Quality Performance Indicators Audit Report

Tumour Area:	Bladder Cancer
Patients Diagnosed:	1st April 2019 – 31st March 2020
Published Date:	23rd March 2022

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

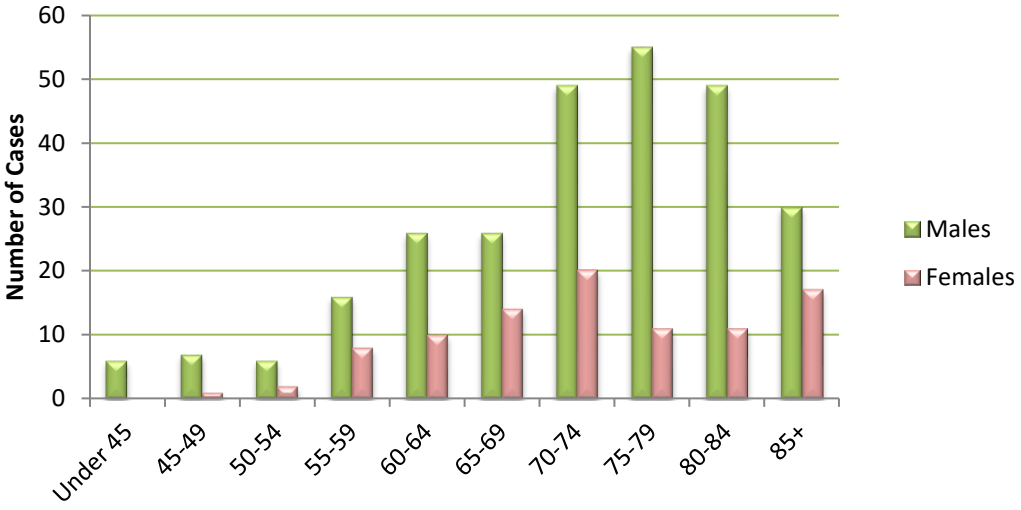
Between 1st April 2019 and 31st March 2020 a total of 364 cases of bladder cancer were diagnosed in the North of Scotland and recorded through audit. Overall case ascertainment was high at 171.4%, the reason for this high case ascertainment is due to differences between the way in which bladder cancer 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, the high results in each board suggests bladder cancer cases are well captured by cancer audit across the North of Scotland.

Case ascertainment and proportion of NoS total for patients diagnosed with bladder cancer in 2019-2020

	Grampian	Highland	Orkney	Shetland	Tayside	W sles	NoS
No. of Patients 2019-20	164	65	6	6	118	5	**364**
% of NoS total	45.1%	17.9%	1.6%	1.6%	32.4%	1.4%	**100%**
Mean ISD Cases 2015-19	85.2	42.0	3.2	3.0	76.6	2.4	**212.4**
% Case ascertainment 2019-20	192.5%	154.8%	187.5%	200%	154%	208.3%	**171.4%**

2. Age Distribution

The figure below shows the age distribution of patients diagnosed with bladder cancer in the North of Scotland in 2019-20, with numbers of patients diagnosed highest in the 75-79 age bracket for males and the 70-74 age category for women.



Age distribution of patients diagnosed with bladder cancer in North of Scotland 2019-2020.

QPI calculations based on data captured are considered to be representative of all patients diagnosed with bladder cancer during the audit period. As has been noted in previous years of the cancer audit; the bladder cancer QPI dataset is particularly complex and includes a lot of detailed information around TURBT and cystectomy. A lack of information on whether patients should be excluded affected 22% of patients for QPI 2 and affected between 10% and 32% for QPI 4. In 2019-20, missing data was most notable for patients receiving surgical treatment in NHS Grampian where the lack of recording of 'Intent of Surgery'

(TURBTINTENT1) and 'Tumour Size at TURBT' (CTSIZE1) affected QPI results. Data capture in these particular fields has decreased since the previous year of reporting for 2018-19 patients.

3. Performance against Quality Performance Indicators (QPIs)

Definitions for the QPIs reported are published by Health Improvement Scotland[1], while further information on datasets and measurability used are available from Information Services Division[2]. Data for QPIs 1, 7, 9, 10 and 11 (radiotherapy & chemotherapy mortality) 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 2019 and is reported by NHS Board of residence.

In 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 (the target will be revised from <5% to <10% when it is reported using CEPAS due to the increased clinical cohort who will be receiving appropriate palliative chemotherapy). In the meantime all deaths within 30 days of SACT will continue to be reviewed at NHS Board level.

4. Governance and Risk

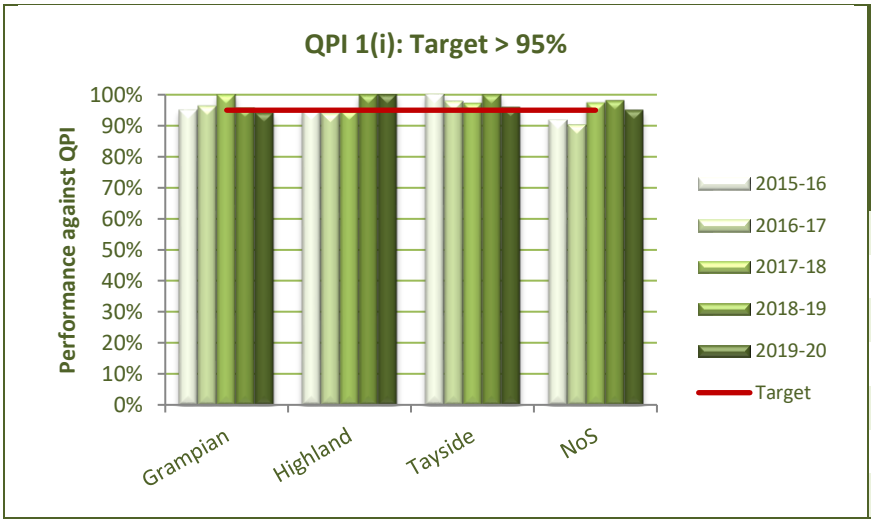
QPI performance is overseen by the North Cancer Alliance and its constituent groups, with an assessment of clinical risk and action planning undertaken collaboratively and reporting at board and regional level. Actions will be overseen by the Pathway Boards and reported concurrently into the NCA governance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

Where the number of cases per Board is between one and four, results have been excluded from charts and tables to minimise the risk of disclosure. However, all board results are included within the total for the North of Scotland.

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



	Performance (%)	Numerator	Denominator
Grampian	**94.1%**	32	34
Highland	**100%**	14	14
Orkney*	-	-	-
Shetland*	-	-	-
Tayside	**95.9%**	47	49
W Isles*	-	-	-
NoS	**95%**	**96**	**101**

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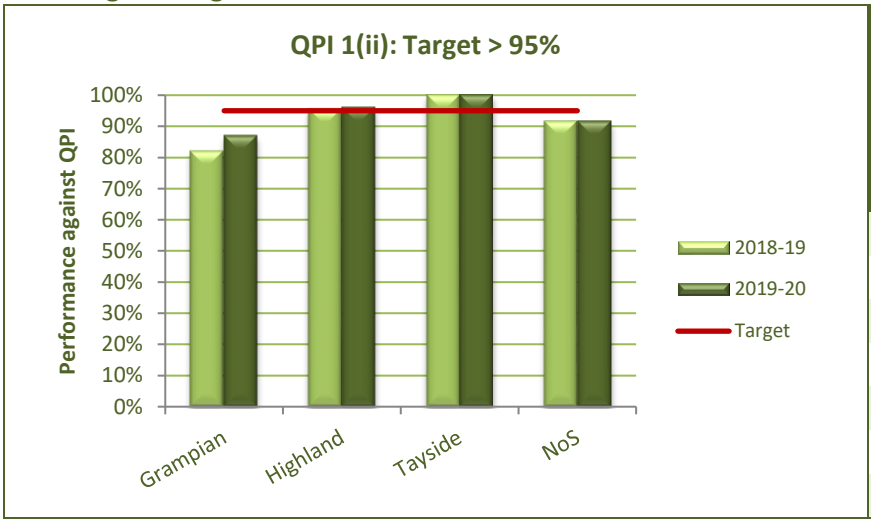
Specification (ii) Patients with Non Muscle Invasive Bladder Cancer (NMIBC) discussed at the MDT following histological confirmation of bladder cancer



	Performance (%)	Numerator	Denominator
Grampian	**86.9%**	106	122
Highland	**96%**	48	50
Orkney*	-	-	-
Shetland*	-	-	-
Tayside	**100%**	68	68
W Isles*	-	-	-
NoS	**91.6%**	**230**	**251**

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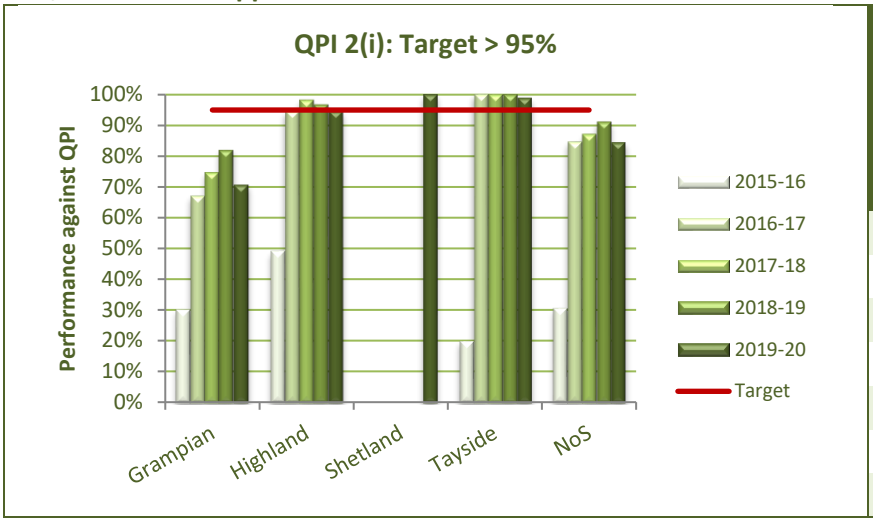
This target was narrowly missed across the North of Scotland, where diagnostic procedures resulted in definitive treatment in some cases.

QPI 2	Quality of Transurethral Resection of Bladder Tumour (TURBT)
Proportion of patients with bladder cancer who undergo good quality TURBT.	

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



	Performance (%)	Numerator	Denominator
Grampian	**70.7%**	94	133
Highland	**94.6%**	53	56
Orkney	-	0	0
Shetland	**100%**	5	5
Tayside	**98.8%**	83	84
W Isles	-	0	0
NoS	**84.5%**	**235**	**278**

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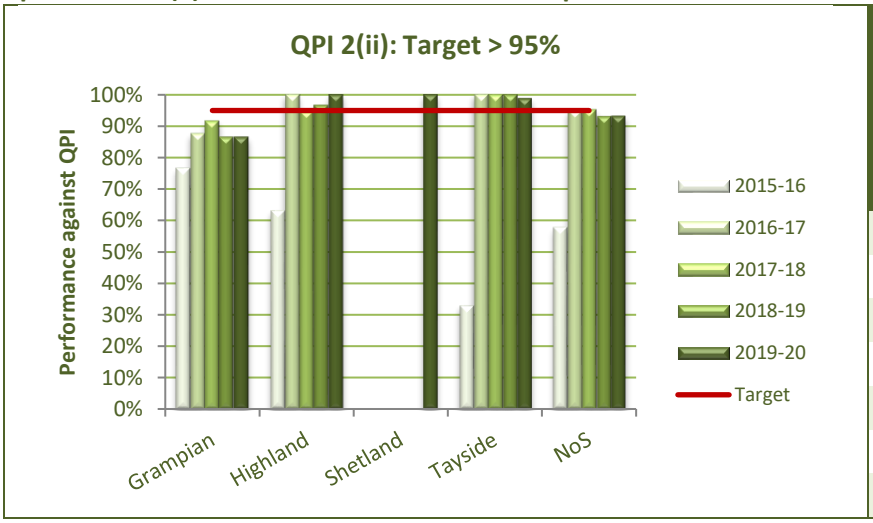
Specification (ii) whether the resection is complete or not



	Performance (%)	Numerator	Denominator
Grampian	**86.5%**	115	133
Highland	**100%**	56	56
Orkney	-	0	0
Shetland	**100%**	5	5
Tayside	**98.8%**	83	84
W Isles	-	0	0
NoS	**93.2%**	**259**	**278**

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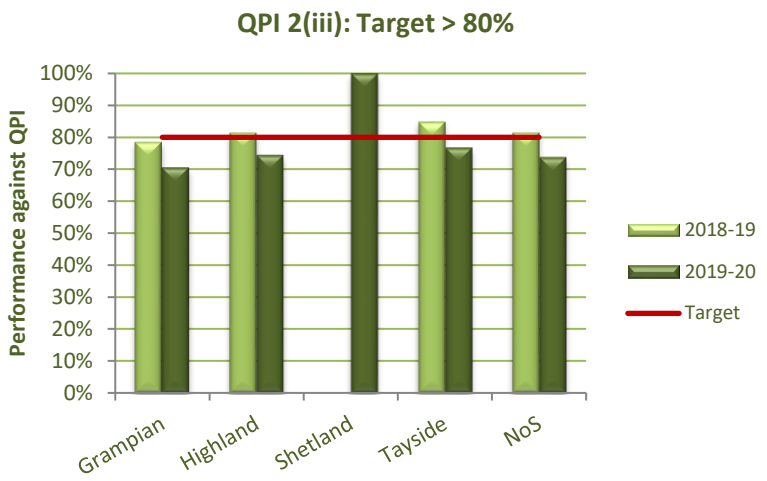
Specification (iii) Whether detrusor muscle included in the specimen



	Performance (%)	Numerator	Denominator
Grampian	**70.5%**	91	129
Highland	**74.5%**	41	55
Orkney	-	0	0
Shetland	**100%**	5	5
Tayside	**76.8%**	63	82
W Isles	-	0	0
NoS	**73.8%**	**200**	**271**

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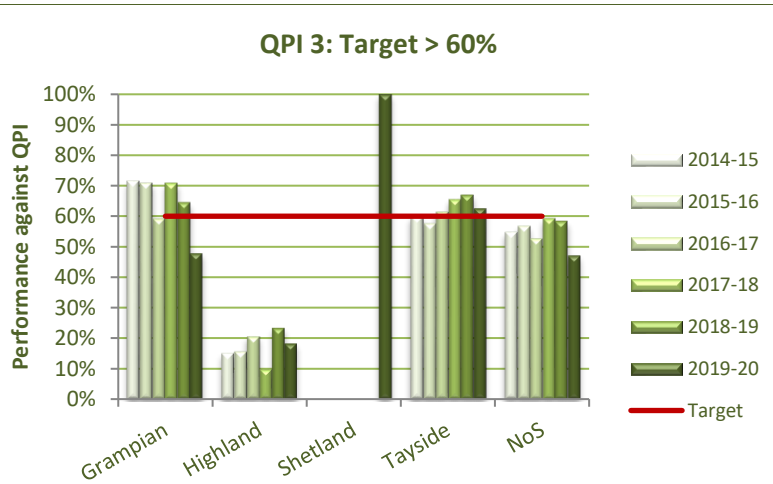
This target was missed across the North of Scotland due to data recording issues. Individual boards are addressing the availability of full descriptions and diagrams for the recording of TURBT going forward, this QPI will continue to be monitored.

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.	



	Performance (%)	Numerator	Denominator
Grampian	**48%**	60	125
Highland	**18.4%**	9	49
Orkney	-	0	0
Shetland	**100%**	5	5
Tayside	**62.7%**	42	67
W Isles	-	0	0
NoS	**47.2%**	**116**	**246**

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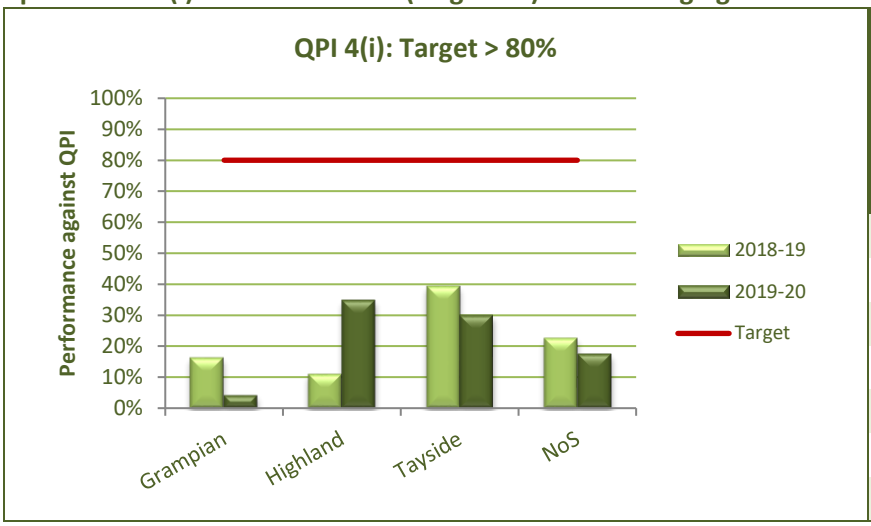
Nationally there have been shortages of mitomycin c and this was formally reported in September 2019 and an alternative management protocol agreed with Scottish Government. Results in future years will be carefully analysed as part of this QPI process and risk assessed on this basis. A review of results is underway within NHS Highland.

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



	Performance (%)	Numerator	Denominator
Grampian	**4.2%**	2	48
Highland	**34.8%**	8	23
Orkney	**-**	0	0
Shetland	**-**	0	0
Tayside	**30%**	6	20
W Isles	**-**	0	0
NoS	**17.6%**	**16**	**91**

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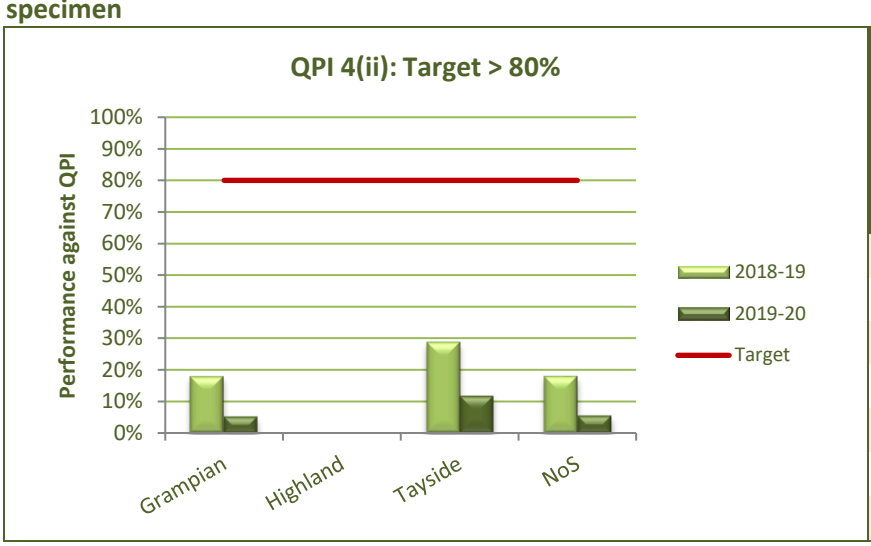
Specification (ii) Patients with high grade or low grade G2 NMIBC where detrusor muscle absent from specimen



	Performance (%)	Numerator	Denominator
Grampian	**5.3%**	2	38
Highland	**0%**	0	15
Orkney	**-**	0	0
Shetland*	**-**	-	-
Tayside	**11.8%**	2	17
W Isles	**-**	0	0
NoS	**5.6%**	**4**	**71**

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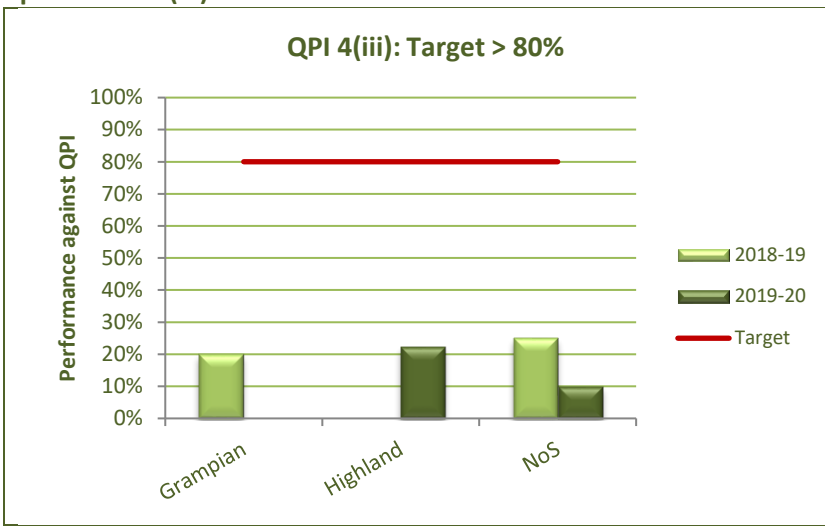
Specification (iii) Patients with NMIBC where initial resection is incomplete



	Performance (%)	Numerator	Denominator
Grampian	**0%**	0	9
Highland	**22.2%**	2	9
Orkney	-	0	0
Shetland	-	0	0
Tayside*	-	-	-
W Isles	-	0	0
NoS	**10%**	**2**	**20**

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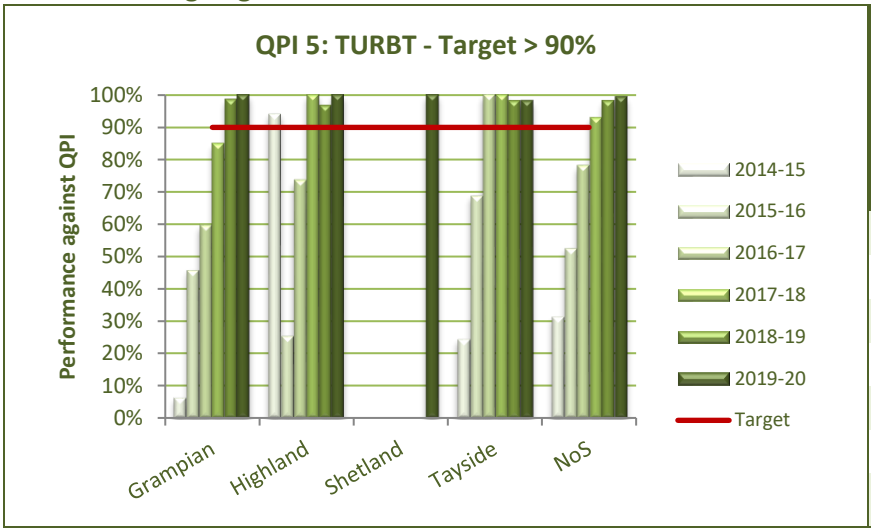
All specifications within QPI 4 remain a challenge to meet across the North of Scotland. The timescales for this QPI are under review nationally.

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



	Performance (%)	Numerator	Denominator
Grampian	**100%**	155	155
Highland	**100%**	62	62
Orkney	-	0	0
Shetland	**100%**	8	8
Tayside	**98.2%**	107	109
W Isles	-	0	0
NoS	**99.4%**	**332**	**334**

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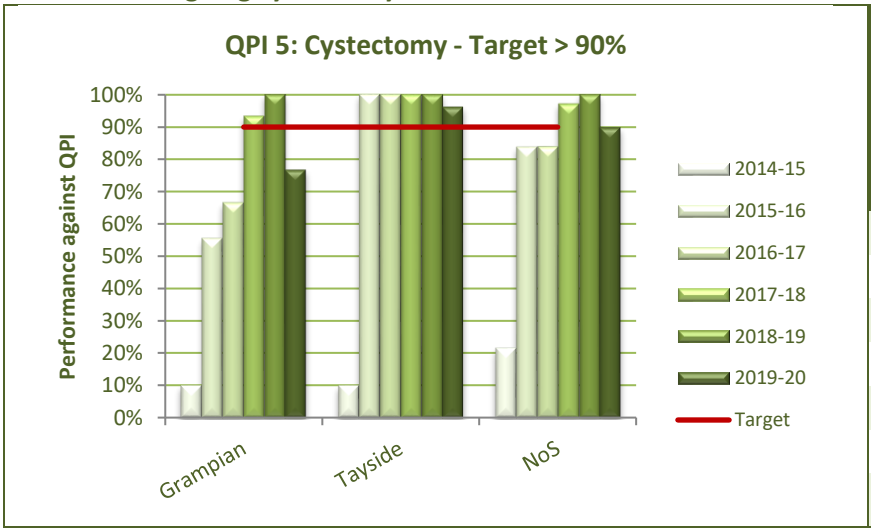
Patients undergoing cystectomy



	Performance (%)	Numerator	Denominator
Grampian	**76.9%**	10	13
Highland	-	0	0
Orkney	-	0	0
Shetland	-	0	0
Tayside	**96.3%**	26	27
W Isles	-	0	0
NoS	**90%**	**36**	**40**

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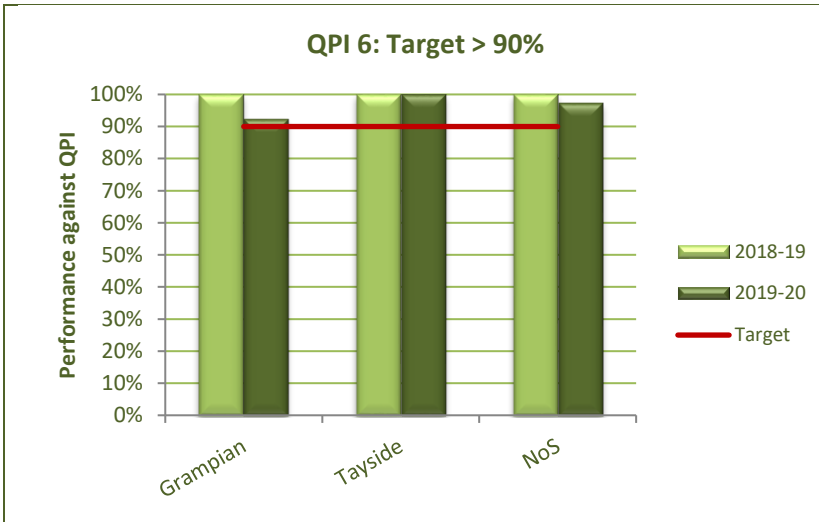
QPI 6	Lymph Node Yield
Proportion of patients with bladder cancer who undergo primary radical cystectomy where at least level 2 pelvic lymph node dissection (to the middle of the common iliac artery or level of the crossing of the ureter) has been undertaken.	



	Performance (%)	Numerator	Denominator
Grampian	**92.3%**	12	13
Highland	-	0	0
Orkney	-	0	0
Shetland	-	0	0
Tayside	**100%**	24	24
W Isles	-	0	0
NoS	**97.3%**	**36**	**37**

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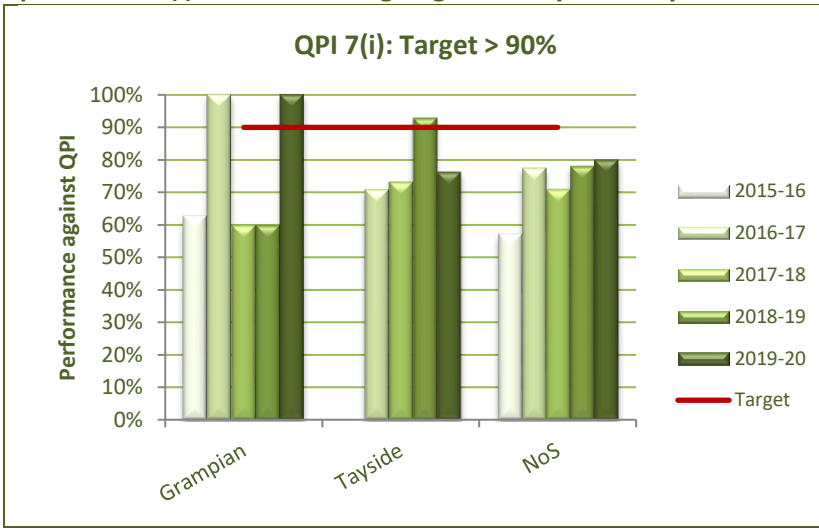
QPI 7	Time to Treatment
Proportion of patients with MIBC who commence radical treatment within 3 months of their diagnosis of MIBC, or within 8 weeks of completing treatment where patients are undergoing neoadjuvant chemotherapy.	

Specification (i) Patients undergoing radical cystectomy or radiotherapy only



	Performance (%)	Numerator	Denominator
Grampian	**100%**	10	10
Highland*	-	-	-
Orkney*	-	-	-
Shetland	-	0	0
Tayside	**76.2%**	16	21
W Isles	-	0	0
NoS	**80%**	**28**	**35**

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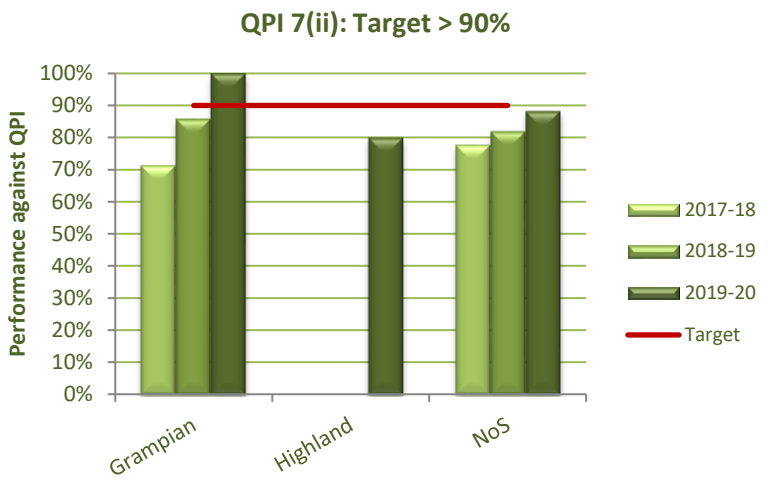
Specification (ii) Patients undergoing neo-adjuvant chemotherapy



	Performance (%)	Numerator	Denominator
Grampian	**100%**	6	6
Highland	**80%**	4	5
Orkney*	-	-	-
Shetland	-	0	0
Tayside*	-	-	-
W Isles*	-	-	-
NoS	**88.2%**	**15**	**17**

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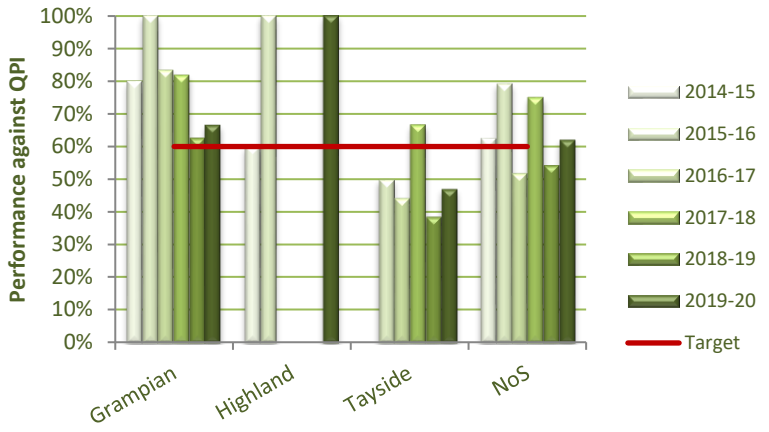
Those patients not meeting this quality standard have been audited at board level and valid reasons provided as to their delay in all cases.

QPI 8	Volume of Cases per Centre / 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**	20	ARI	27
	Surgeon 2	7		
Shetland	**Surgeon 1**	1	Gilbert Bain	1
Tayside	**Surgeon 1**	28	Ninewells	28

Adherence to surgery volumes continue to be monitored by the Getting It Right for the North: Low Volume Surgery Programme.

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	**66.7%**	4	6
Highland	**100%**	5	5
Orkney*	-	-	-
Shetland	-	0	0
Tayside	**47.1%**	8	17
W Isles	-	0	0
NoS	**62.1%**	**18**	**29**

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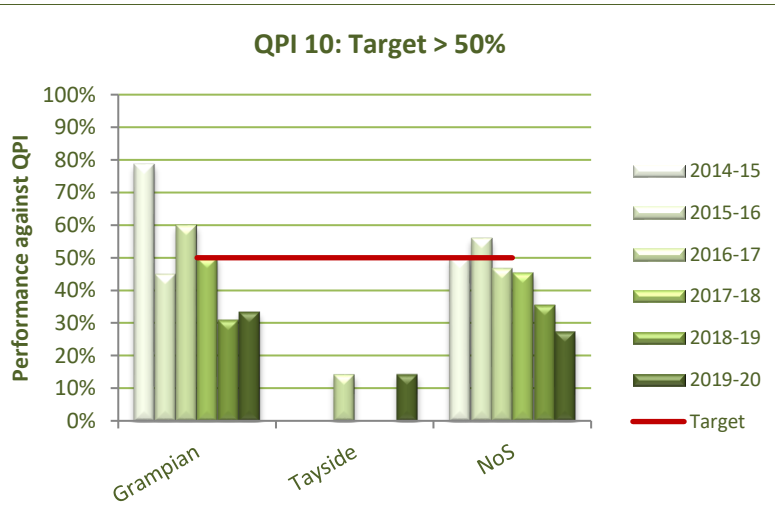
QPI 10	Radical Radiotherapy with Chemotherapy
Proportion of patients with transitional cell carcinoma of the bladder (T2-T4) undergoing radical radiotherapy receiving concomitant chemotherapy.	



	Performance (%)	Numerator	Denominator
Grampian	**33.3%**	3	9
Highland*	-	-	-
Orkney*	-	-	-
Shetland*	-	-	-
Tayside	**14.3%**	1	7
W Isles	-	0	0
NoS	**27.3%**	**6**	**22**

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Patients had been considered for concurrent chemotherapy, however some patients were deemed as unfit for both treatment and therefore failed this QPI.

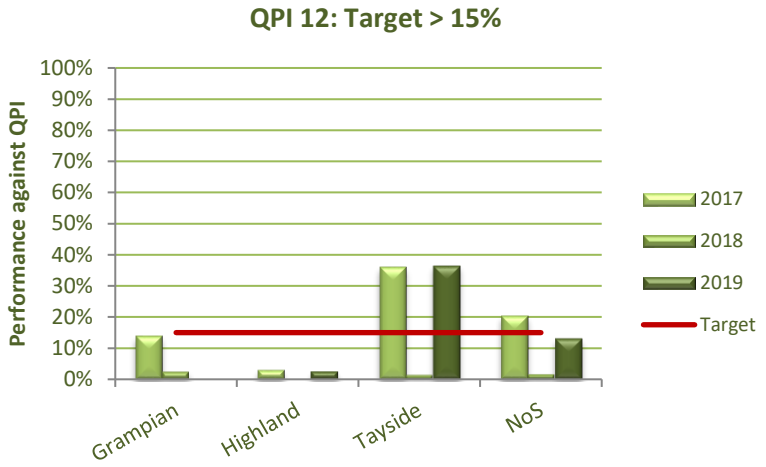
QPI 11	30 / 90 Day Mortality after Treatment for Bladder Cancer
Proportion of patients with bladder cancer who die within 30/90 days of treatment with curative intent (radical cystectomy, radiotherapy and chemotherapy) for bladder cancer.	

Radical cystectomy	30 Day Mortality			90 Day Mortality		
Target <5%	Performance (%)	Numerator	Denominator	Performance (%)	Numerator	Denominator
Grampian	**0%**	0	13	**7.7%**	1	13
Highland	-	0	0	-	0	0
Orkney	-	0	0	-	0	0
Shetland	-	0	0	-	0	0
Tayside	**0%**	0	23	**4.3%**	1	23
W Isles	-	0	0	-	0	0
NoS	**0%**	**0**	**36**	**5.6%**	**2**	36

Radiotherapy	30 Day Mortality			90 Day Mortality		
Target <5%	Performance (%)	Numerator	Denominator	Performance (%)	Numerator	Denominator
Grampian	**0%**	0	10	**10%**	1	10
Highland	**20%**	1	5	**20%**	1	5
Orkney*	-	-	-	-	-	-
Shetland*	-	-	-	-	-	-
Tayside	**12.5%**	1	8	**12.5%**	1	8
W Isles*	-	-	-	-	-	-
NoS	**7.7%**	**2**	**26**	**11.5%**	**3**	**26**

All patients have been through board morbidity and mortality review. This QPI does not capture all cystectomies undertaken and the data collection for this QPI is currently under review.

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 consented into trials in 2019 and have been provided by the Scottish Cancer Research Network (SCRN).	



	Performance (%)	Numerator	Denominator
Grampian	**0%**	0	90
Highland	**2.6%**	1	39
Orkney*	-	-	-
Shetland*	-	-	-
Tayside	**36.5%**	27	74
W Isles*	-	-	-
NoS	**13.2%**	**28**	**212**

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Due to the COVID-19 pandemic recruitment to clinical trials has decreased since 2019. This is partly due to all clinical trials across the UK being closed to recruitment on 13th March 2020. Trials began to reopen in a phased manner shortly after the closure based on local health board risk assessments. The cancer portfolio has since reopened the majority of trials and has been able to open new trials in all health boards. Impacts of COVID-19 on research staff have also effected the running of trials such as staff deployment to wards and COVID research. Also the impact of a reduced number of patients being diagnosed and coming into the cancer centres has had an impact on recruitment.

References

1. 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_qpis/quality_performance_indicators.aspx

2. 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 2019

Trial	Principle Investigator	Patients Consented
ATLANTIS	Judith Grant (Grampian)	N
Evaluation of the MCM5 ELISA in bladder cancer recurrence	Ghulam Nabi (Tayside)	Y
KEYNOTE 676	Neil McPhail (Highland)	Y