Quality Performance Indicators Audit Report

Tumour Area:	Bladder Cancer
Patients Diagnosed:	1st April 2020 – 31st March 2021
Published Date:	17th June 2022

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

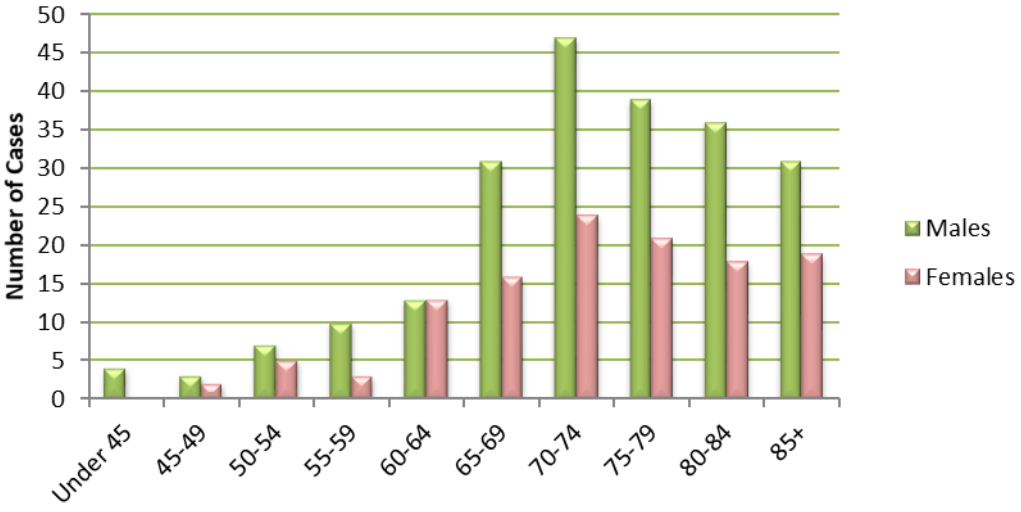
Between 1st April 2020 and 31st March 2021, 342 bladder cancer cases were diagnosed in the North of Scotland and recorded through audit. Overall case ascertainment was high at 161.0%, the reason for this high case ascertainment is due to differences between the way in which bladder cancer is defined 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 2020-2021

	Grampian	Highland	Orkney	Shetland	Tayside	W Isles	NoS
No. of Patients 2020-21	151	70	10	4	104	3	**342**
% of NoS total	44.2%	20.5%	2.9%	1.2%	30.4%	0.9%	**44.2%**
Mean ISD Cases 2015-19	85.2	42.0	3.2	3.0	76.6	2.4	**212.4**
% Case ascertainment 2020-21	177.2%	166.7%	312.5%	133.3%	135.8%	125.0%	**161.0%**

2. Age Distribution

The figure below shows the age distribution of patients diagnosed with bladder cancer in the North of Scotland in 2020-21, with numbers of patients diagnosed highest in the 70-74 age bracket for both males and females.



Age distribution of patients diagnosed with bladder cancer in North of Scotland 2020-2021.

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.

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 2020 and is reported by NHS Board of residence.

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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.

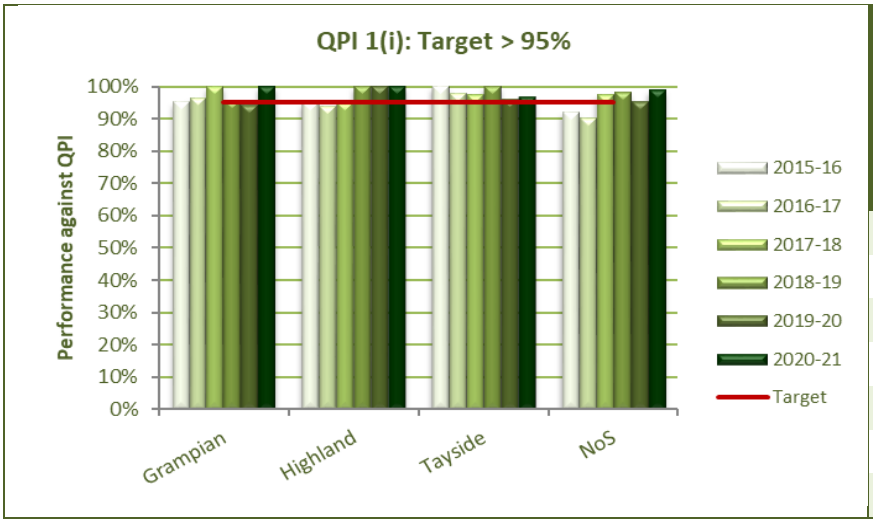
4. Governance and Risk

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 Clinical Governance committees at each North of Scotland health board.

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	**100.0%**	45	45
Highland	**100.0%**	16	16
Orkney*	-	-	-
Shetland*	-	-	-
Tayside	**96.6%**	28	29
W Isles	-	0	0
NoS	**98.9%**	**94**	**95**

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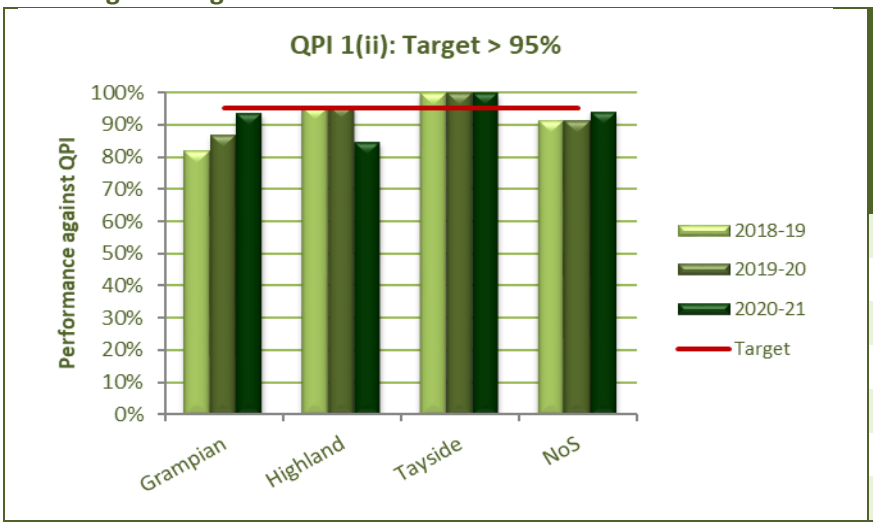
Specification (ii) Patients with Non Muscle Invasive Bladder Cancer (NMIBC) discussed at the MDT following histological confirmation of bladder cancer



	Performance (%)	Numerator	Denominator
Grampian	**93.8%**	90	96
Highland	**84.6%**	44	52
Orkney	**100%**	6	6
Shetland*	-	-	-
Tayside	**100%**	70	70
W Isles*	-	-	-
NoS	**93.9%**	**214**	**228**

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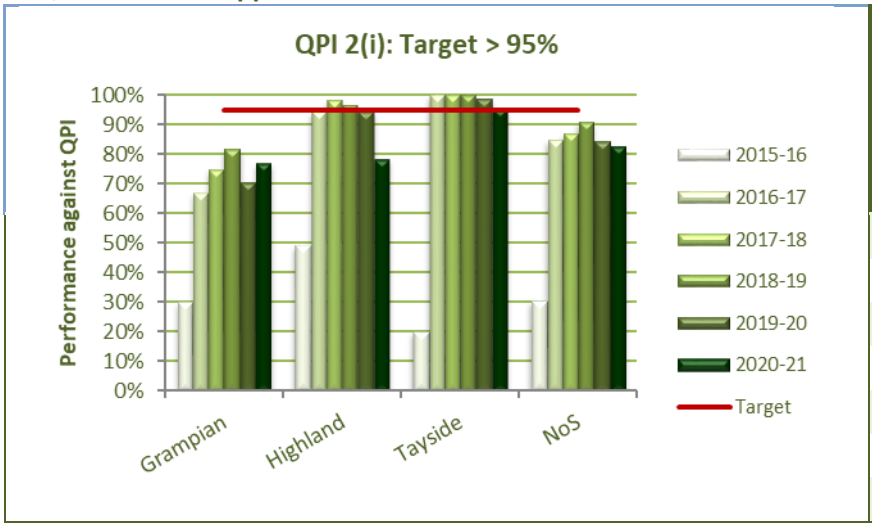
This target was narrowly missed across the North of Scotland, and work is underway in local boards to improve presentation at MDT. Cases are operated and managed in best interest of patients and MDT discussion happens after histology-pathology is available approximately 2-3 weeks. As part of the MDT all the patients get discussed unless their decisions were taken prior to MDT. These cases have been reviewed and were also managed in a safe and effective way, e.g. Emergency procedures, urgent procedure in view of symptoms.

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	**76.9%**	100	130
Highland	**78.3%**	47	60
Orkney	-	0	0
Shetland*	-	-	-
Tayside	**95.1%**	77	81
W Isles	-	0	0
NoS	**82.8%**	**227**	**274**

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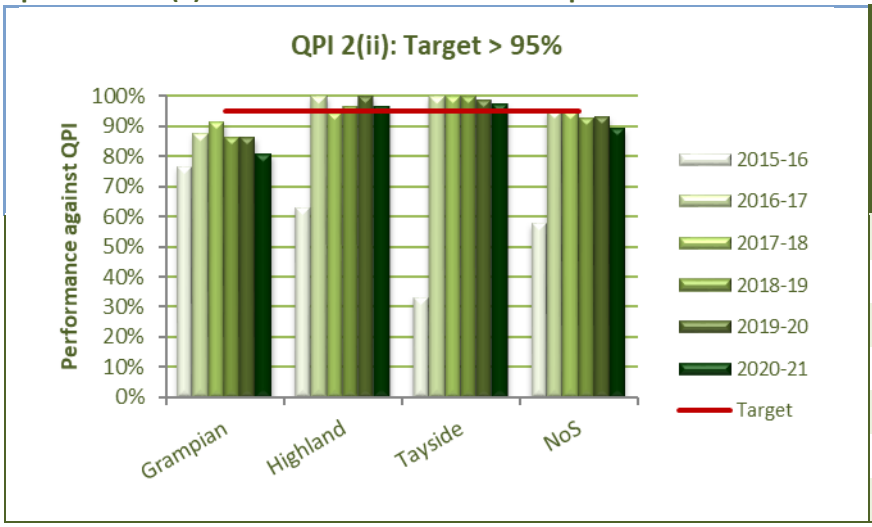
Specification (ii) Whether the resection is complete or not



	Performance (%)	Numerator	Denominator
Grampian	**80.8%**	105	130
Highland	**96.7%**	58	60
Orkney	-	0	0
Shetland*	-	-	-
Tayside	**97.5%**	79	81
W Isles	-	0	0
NoS	**89.4%**	**245**	**274**

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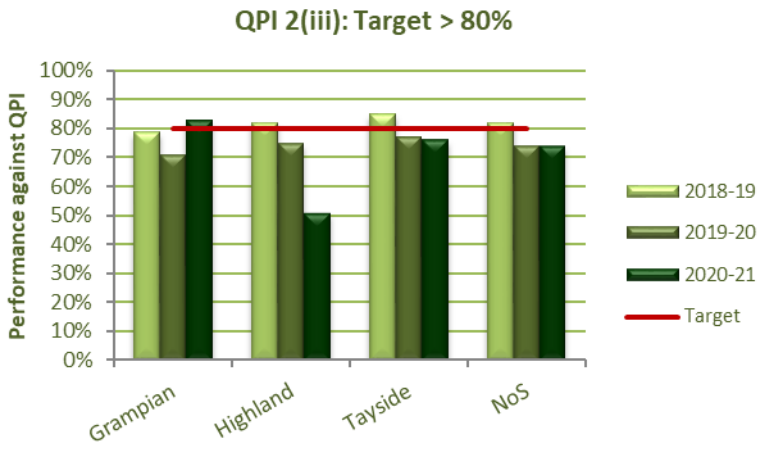
Specification (iii) Whether detrusor muscle included in the specimen



	Performance (%)	Numerator	Denominator
Grampian	**82.8%**	101	122
Highland	**50.9%**	29	57
Orkney	-	0	0
Shetland*	-	-	-
Tayside	**75.9%**	60	79
W Isles	-	0	0
NoS	**73.9%**	**193**	**261**

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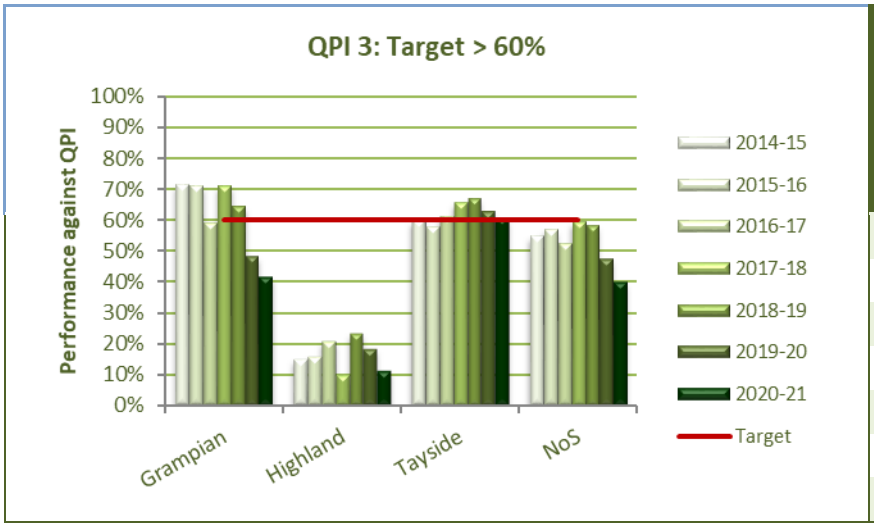
This target was missed across the North of Scotland due to data recording issues. Individual boards are addressing the availability of full descriptions and diagrams for the recording of TURBT going forward, this QPI will continue to be monitored.

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	**41.3%**	45	109
Highland	**11.1%**	6	54
Orkney	-	0	0
Shetland*	-	-	-
Tayside	**60.6%**	40	66
W Isles	-	0	0
NoS	**39.7%**	**92**	**232**

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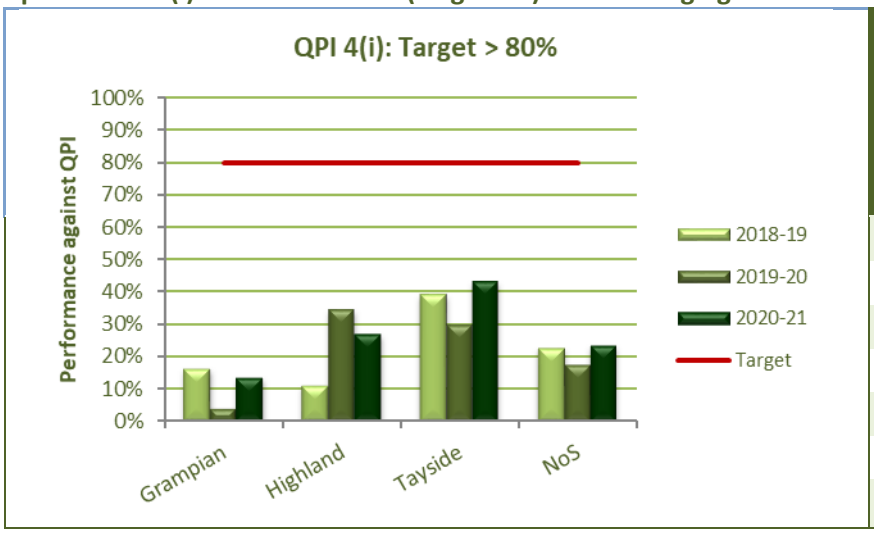
For information this QPI covers the use of chemotherapeutic substances inclusive of Mitomycin C and Gemcitabine. Nationally there have been shortages of Mitomycin C and this was formally reported in September 2019 and an alternative management protocol agreed with Scottish Government. Results in future years will be carefully analysed as part of this QPI process and risk assessed on this basis. This QPI measure is due to be updated to include other alternative chemotherapy agents in future years reporting and will continue to be monitored. 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	**13.5%**	7	52
Highland	**26.9%**	7	26
Orkney	-	0	0
Shetland*	-	-	-
Tayside	**43.5%**	10	23
W Isles	-	0	0
NoS	**23.5%**	**24**	**102**

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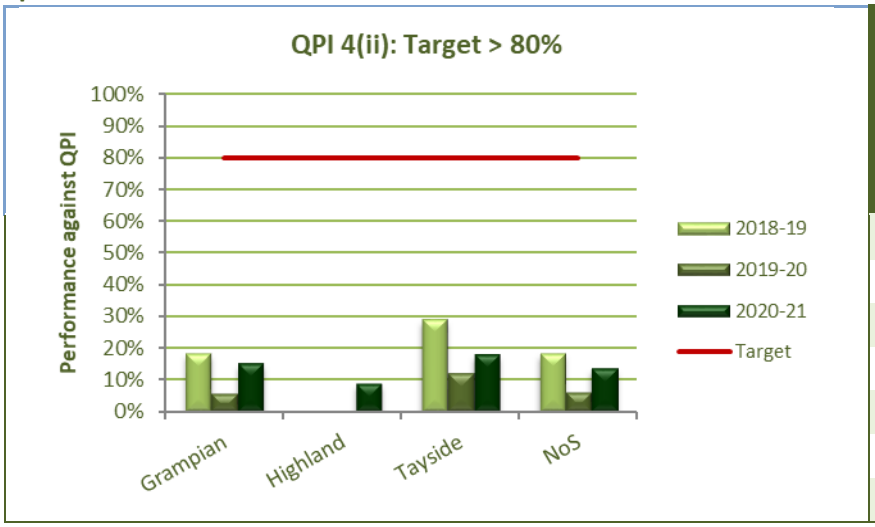
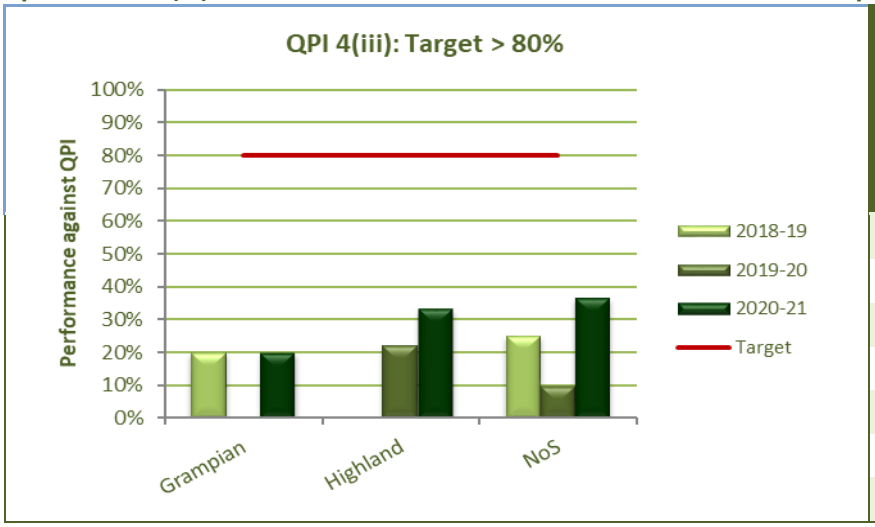
This QPI target was not met across the north, where there was a high risk disease or poor anaesthetic risk, further resection was avoided to start definitive management. There were additional theatre capacity issues which are multifactorial and management of individual boards are looking into these to make it better. In some cases the target was missed by few weeks which did not impact on patient's definitive final management.

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



	Performance (%)	Numerator	Denominator
Grampian	**15.0%**	3	20
Highland	**8.7%**	2	23
Orkney	-	0	0
Shetland	-	0	0
Tayside	**17.6%**	3	17
W Isles	-	0	0
NoS	**13.3%**	**8**	**60**

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



	Performance (%)	Numerator	Denominator
Grampian	**20.0%**	1	5
Highland	**33.3%**	3	9
Orkney	-	0	0
Shetland*	-	-	-
Tayside*	-	-	-
W Isles	-	0	0
NoS	**36.8%**	**7**	**19**

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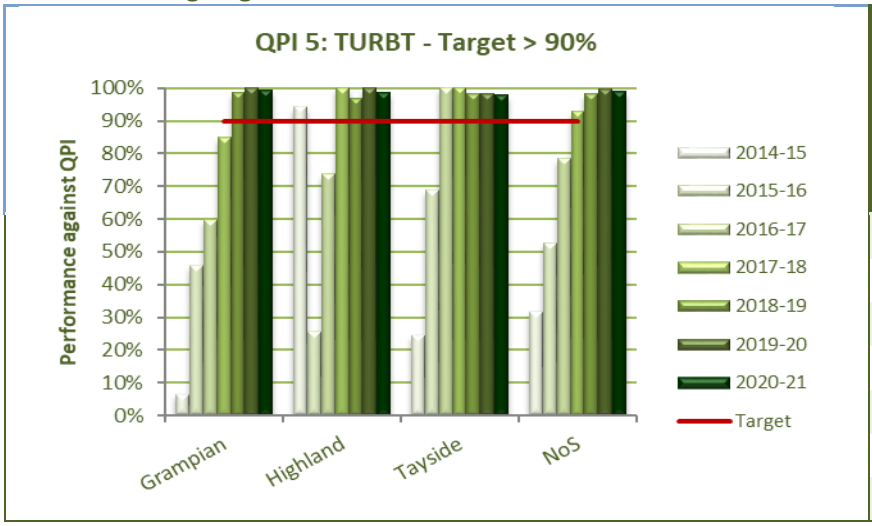
All specifications within QPI 4 remain a challenge to meet across the North of Scotland, and were further impacted by COVID-19 Pandemic. The impact of COVID led to an indirect increase of theatre capacity although this was lessened by further prioritising patients for re-resection and isolation periods prior to surgery. Overall improvements have been made within the last reporting period.

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	**99.3%**	147	148
Highland	**98.5%**	64	65
Orkney	-	0	0
Shetland*	-	-	-
Tayside	**97.8%**	91	93
W Isles	-	0	0
NoS	**98.7%**	**306**	**310**

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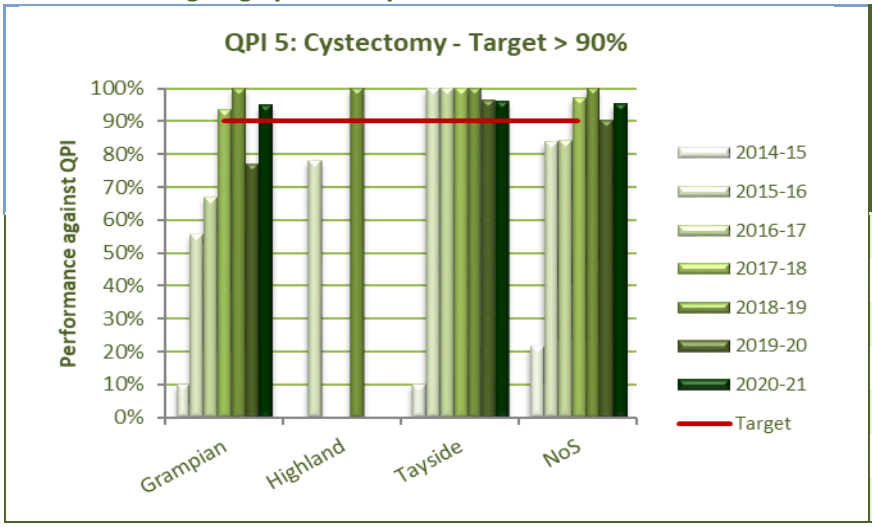
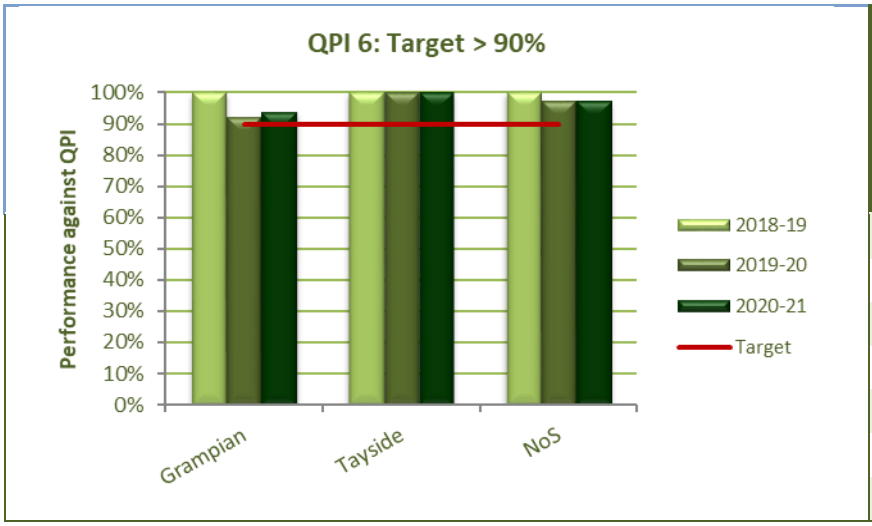
Patients undergoing cystectomy



	Performance (%)	Numerator	Denominator
Grampian	**94.7%**	18	19
Highland	-	0	0
Orkney	-	0	0
Shetland	-	0	0
Tayside	**95.7%**	22	23
W Isles	-	0	0
NoS	**95.2%**	**40**	**42**

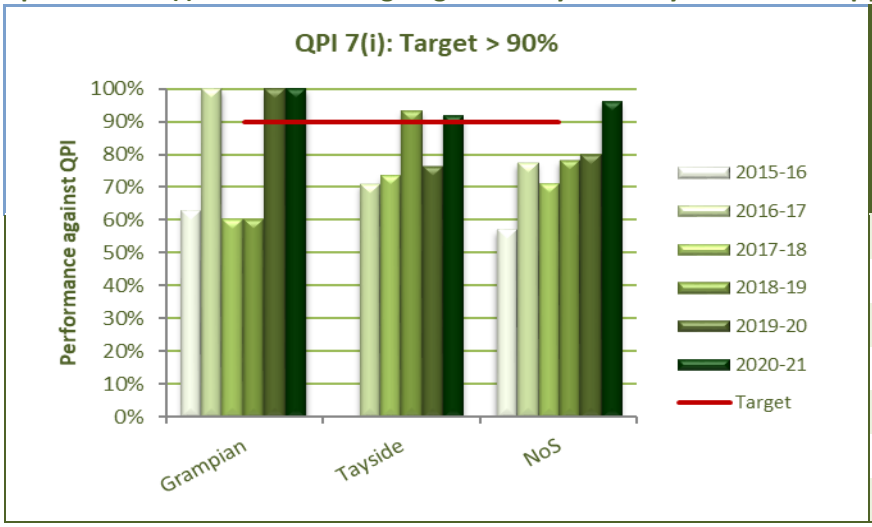
QPI 6	Lymph Node Yield
Proportion of patients with bladder cancer who undergo primary radical cystectomy where at least level 2 pelvic lymph node dissection (to the middle of the common iliac artery or level of the crossing of the ureter) has been undertaken.	



	Performance (%)	Numerator	Denominator
Grampian	**93.8%**	15	16
Highland	-	0	0
Orkney	-	0	0
Shetland	-	0	0
Tayside	**100%**	20	20
W Isles	-	0	0
NoS	**97.2%**	**35**	**36**

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%**	11	11
Highland*	-	-	-
Orkney	-	0	0
Shetland	-	0	0
Tayside	**91.7%**	11	12
W Isles	-	0	0
NoS	**95.8%**	**23**	**24**

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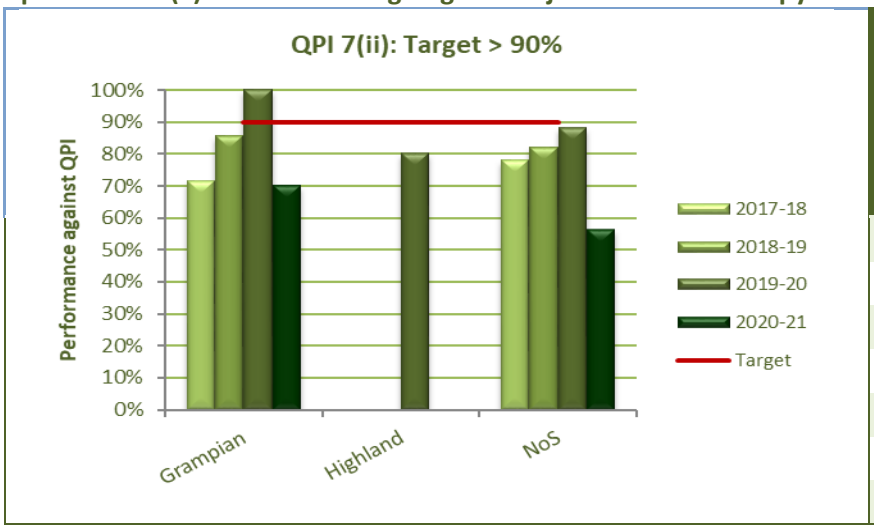
The impact of COVID led to an indirect increase of theatre capacity although this was lessened by further prioritising patients for re-resection and isolation periods prior to surgery. Overall improvements have been made within the last reporting period.

Specification (ii) Patients undergoing neo-adjuvant chemotherapy



	Performance (%)	Numerator	Denominator
Grampian	**70.0%**	7	10
Highland	-	-	-
Orkney	-	0	0
Shetland	-	0	0
Tayside*	-	-	-
W Isles	-	0	0
NoS	**56.3%**	**9**	**16**

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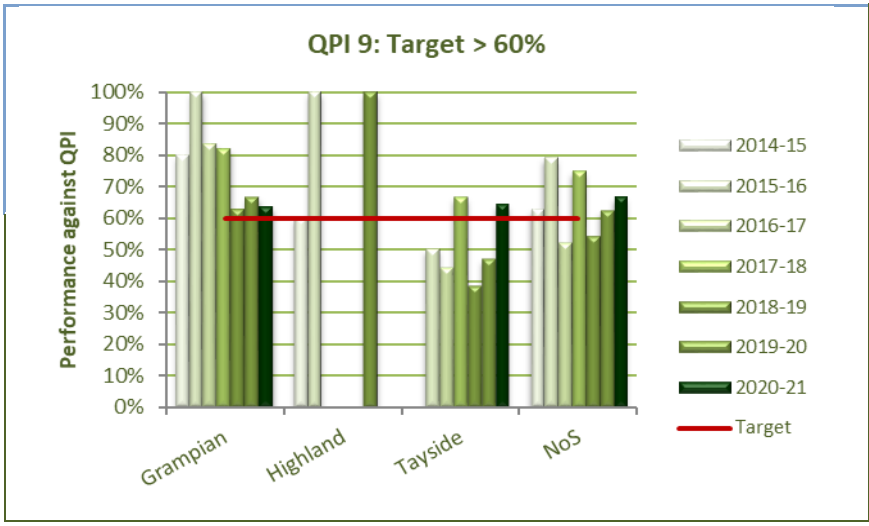
The North Boards have not met this target, those patients not meeting this quality standard have been audited at board level and valid reasons provided as to their delay in all cases. In addition, COVID-19 had a significant impact on patient pathways to minimise patient risk.

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**	31	ARI	31
Highland	**Surgeon 1**	1	Raigmore	3
	Surgeon 2	1		
	Surgeon 3	1		
Tayside	**Surgeon 1**	37	Ninewells	41
	Surgeon 2	3		
	Surgeon 3	1		

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	**63.6%**	7	11
Highland*	-	-	-
Orkney	-	0	0
Shetland	-	0	0
Tayside	**64.3%**	9	14
W Isles	-	0	0
NoS	**66.7%**	**18**	**27**

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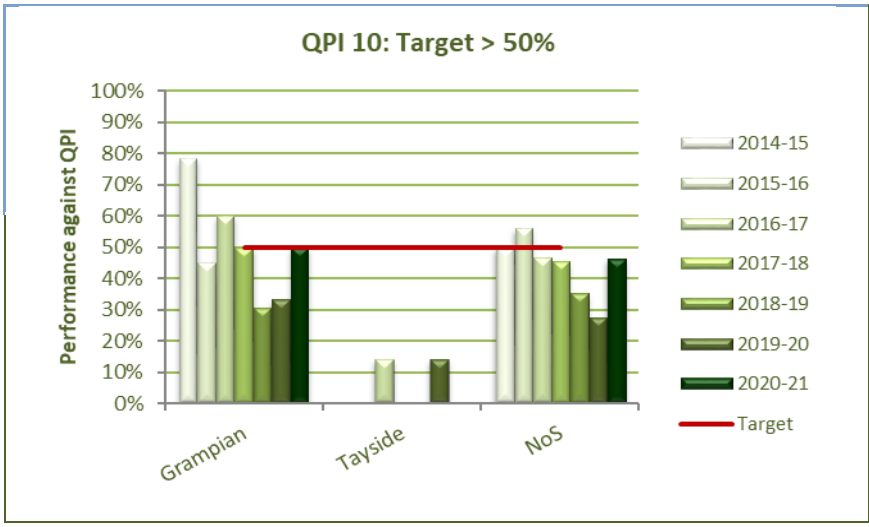
QPI 10	Radical Radiotherapy with Chemotherapy
Proportion of patients with transitional cell carcinoma of the bladder (T2-T4) undergoing radical radiotherapy receiving concomitant chemotherapy.	



	Performance (%)	Numerator	Denominator
Grampian	**50.0%**	5	10
Highland*	-	-	-
Orkney	-	0	0
Shetland	-	0	0
Tayside*	-	-	-
W Isles	-	0	0
NoS	**46.2%**	**6**	**13**

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Patients had been considered for concurrent chemotherapy, however some patients were deemed as unfit due to comorbidities.

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.	

Below is displayed the current reporting year and seven year data accumulated for the same QPI for information. This is all information available from the start of QPI data collection in for 2014/15 diagnosed patients.

Radical cystectomy (2020-2021)	30 Day Mortality			90 Day Mortality		
Target <5%	Performance (%)	Numerator	Denominator	Performance (%)	Numerator	Denominator
Grampian	0%	0	16	0%	0	16
Highland	-	0	0	-	0	0
Orkney	-	0	0	-	0	0
Shetland	-	0	0	-	0	0
Tayside	10%	2	20	15%	3	20
W Isles	-	0	0	-	0	0
NoS	5.6%	2	36	8.3%	3	36

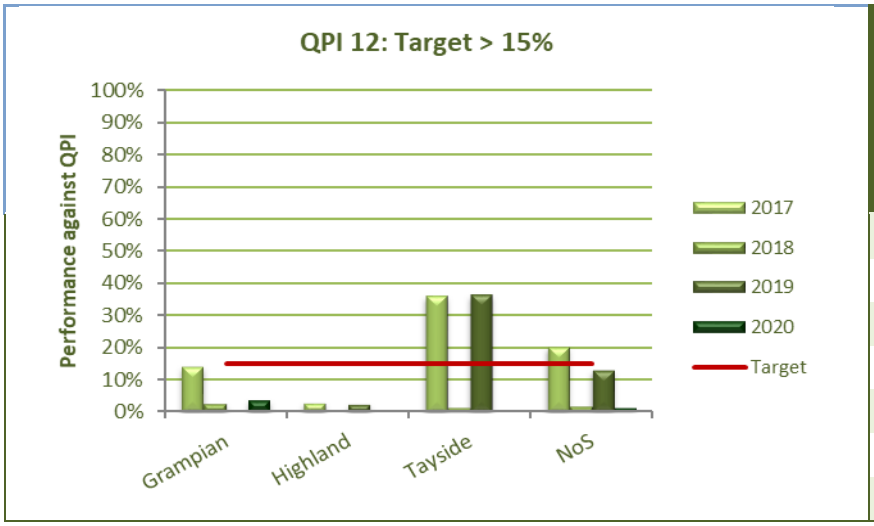
Radical cystectomy (2014-2021)	30 Day Mortality			90 Day Mortality		
Target <5%	Performance (%)	Numerator	Denominator	Performance (%)	Numerator	Denominator
Grampian	0%	0	89	1.1%	1	87
Highland	0%	0	7	0%	0	7
Orkney	-	0	0	-	0	0
Shetland	-	0	0	-	0	0
Tayside	1.8%	2	112	4.5%	5	111
W Isles	-	0	0	-	0	0
NoS	1.0%	2	208	2.9%	6	205

Radiotherapy (2020-2021)	30 Day Mortality			90 Day Mortality		
Target <5%	Performance (%)	Numerator	Denominator	Performance (%)	Numerator	Denominator
Grampian	0%	0	11	0%	0	11
Highland*	-	-	-	-	-	-
Orkney	-	0	0	-	0	0
Shetland	-	0	0	-	0	0
Tayside*	-	-	-	-	-	-
W Isles	-	0	0	-	0	0
NoS	0%	0	14	0%	0	14

Radiotherapy (2014-2021)	30 Day Mortality			90 Day Mortality		
Target <5%	Performance (%)	**Numerator**	**Denominator**	Performance (%)	**Numerator**	**Denominator**
Grampian	**0%**	0	91	**5.7%**	5	88
Highland	**3.2%**	1	31	**6.5%**	2	31
Orkney*	-	-	-	-	-	-
Shetland*	-	-	-	-	-	-
Tayside	**7.1%**	2	28	**7.1%**	2	28
W Isles*	-	-	-	-	-	-
NoS	**1.9%**	**3**	**156**	**5.9%**	**9**	**153**

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 2020 and have been provided by the Scottish Cancer Research Network (SCRN).	



	Performance (%)	Numerator	Denominator
Grampian	**3.5%**	3	85.2
Highland	**0.0%**	0	42
Orkney*	-	-	-
Shetland*	-	-	-
Tayside	**0.0%**	0	76.6
W Isles*	-	-	-
NoS	**1.4%**	**3**	**212.4**

**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.*

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 affected 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 2020

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