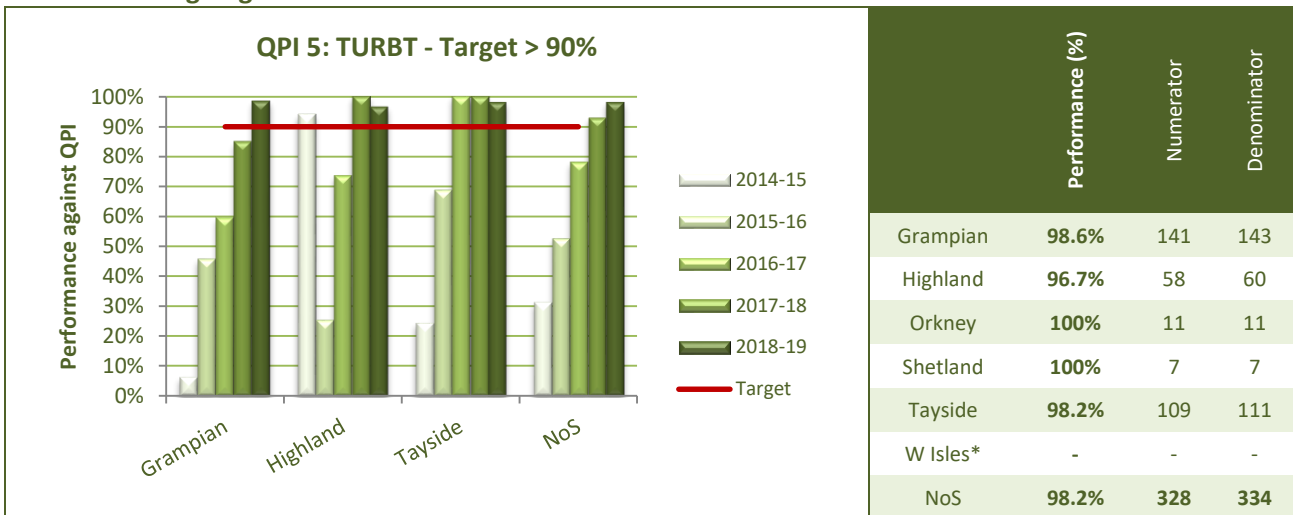
Specification (iii) Patients with NMIBC where initial resection is incomplete



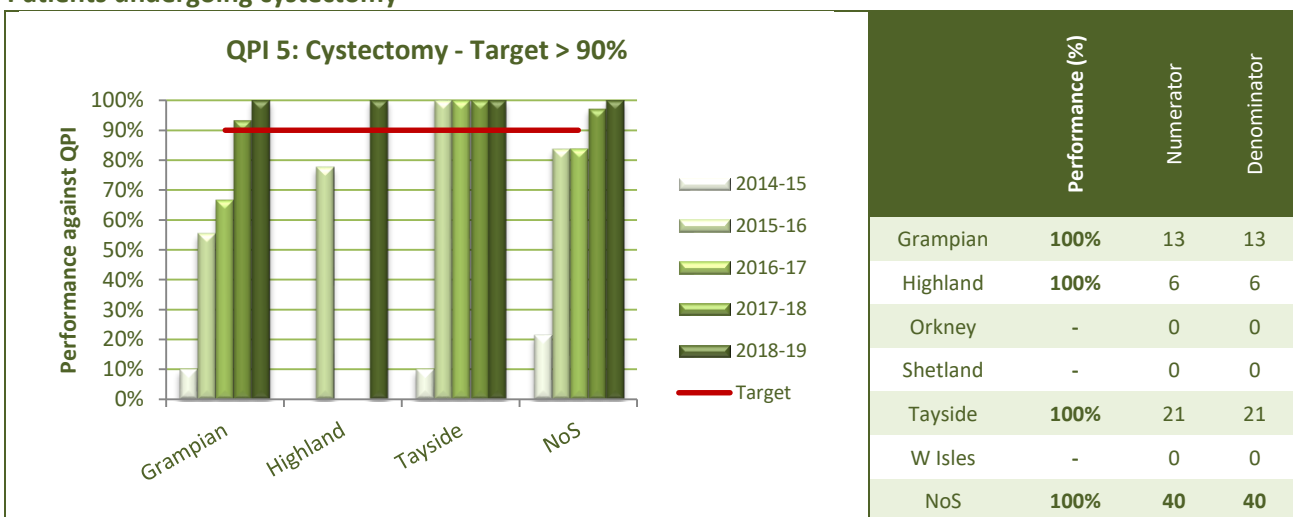
Clinical Commentary	<p>This is the first year of reporting this new specification of QPI and it is clear there are challenges in the delivery of re-TURBT in the timescales required by this QPI.</p> <p>The agreement of the NCA Bladder Clinical Management Guidelines is required to ensure a North of Scotland approach to the management of these patients and thereafter ensuring timescales in place to meet the requirements of this QPI.</p> <p>The six-week pathway requires to be embedded in practice to meet specification (i) and work will be progressed through the NCA Pathway Board to achieve this quality standard. This is a challenge to meet nationally and performance in the North of Scotland is consistent with the Scottish average.</p>
Actions	<ol style="list-style-type: none"> 1. NCA Urology Pathway Board to agree patient management documented in NCA Bladder Clinical Management Guideline. 2. NCA to escalate to North of Scotland boards, responsible for implementing pathway to ensure re-TURBT within 6 weeks of initial treatment.
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

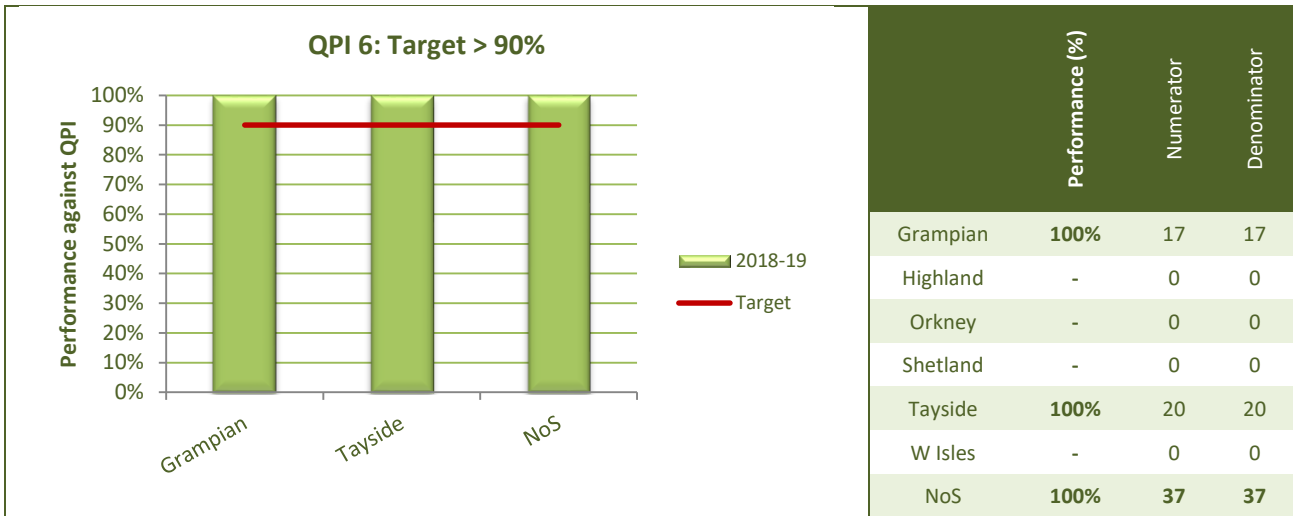


Patients undergoing cystectomy



Clinical Commentary	Performance in the North of Scotland has improved for patients undergoing TURBT and cystectomy and this reflects collaboration between the North of Scotland pathology teams and adopting the guidelines required for reporting of specimens against the standards of this QPI.
Actions	No action required
Risk Status	Tolerate

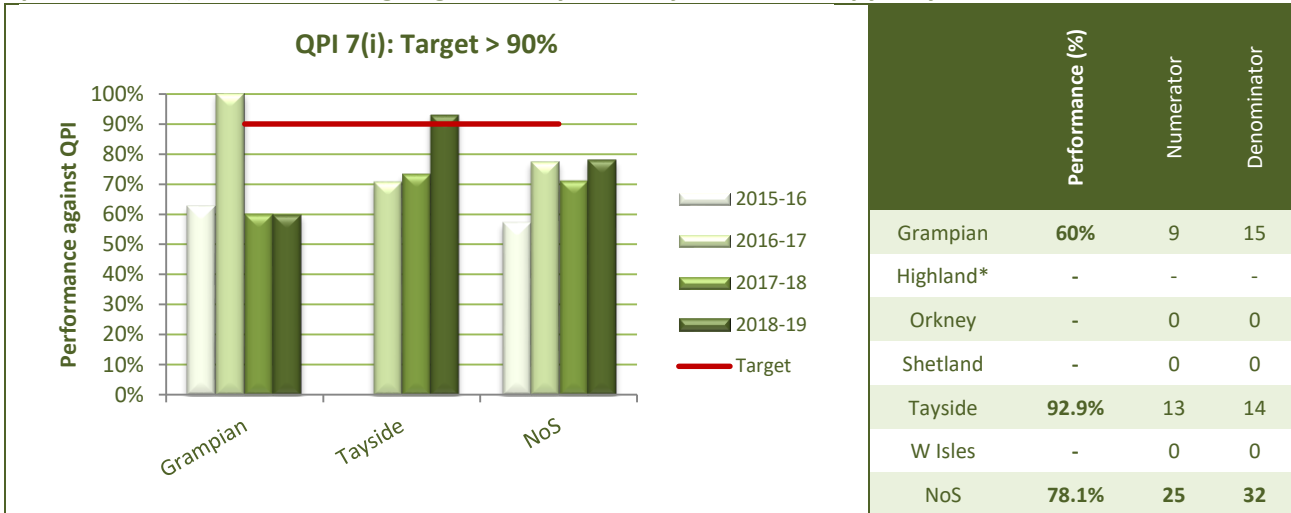
QPI 6	Lymph Node Yield
Proportion of patients with bladder cancer who undergo primary radical cystectomy where at least level 2 pelvic lymph node dissection (to the middle of the common iliac artery or level of the crossing of the ureter) has been undertaken.	



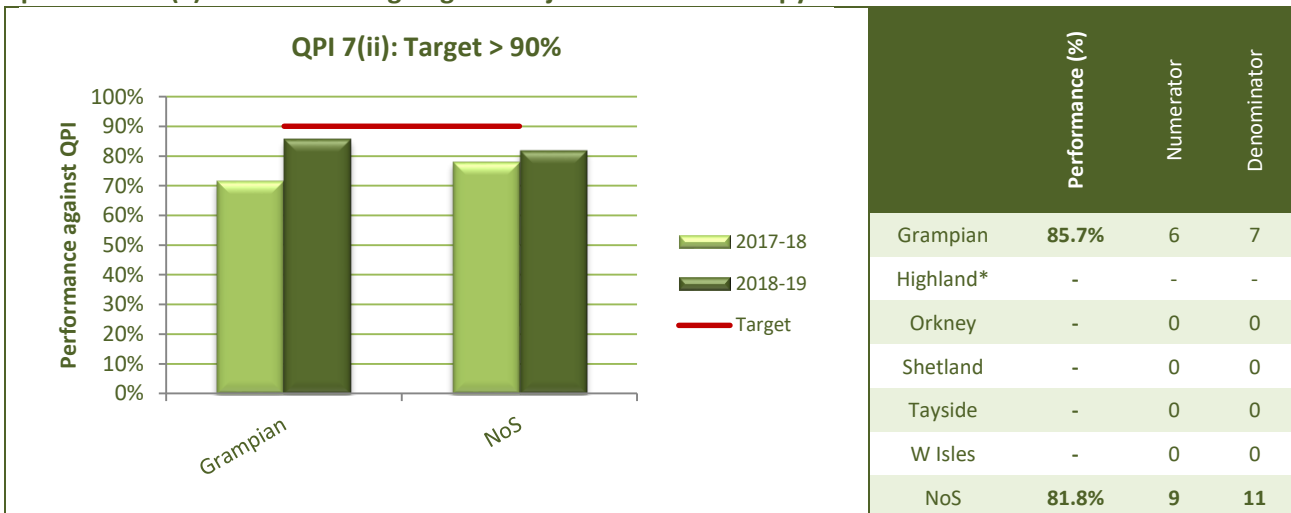
Clinical Commentary	Both North of Scotland surgical centres achieved 100% for this QPI and continues to demonstrate a high standards of surgery services.
Actions	No action required
Risk Status	Tolerate

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 completing treatment where patients are undergoing neoadjuvant chemotherapy.	

Specification (i) Patients undergoing radical cystectomy or radiotherapy only



Specification (ii) Patients undergoing neo-adjuvant chemotherapy



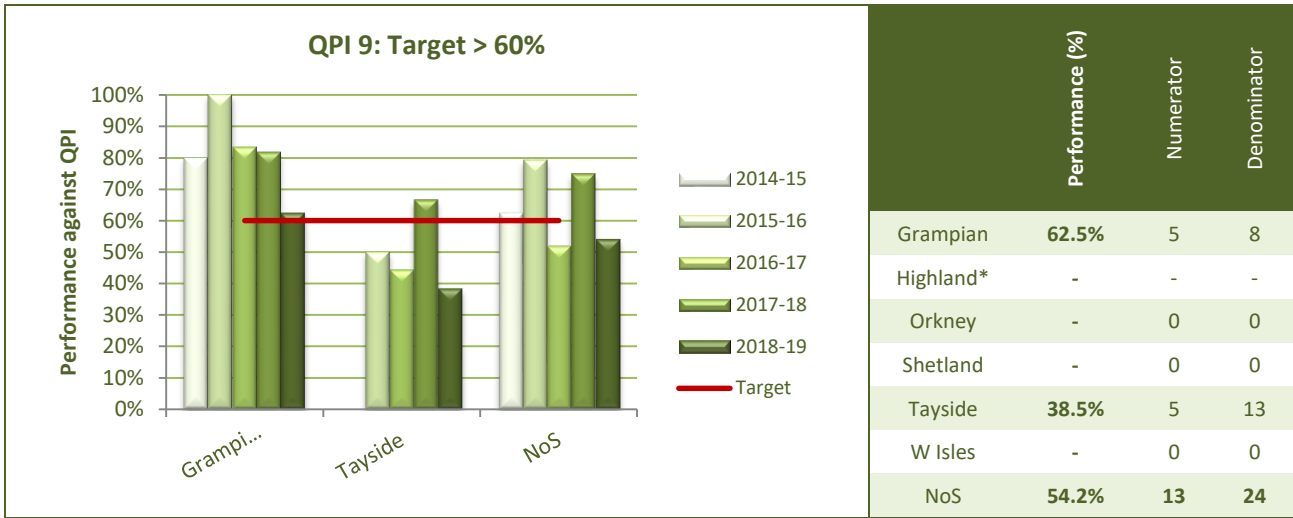
Clinical Commentary	Those patients not meeting this quality standard have been audited at board level and valid reasons provided as to their delay in all but two cases. Pathways are to be examined in the NCA to embed timescales to systemic treatments.
Actions	<ol style="list-style-type: none"> 1. NCA Urology Pathway Board to discuss improvements required to meet timescales to systemic treatment for MIBC patients. 2. NCA to escalate this QPI to boards who are responsible for the implementation of pathways that adhere to these timelines.
Risk Status	Escalate

QPI 8	Volume of Cases per Surgeon
Number of radical cystectomy procedures performed by a specialist centre, and 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		Minimum of 20 procedures per centre	
NHS Board of Surgeon	Surgeon	Number of Cases	Surgical Centre	Number of Cases
Grampian	Surgeon 1	23	ARI	23
	Surgeon 2	1		
Highland	-		Raigmore	0
Tayside	Surgeon 1	27	Ninewells	27

Clinical Commentary	All except Surgeon 2 achieved the volume standards and both North surgery centres surpassed the volume requirements. Surgeon 2 performed one procedure in assistance to Surgeon 1.
Actions	1. Arrangements for Radical Cystectomy to be considered by Low Volume Cancer Surgery programme to ensure resilience of service for North of Scotland patients.
Risk Status	Escalate

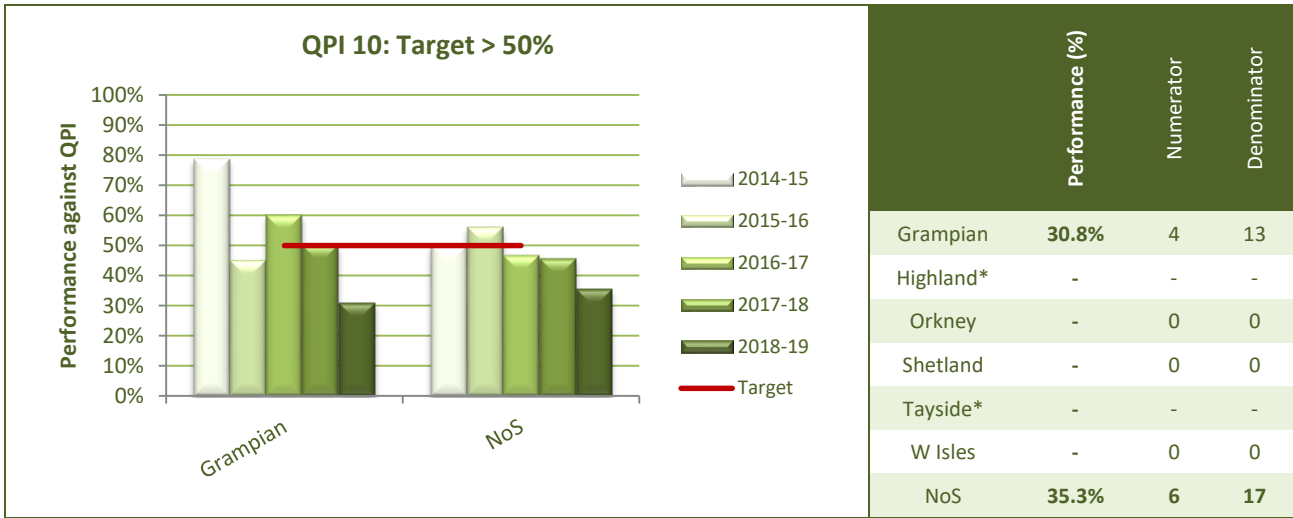
QPI 9	Oncological Discussion
Proportion of patients with MIBC who had radical surgery who met with an oncologist prior to radical cystectomy.	



	Performance (%)	Numerator	Denominator
Grampian	62.5%	5	8
Highland*	-	-	-
Orkney	-	0	0
Shetland	-	0	0
Tayside	38.5%	5	13
W Isles	-	0	0
NoS	54.2%	13	24

Clinical Commentary	There continues to be challenges in the pathways involved for this QPI. Oncology input into patient management is directed through the MDT and would represent an MDT decision to treat, involving both oncologist and urologist input. However, there is currently no pathway in place that allows for outpatient appointment with oncologist prior to radical cystectomy and there needs to be consideration about the impact of MDT working on the aspirations for this QPI. Any patients not fit for neo-adjuvant or radiotherapy treatments will be seen by urologists as per management decided by MDT.
Actions	1. Requirements for this QPI to be discussed as part of the Bladder Cancer QPI formal review beginning in 2021.
Risk Status	Manage

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



Clinical Commentary	Patients who did not receive concomitant chemotherapy with radical radiotherapy have been audited and clinical reasons were noted as the reasons where it was unsafe to treat, include co-morbidities and patient choice.
Actions	No action required
Risk Status	Mitigate

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.	

Radical cystectomy	30 Day Mortality			90 Day Mortality		
Target <5%	Performance (%)	Numerator	Denominator	Performance (%)	Numerator	Denominator
Grampian	0%	0	17	0%	0	16
Highland	-	0	0	-	0	0
Orkney	-	0	0	-	0	0
Shetland	-	0	0	-	0	0
Tayside	0%	0	19	5.3%	1	19
W Isles	-	0	0	-	0	0
NoS	0%	0	36	2.9%	1	35

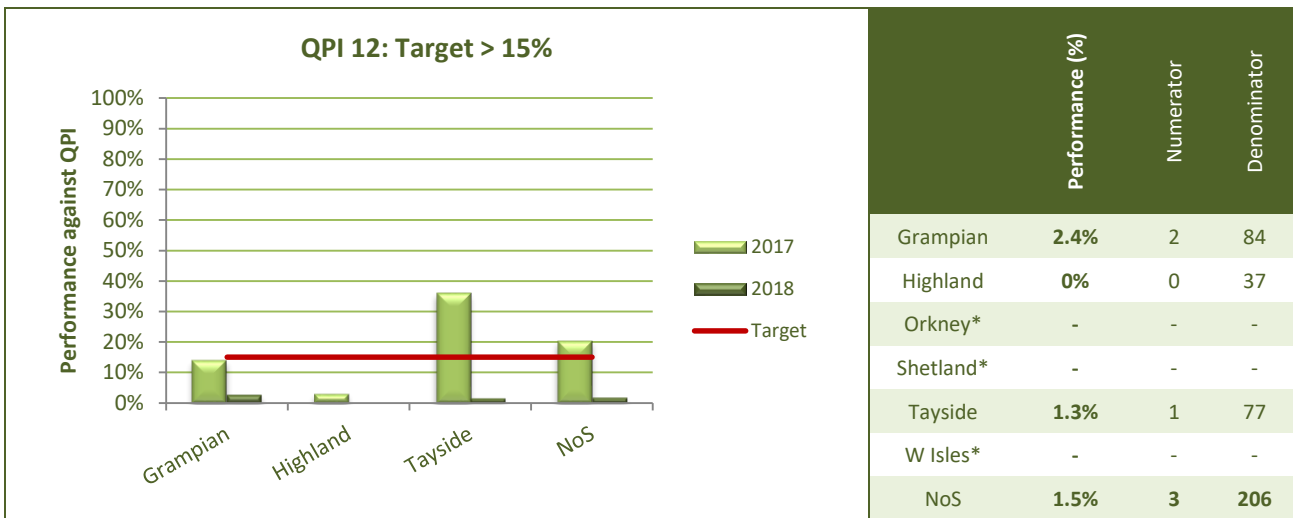
Radiotherapy	30 Day Mortality			90 Day Mortality		
Target <5%	Performance (%)	Numerator	Denominator	Performance (%)	Numerator	Denominator
Grampian	0%	0	14	7.7%	1	13
Highland	0%	0	5	0%	0	5
Orkney	-	0	0	-	0	0
Shetland	-	0	0	-	0	0
Tayside*	-	-	-	-	-	-
W Isles	-	0	0	-	0	0
NoS	0%	0	21	5%	1	20

With regards to mortality following SACT, a decision has been taken nationally to move to a new generic QPI (30-day mortality for SACT) applicable across all tumour types.

This new QPI will use CEPAS (Chemotherapy ePrescribing and Administration System) data to measure SACT mortality to ensure that the QPI focuses on the prevalent population rather than the incident population. The measurability for this QPI is still under development to ensure consistency across the country and it is anticipated that performance against this measure will be reported in the next audit cycle. In the meantime all deaths within 30 days of SACT will continue to be reviewed at a NHS Board level.

Clinical Commentary	All patients who died within 90 days of treatment have been audited. Reasons included non-cancer related illness. Performance within the North of Scotland overall was within QPI tolerances.
Actions	No action required
Risk Status	Mitigate

QPI 12	Clinical Trial and Research Study Access
Proportion of patients with bladder cancer who are consented for a clinical trial or / research study. Results presented are for patients enrolled into trails in 2018 and have been provided by the Scottish Cancer Research Network (SCRN).	



Clinical Commentary	<i>[Note that trials open for recruitment during 2018 are listed in the appendix.]</i> Trial recruitment continues to be a challenge across all tumour sites however engagement through the NCA Urology Pathway Board continues on available clinical trials and research studies in the North of Scotland.
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. June 2020. <https://www.isdscotland.org/Health-Topics/Cancer/Cancer-Statistics/Bladder/>
2. Information Services Division. Cancer in Scotland, April 2018. https://www.isdscotland.org/Health-Topics/Cancer/Publications/2018-10-30/Cancer_in_Scotland_summary_m.pdf
3. 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, 2018. Bladder Cancer Clinical Performance Indicators, Version 3.0. Health Improvement Scotland. http://www.healthcareimprovementscotland.org/our_work/cancer_care_improvement/cancer_gp_is/quality_performance_indicators.aspx
5. <http://www.isdscotland.org/Health-Topics/Cancer/Cancer-Audit/>

Appendix 1: Clinical Trials and Research Studies open to recruitment in the North of Scotland in 2018

Trial	Principle Investigator	Patients Consented
ATLANTIS	Judith Grant (Grampian)	Y
CANC 5167	Ghulam Nabi (Tayside)	N
The PHOTO Trial	Ghulam Nabi (Tayside)	Y