

West of Scotland Cancer Network

**Urological Cancer
Managed Clinical Network**



Audit Report

Bladder Cancer Quality Performance Indicators

Clinical Audit Data: 01 April 2020 to 31 March 2021

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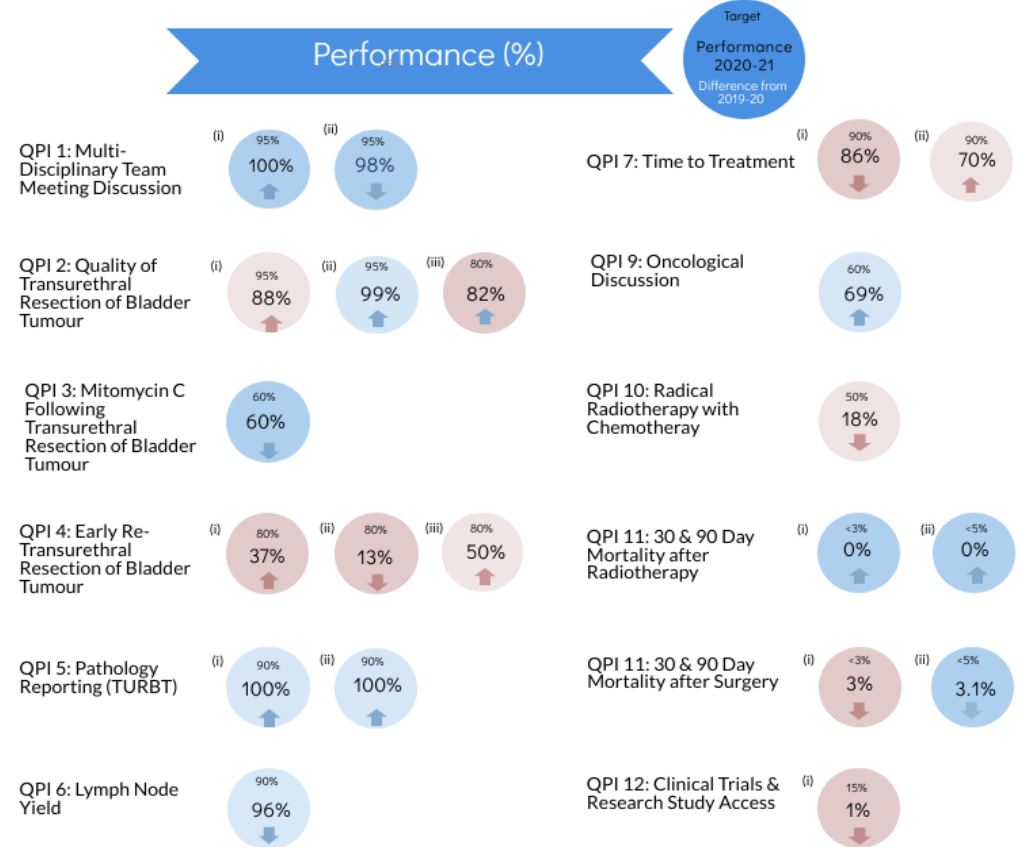
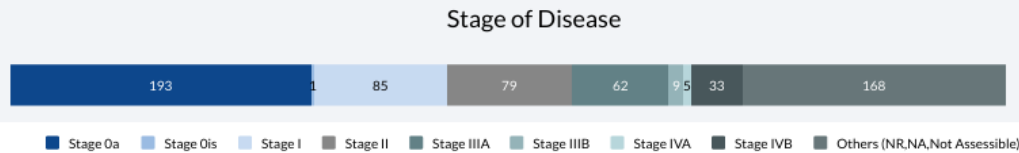
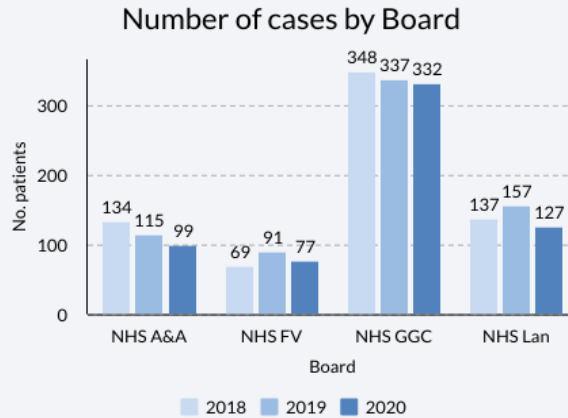
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Bladder Quality Performance Indicators Overview

Patients diagnosed April 2020 - March 2021

Number of patients:	635	
Gender of patients:	Male	Female
	68%	32%
Mode Age group:	Male	Female
	70-74	80-84
	Male	Female
1 year Net survival*	71.0%	55.6%
5 year Net survival*	46.1%	34.7%

* Net non-age standardised survival for patients diagnosed 2013-17 in Scotland



Key Achievements

QPI results indicate that overall, the quality of Bladder cancer services across the WoS is good. Particular areas of note include:

- QPI 1(i): 100% of patients were discussed at MDT meeting before definitive treatment.
- QPI 5(iii): A high rate of compliance with Pathology Reporting in line with Royal College of Pathology Guidance, achieving 100%.
- QPI 11: Zero mortality at 30 and 90 days following Radiotherapy.

Executive Summary

Introduction

This report contains an assessment of the performance of West of Scotland (WoS) urological cancer services using clinical audit data relating to patients diagnosed with bladder cancer in the twelve months between 01 April 2020 and 31 March 2021.

In order to ensure the success of the Cancer QPIs (Quality Performance Indicators) in driving quality improvement in cancer care, QPIs will continue to be assessed for clinical effectiveness and relevance. The initial formal review of Bladder Cancer QPIs took place in 2018. With seven years of reporting now complete, a second cycle of review of QPIs commenced in March 2021 with Version 4.0 published in May 2022. This clinically led review aims to identify potential refinements to the current QPIs and involves key clinicians from each of the Regional Cancer Networks. The review focussed on any significant changes to the QPIs that are required due to changes in evidence or clinical practice and consideration of any new evidence based QPIs.

Background

A total of 635 cases of bladder cancer were recorded through audit as diagnosed in the WoS between 01 April 2020 and 31 March 2021. Male cases accounted for over two thirds of all new WoS bladder cancer diagnoses (68.2%) captured by audit between April 2020 and March 2021. The majority of new cases of bladder cancer diagnosed in WoS occurred in people within older age groups with nearly three quarters of cases occurring in those over the age of 65 years at time of diagnosis (73.2%).

The configuration of the urological cancer MDTs in WoS is set out below and each MDT convenes on a weekly basis.

MDT	Constituent Hospitals
Ayrshire & Arran	Ayr Central Hospital, Crosshouse Hospital
GGC	Glasgow Royal Infirmary, Stobhill ACH, Gartnavel General Hospital, Queen Elizabeth, University Hospital, New Victoria ACH, Inverclyde Royal Hospital, Royal Alexandra Hospital, Vale of Leven District General.
Forth Valley	Forth Valley Royal Hospital
Lanarkshire	Hairmyres Hospital, Monklands Hospital, Wishaw Hospital

Methodology

Further detail on the audit and analysis methodology and data quality is available in the meta data within [Appendix 1](#).

Results

The overall case ascertainment for bladder cancer in WoS is 85.9%, which indicates good data capture through audit.

A summary of the Bladder Cancer QPIs (QPI 1 to 12) for 2020/21 clinical audit data is presented below, with a more detailed analysis of the results set out in the main report. Data are analysed by location of diagnosis or treatment, and illustrate NHS Board performance against each target and overall regional performance for each performance indicator. Results are presented graphically and the accompanying

tabular format also highlights any missing data and its' possible effect on any of the measured outcomes.

Where the number of cases meeting the denominator criteria for any indicator is between one and four, the percentage calculation has not been shown on any associated charts or tables. This is to avoid any unwarranted variation associated with small numbers and to minimise the risk of disclosure. Any charts or tables impacted by this restricted data are denoted with a dash (-). An asterisk (*) is used to specify a denominator of zero and to distinguish between this and a 0% performance. Any commentary provided by NHS Boards relating to the impacted indicators will however be included as a record of continuous improvement.

In accordance with the regional governance process, specific NHS Board actions are identified to address issues highlighted through data analysis.

Please note actions have been categorised into the following groupings for internal management purposes to allow regional trends to be identified, and co-ordinate regional actions across multiple tumour groups where appropriate; MDT, Pathology, Radiology, Other diagnostic, Treatment Decision, Time to Treatment, Surgery, Oncology, Resource, Workforce, Capacity, Clinical Documentation and Data Capture.

Summary of Bladder QPI Results – 3 Years

Colour Key		Symbol Key	
	Above QPI target	†	Analysed by Board/hospital of surgery
	Below QPI target	^	Small numbers in some Boards - percentage comparisons over a single year should be viewed with caution

Summary of the QPI results for clinical audit data. A dash (-) denotes restricted data where the denominator is less than 5. An asterisk (*) denotes data where the denominator is zero.

Bladder MCN					
Year	AA	FV	GGC	LAN	WoSCAN
2020 - 21	99	77	332	127	635
2019 - 20	115	91	337	157	700
2018 - 19	134	69	348	137	688

Quality Performance Indicator (QPI)	Performance by NHS Board of diagnosis						
	QPI target	Year	AA	FV	GGC	LAN	WoSCAN
QPI 1 (i): Multi-Disciplinary Team Meeting Discussion: Proportion of patients with bladder cancer who are discussed at MDT meeting before definitive treatment. <i>(i) MIBC</i>	95%	2020 - 21	100.0%	100.0%	99.0%	100.0%	99.5%
		2019 - 20	100.0%	100.0%	99.0%	95.2%	98.4%
		2018 - 19	97.8%	100.0%	96.3%	100.0%	97.5%
QPI 1 (ii): Multi-Disciplinary Team Meeting Discussion: Proportion of patients with bladder cancer who are discussed at MDT meeting before definitive treatment. <i>(i) NMIBC</i>	95%	2020 - 21	100.0%	89.1%	99.1%	100.0%	98.3%
		2019 - 20	100.0%	98.4%	95.7%	98.1%	97.5%
		2018 - 19	100.0%	70.3%	95.6%	94.5%	94.1%
QPI 2 (i): Quality of Transurethral Resection of Bladder Tumour: Proportion of patients with bladder cancer who undergo good quality TURBT. <i>(i) Use of a bladder diagram / detailed description with documentation of tumour location, size, number and appearance at initial resection.</i>	95%	2020 - 21	95.2%	92.6%	81.3%	97.3%	88.2%
		2019 - 20	82.7%	91.3%	78.1%	88.1%	82.9%
		2018 - 19	92.9%	69.4%	74.6%	85.8%	80.2%
QPI 2 (ii): Quality of Transurethral Resection of Bladder Tumour: Proportion of patients with bladder cancer who undergo good quality TURBT. <i>(ii) Whether the resection is complete or not at initial resection</i>	95%	2020 - 21	98.8%	94.4%	99.2%	100%	98.8%
		2019 - 20	88.8%	98.6%	99.6%	93.7%	96.2%
		2018 - 19	99.1%	87.8%	94.0%	96.7%	95.0%

Quality Performance Indicator (QPI)	Performance by NHS Board of diagnosis						
	QPI target	Year	AA	FV	GGC	LAN	WoSCAN
QPI 2 (iii): Quality of Transurethral Resection of Bladder Tumour: Proportion of patients with bladder cancer who undergo good quality TURBT. <i>(iii) Whether detrusor muscle included in the specimen at initial resection.</i>	80%	2020 - 21	82.5%	86.8%	83.4%	76.7%	82.2%
		2019 - 20	71.6%	86.6%	78.9%	80.2%	78.9%
		2018 - 19	76.2%	75.0%	79.2%	80.5%	78.5%
QPI 3: Mitomycin C Following Transurethral Resection of Bladder Tumour: Proportion of patients with NMIBC who undergo TURBT who receive a single instillation of mitomycin C within 24 hours of resection.	60%	2020 - 21	55.9%	51.1%	68.3%	46.7%	60.1%
		2019 - 20	63.8%	34.4%	70.2%	52.9%	60.8%
		2018 - 19	72.6%	63.2%	78.4%	58.3%	71.7%
QPI 4 (i): Early Re-Transurethral Resection of Bladder Tumour: 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. <i>(i) With T1 (all grades) or select high grade Ta NMIBC</i>	80%	2020 - 21	0.0%	53.8%	50.6%	17.1%	36.8%
		2019 - 20	9.7%	36.4%	40.9%	19.5%	30.2%
		2018 - 19	18.8%	25.0%	31.3%	24.1%	26.8%
QPI 4 (ii): Early Re-Transurethral Resection of Bladder Tumour: 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. <i>(ii) With high grade or low grade G2 NMIBC where detrusor muscle absent from specimen.</i>	80%	2020 - 21	0.0%	20.0%	20.9%	0.0%	13.3%
		2019 - 20	8.3%	0.0%	21.3%	14.3%	15.0%
		2018 - 19	17.4%	9.1%	8.3%	11.1%	11.0%
QPI 4 (iii): Early Re-Transurethral Resection of Bladder Tumour: 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. <i>(iii) With NMIBC where initial resection is incomplete.</i>	80%	2020 - 21	0.0%	na	63.6%	46.2%	50.0%
		2019 - 20	50.0%	100.0%	33.3%	0.0%	31.8%
		2018 - 19	50.0%	0.0%	33.3%	33.3%	31.3%
QPI 5(i): Pathology Reporting (TURBT): Proportion of patients with bladder cancer who undergo TURBT reported according to the guidelines provided by the Royal College of Pathology for the reporting of these specimens.	90%	2020 - 21	98.9%	100.0%	99.4%	100.0%	99.5%
		2019 - 20	92.0%	100.0%	99.7%	100.0%	98.4%
		2018 - 19	94.5%	98.2%	98.2%	100.0%	97.8%

QPI 5(ii): Pathology Reporting (Cystectomy): Proportion of patients with bladder cancer who undergo cystectomy reported according to the guidelines provided by the Royal College of Pathology for the reporting of these specimens.	90%	2020 - 21	100.0%	na	100.0%	100.0%	100.0%
		2019 - 20	100.0%	100.0%	100.0%	91.7%	98.0%
		2018 - 19	100.0%	83.3%	100.0%	100.0%	98.4%
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.	90%	2020 - 21	87.5%	na	97.4%	100%	95.5%
		2019 - 20	100.0%	100.0%	100.0%	81.8%	96.0%
		2018 - 19	92.3%	100.0%	96.8%	90.0%	95.0%
QPI 7 (i): 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. <i>(i) Radical treatment (cystectomy or radiotherapy)</i>	90%	2020 - 21	83.3%	66.7%	88.0%	100%	85.7%
		2019 - 20	100.0%	100.0%	93.9%	81.3%	91.7%
		2018 - 19	62.5%	57.1%	85.0%	100.0%	76.0%
QPI 7 (ii): 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. <i>(ii) Neoadjuvant chemotherapy</i>	90%	2020 - 21	85.7%	100%	69.6%	55.6%	70.0%
		2019 - 20	50.0%	50.0%	73.3%	75.0%	69.0%
		2018 - 19	71.4%	50.0%	94.4%	85.7%	85.3%
QPI 8: Volume of Cases per Surgeon: Number of radical cystectomy procedures performed by a surgeon over a 1 year period (SMR01 data).	Min 10 per year	2020 - 21	1 MET	na	2 MET 4 NOT MET	2 MET 1 NOT MET	5 MET 5 NOT MET
		2019 - 20	1 MET	0 MET 2 NOT MET	2 MET 3 NOT MET	2 NOT MET	3 MET 7 NOT MET
		2018 - 19	1 MET 3 NOT MET	0 MET 1 NOT MET	2 MET 3 NOT MET	0 MET 3 NOT MET	3 MET 10 NOT MET
QPI 9: Oncological Discussion: Proportion of patients with muscle invasive bladder cancer who had radical surgery who met with an oncologist prior to radical cystectomy	60%	2020 - 21	46.2%	66.7%	73.1%	100%	69.4%
		2019 - 20	na	0.0%	56.3%	66.7%	48.1%
		2018 - 19	33.3%	40.0%	53.3%	100.0%	51.4%
QPI 10: Radical Radiotherapy with Chemotherapy: Proportion of patients with transitional cell carcinoma of the bladder (T2-T4) undergoing radical radiotherapy receiving concomitant chemotherapy.	50%	2020 - 21	40.0%	50.0%	14.3%	0.0%	18.4%
		2019 - 20	30.0%	0.0%	27.6%	0.0%	20.0%
		2018 - 19	22.2%	25.0%	27.3%	0.0%	20.9%

QPI 11 – 30 Day Mortality - Surgery Proportion of patients with bladder cancer who die within 30 days of treatment with curative intent (radical cystectomy, radiotherapy and chemotherapy) for bladder cancer.	<3%	2020 - 21	6.3%	na	2.6%	0.0%	3.0%
		2019 - 20	0.0%	0.0%	0.0%	0.0%	0.0%
		2018 - 19	7.1%	0.0%	0.0%	0.0%	1.6%
QPI 11 – 30 Day Mortality - Radiotherapy Proportion of patients with bladder cancer who die within 30 days of treatment with curative intent (radical cystectomy, radiotherapy and chemotherapy) for bladder cancer.	<3%	2020 - 21	0.0%	0.0%	0.0%	0.0%	0.0%
		2019 - 20	0.0%	0.0%	0.0%	0.0%	0.0%
		2018 - 19	0.0%	0.0%	0.0%	0.0%	0.0%
QPI 11 – 90 Day Mortality - Surgery Proportion of patients with bladder cancer who die within 30 days of treatment with curative intent (radical cystectomy, radiotherapy and chemotherapy) for bladder cancer.	<5%	2020 - 21	6.3%	na	2.7%	0%	3.1%
		2019 - 20	0.0%	0.0%	0.0%	0.0%	0.0%
		2018 - 19	7.7%	0.0%	0.0%	0.0%	1.7%
QPI 11 – 90 Day Mortality - Radiotherapy Proportion of patients with bladder cancer who die within 30 days of treatment with curative intent (radical cystectomy, radiotherapy and chemotherapy) for bladder cancer.	<5%	2020 - 21	0.0%	0.0%	0.0%	0.0%	0.0%
		2019 - 20	0.0%	0.0%	2.9%	0.0%	1.6%
		2018 - 19	0.0%	0.0%	4.3%	0.0%	2.1%
Clinical Trials 2020: Proportion of patients diagnosed with bladder cancer who are consented for a clinical trial / research study.	15%	2020 - 21	0.0%	0.0%	1.1%	1.4%	0.8%
		2019 - 20	0.0%	0.0%	2.9%	0.0%	1.6%
		2018 - 19	0.0%	0.0%	4.3%	0.0%	2.1%

Conclusions and Action Required

Cancer audit has underpinned much of the regional development and service improvement work of the MCN and the regular reporting of activity and performance have been fundamental in assuring the quality of care delivered across the region. Following the development of QPIs, this has now become an established national programme to drive continuous improvement and ensure equity of care for patients across Scotland.

QPI results indicate that overall, the quality of Bladder cancer services across the WoS is good. Particular areas of note include:

- QPI 1(i): 100% of patients were discussed at MDT meeting before definitive treatment.
- QPI 5(ii): A high rate of compliance with Pathology Reporting in line with Royal College of Pathology Guidance, achieving 100%.
- QPI 11: Zero mortality at 30 and 90 days following Radiotherapy.

In line with the agreed regional governance process, each NHS Board was asked to complete a Performance Summary Report (PSR), providing detailed comments where QPI targets were not met. In the main, feedback from the Boards indicates valid clinical reasons or that, in some cases, patient choice or co-morbidities have influenced patient management. Additionally, these Boards have indicated where positive action has already been taken at a local level to address any issues highlighted through the QPI data analysis. It is anticipated that these positive changes will result in improved performance going forward.

The MCN will actively take forward regional actions identified and NHS Boards are asked to develop local Action/Improvement Plans in response to the findings presented in the report. A summary of actions for each NHS Board has been included within the Action Plan templates in Appendix I.

Action required:

QPI 2(i) - Quality of Transurethral Resection of Bladder Tumour Recording

- NHS GGC to continue to monitor performance and reiterate the need to use the proforma for documentation of TURBT.
- MCN to explore the possibility of enhancing the bladder proforma to highlight essential items for QPI measurement.

QPI 3 – Mitomycin C Following Transurethral Resection of Bladder Tumour

- NHS Lanarkshire Clinical lead to remind staff that MMC must be given within 24-hour period of TURBT.
- NHS Forth Valley to ensure TURBTs are closely supervised by senior medical staff.

QPI 4 (i) - Early Re-Transurethral Resection of Bladder Tumour

- NHS Lanarkshire to give priority to patients with confirmed high grade disease requiring re-resection and new cancer cases for theatre lists.

QPI 10 - Radical Radiotherapy with Chemotherapy

- MCN to continue to monitor the development of the new service being led by the clinical team in radiation oncology at BWoSCC, and MCN uro-oncology lead to provide an update to the MCN Advisory Board.

Completed Action Plans should be returned to WoSCAN within two months of publication of this report.

Progress against these plans will be monitored by the MCN Advisory Board and any service or clinical issue which the Advisory Group considers not to have been adequately addressed will be escalated to the NHS Board Territorial Lead Cancer Clinician and Regional Lead Cancer Clinician.

Additionally, progress will be reported annually to the Regional Cancer Advisory Group (RCAG) by NHS Board Territorial Lead Cancer Clinicians and MCN Clinical Leads, and nationally on a three-yearly basis to Healthcare Improvement Scotland as part of the governance processes set out in CEL 06 (2012).

1. Introduction

This report contains an assessment of the performance of West of Scotland (WoS) urological cancer services using clinical audit data relating to patients diagnosed with Bladder cancer between 1st April 2020 and 31st March 2021. Data analysed and included within this report relates to cancer of the bladder and results are measured against the Bladder Cancer Quality Performance Indicators¹. Twelve months of data were measured against the Bladder Cancer QPIs for the seventh consecutive year.

In order to ensure the success of the Cancer QPIs in driving quality improvement in cancer care, QPIs will continue to be assessed for clinical effectiveness and relevance. The initial formal review of Bladder Cancer QPIs took place in 2018. With seven years of reporting now complete, a second cycle of review commenced in March 2021 with Version 4.0 published in May 2022. This clinically led review aims to identify potential refinements to the current QPIs and involves key clinicians from each of the Regional Cancer Networks. The review focussed on any significant changes to the QPIs that are required due to changes in evidence or clinical practice.

2. Background

Four NHS Boards across the WoS serve the 2.5 million population³. There were 635 new cases of bladder cancer (MIBC and NMIBC) managed in the WoS between 01 April 2020 and 31 March 2021.

The configuration of the MDTs in WoS is set out below and each MDT convenes on a weekly basis.

MDT	Constituent Hospitals
Ayrshire & Arran	Ayr Hospital, Crosshouse Hospital
GGC	Glasgow Royal Infirmary, Stobhill Hospital, Gartnavel General Hospital, Queen Elizabeth University Hospital, Victoria Infirmary, Inverclyde Royal Hospital, Royal Alexandra Hospital, Vale of Leven District General
Forth Valley	Forth Valley Royal Hospital
Lanarkshire	Hairmyres Hospital, Monklands Hospital, Wishaw Hospital

2.1 National Context

Bladder cancer accounts for 2.6% of all cancers and is the eleventh most common cancer type in Scotland in 2020⁴. Incidence of bladder cancer has reduced by 17.7% from 2010 to 2020⁴. There is a notable difference in incidence between the sexes with nearly twice as many cases being diagnosed in the male population in 2020⁴. Invasive bladder cancer accounts for 3.5% of all cancer diagnoses in men and was the ninth most commonly diagnosed cancer in males in 2020. It was the eleventh most common cancer type in females accounting for only 1.8% of all female cancer diagnoses⁴.

Survival rates for bladder cancer are relatively low compared to other cancer types which are detected more easily, either due to earlier presentation or screening programmes⁵. One-year and five-year relative survival for males diagnosed between 2013 and 2017 is 71% and 46.1% respectively, compared to only 55.6% and 34.7% respectively for females⁴. The lower survival rates amongst the female population are attributed to delays in diagnosis often due to later presentation or misdiagnosis⁵. Although bladder cancer shows a decrease in survival rates over the past 20 years, this is an artefact of a change in classification whereby some invasive bladder cancers were reclassified as non-invasive and are therefore no longer included in the survival statistics⁵.

Invasive bladder cancer is the ninth most common cause of death from cancer in Scotland⁴ however overall mortality rates have decreased by 14.6% from 2010 to 2020⁴.

2.2 West of Scotland Context

A total of 635 cases of bladder cancer were recorded through audit as diagnosed in the WoS between 01 April 2020 and 31 March 2021; the lowest in five years. The number of patients diagnosed within each NHS Board of diagnosis is presented in Figure 1. As the largest WoS Board, 50.6% of all new cases of bladder cancer were diagnosed in NHS Greater Glasgow and Clyde (NHSGGC) which is approximately in line with population estimates for this Board³.

Figure 1: Number of new bladder cancer cases within each NHS Board of diagnosis from 2018/19 – 2020/21.

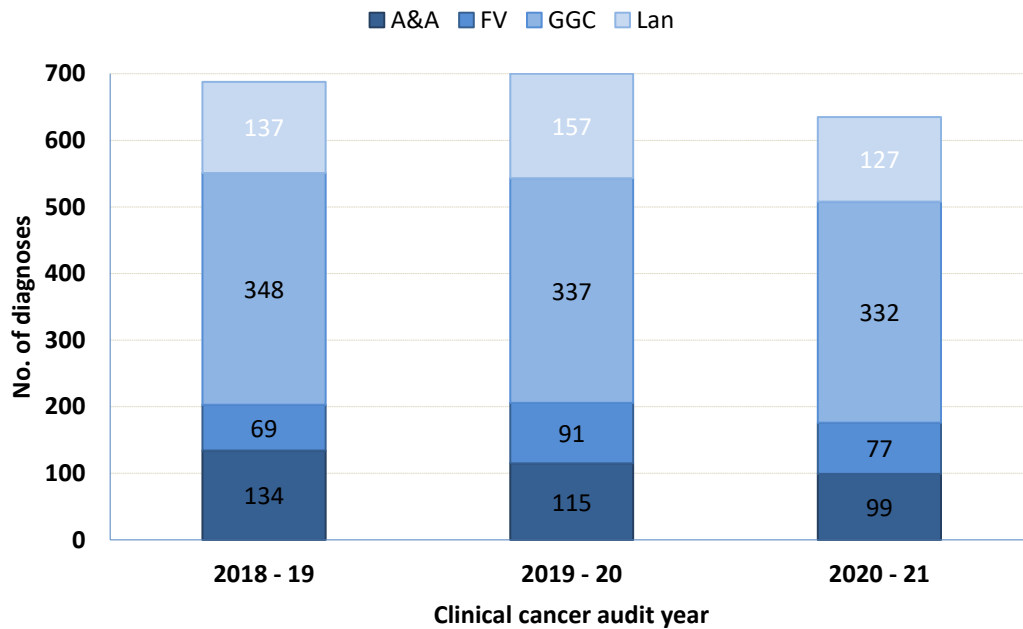
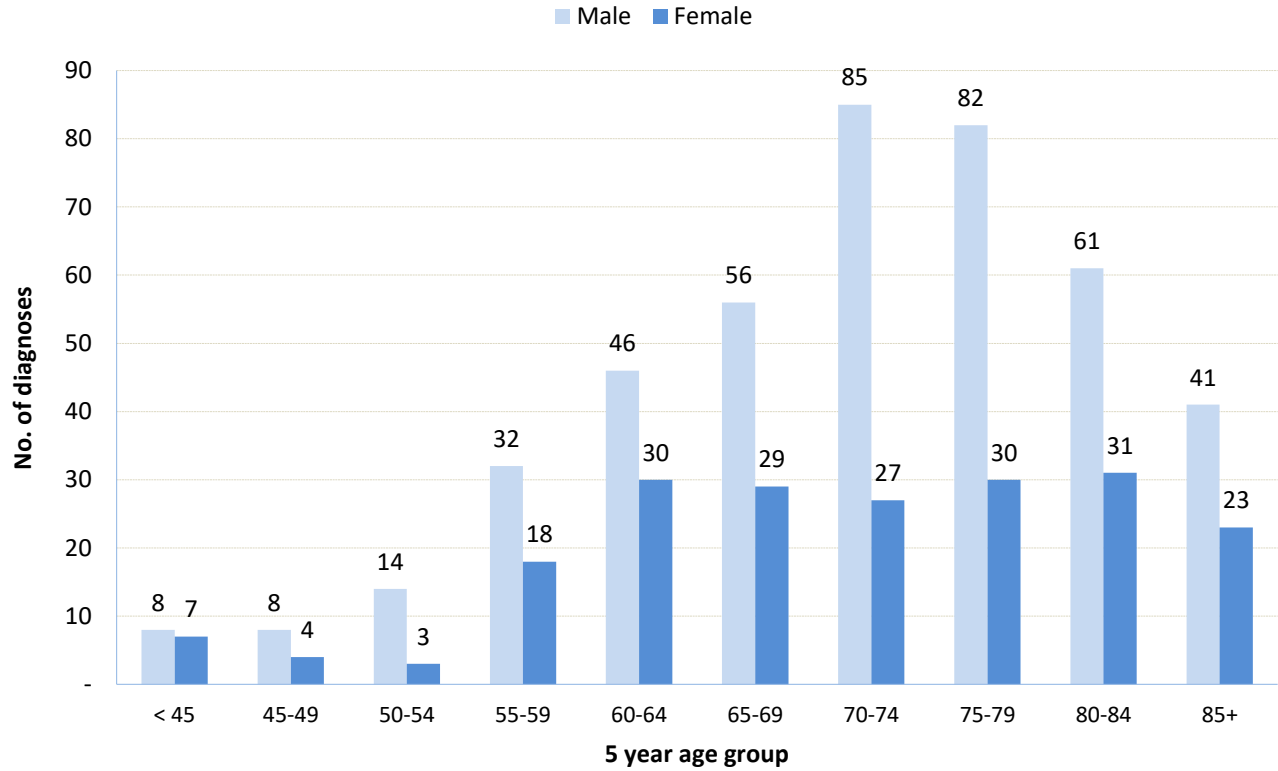


Figure 2 illustrates the distribution of the number of new diagnoses within each 5-year age group by sex for the WoS. Male cases accounted for over two thirds of all new WoS bladder cancer diagnoses (68.2%) captured by audit between 01 April 2020 and 31 March 2021. The majority of new cases of bladder cancer diagnosed in WoS occurred in people within older age groups with nearly three quarters of cases occurring in those over the age of 65 years at time of diagnosis (73.2%).

Fig 2: Number of patients diagnosed with bladder cancer in WoS within each 5-year age group by sex from 01 April 2020 to 31 March 2021.



3. Methodology

Further detail on the audit and analysis methodology and data quality is available in the meta data within [Appendix 1](#).

4. Results and Action Required

4.1 Performance against Quality Performance Indicators (QPIs)

The overall case ascertainment for bladder cancer in WoS is 85.9%, which indicates good data capture through audit.

A summary of the Bladder Cancer QPIs (QPI 1 to 12) for 2020/21 clinical audit data is presented below. Data are analysed by location of diagnosis or treatment, and illustrate NHS Board performance against each target and overall regional performance for each performance indicator. Results are presented graphically and the accompanying tabular format also highlights any missing data and its' possible effect on any of the measured outcomes.

Where the number of cases meeting the denominator criteria for any indicator is between one and four, the percentage calculation has not been shown on any associated charts or tables. This is to avoid any unwarranted variation associated with small numbers and to minimise the risk of disclosure. Any charts or tables impacted by this restricted data are denoted with a dash (-). An asterisk (*) is used to specify a denominator of zero and to distinguish between this and a 0% performance. Any commentary provided by NHS Boards relating to the impacted indicators will however be included as a record of continuous improvement.

In accordance with the regional governance process, specific NHS Board actions are identified to address issues highlighted through data analysis.

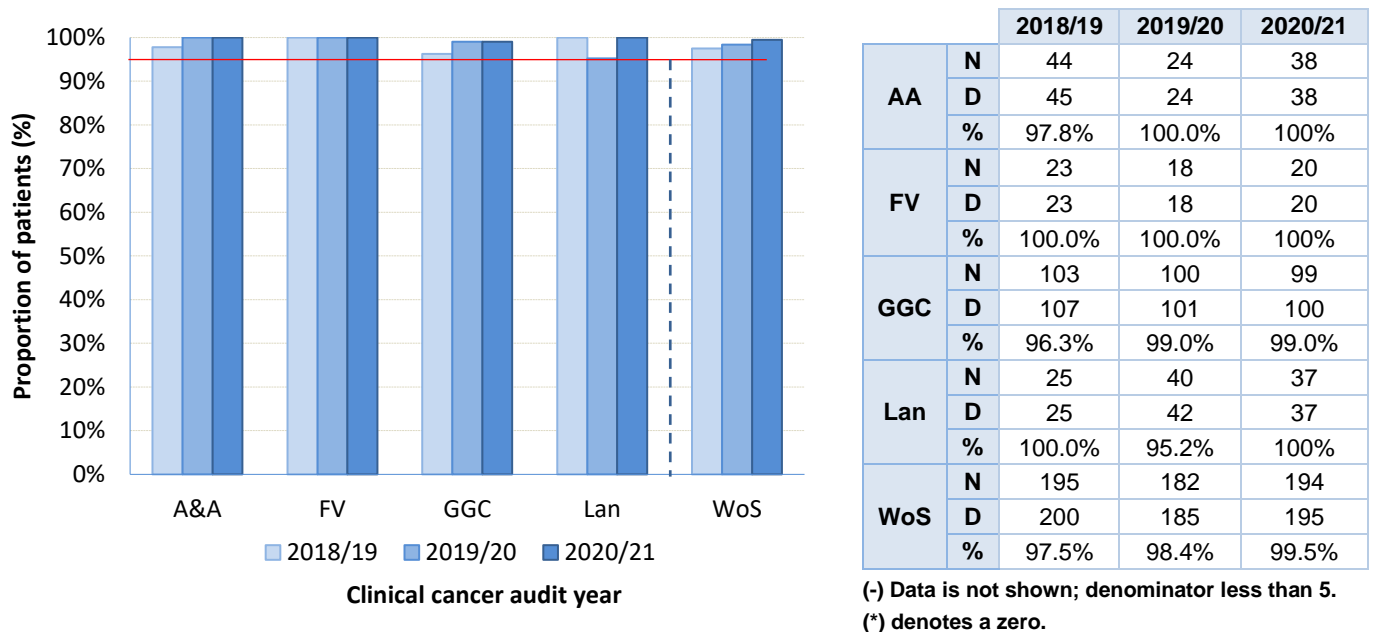
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QPI 1: Multidisciplinary Team Meeting Discussion

Evidence suggests that patients with cancer managed by a multidisciplinary team have a better outcome. There is also evidence that the multidisciplinary management of patients increases their overall satisfaction with their care¹. Discussion prior to definitive treatment decisions being made provides reassurance that patients are being managed appropriately¹.

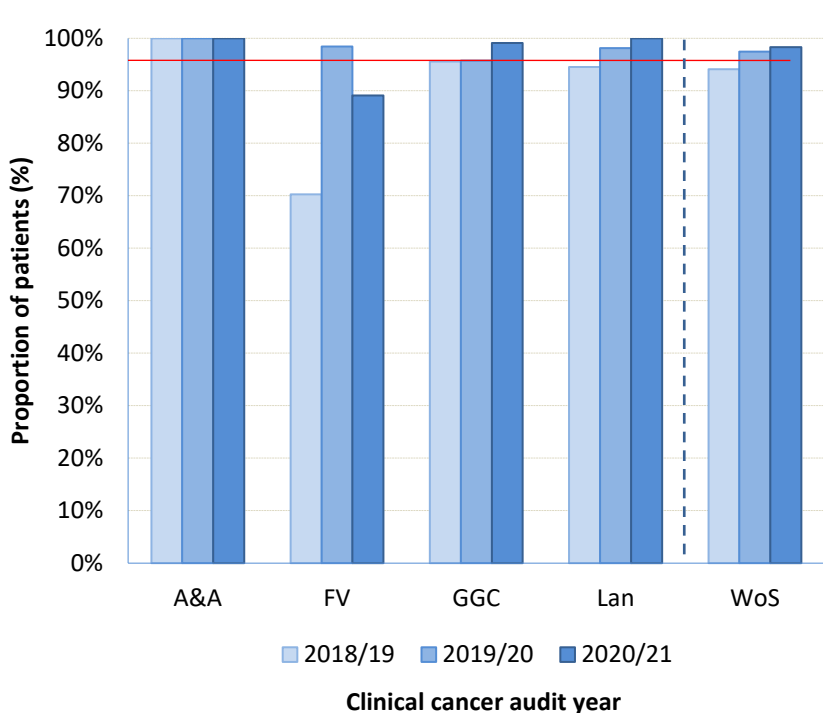
QPI 1	Patients with bladder cancer should be discussed by a multidisciplinary team (MDT) prior to definitive treatment.	
Description:	Proportion of patients with bladder cancer who are discussed at MDT meeting before definitive treatment.	
Numerator:	i)	Number of patients with MIBC discussed at the MDT before definitive treatment (this includes: neo-adjuvant SACT, radical cystectomy, radiotherapy and supportive care only).
	ii)	Number of patients with NMIBC discussed at the MDT following histological confirmation of bladder cancer.
Denominator:	i)	All patients with MIBC.
	ii)	All patients with NMIBC
Exclusions:	i)	Patients who died before first treatment.
	ii)	None
Target:	95%	

Fig 3: The proportion of patients with MIBC who are discussed at MDT meeting from 2018/19 – 2020/21.



All Boards met the 95% target for QPI 1(i) for the third consecutive year. The overall performance for the WoS was 99.5%.

Fig 6: The proportion of patients with NMIBC who are discussed at MDT meeting from 2018/19 – 2020/21.



		2018/19	2019/20	2020/21
AA	N	86	90	61
	D	86	90	61
	%	100.0%	100.0%	100%
FV	N	26	62	41
	D	37	63	46
	%	70.3%	98.4%	89.1%
GGC	N	215	202	212
	D	225	211	214
	%	95.6%	95.7%	99.1%
Lan	N	104	106	87
	D	110	108	87
	%	94.5%	98.1%	100%
WoS	N	431	460	401
	D	458	472	408
	%	94.1%	97.5%	98.3%

(-) Data is not shown; denominator less than 5.
 (*) denotes a zero.

WoS performance was 98.3% against the 95% target with 401 of 408 patients with NMIBC discussed at the MDT following histological confirmation of bladder cancer. All Boards except NHS Forth Valley met the target with NHS Ayrshire & Arran and NHS Lanarkshire achieving 100%.

NHS Forth Valley provided detailed feedback on the five cases not meeting the QPI. In two cases this was attributed to documentation omissions. The Board noted that the team meeting forms are now being scanned into portal and all information including date should be better documented going forward.

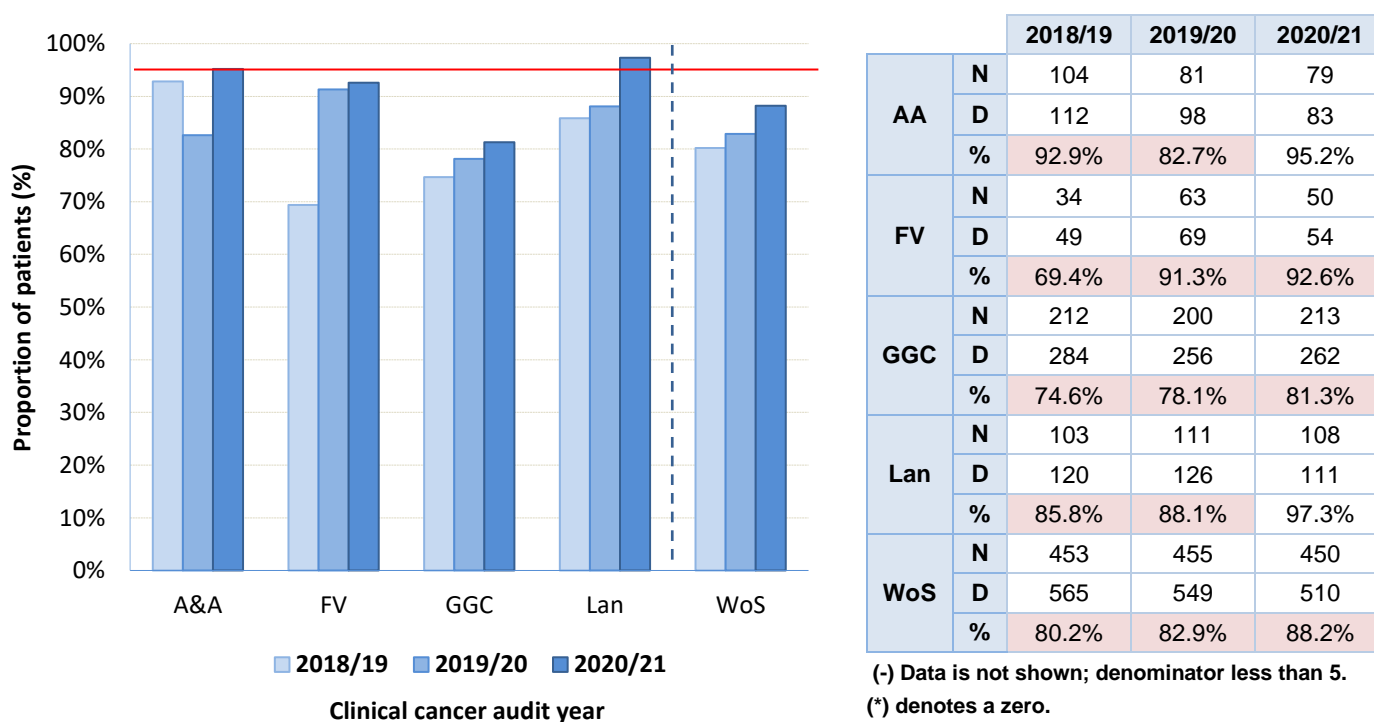
QPI 2: Quality of Transurethral Resection of Bladder Tumour Recording

Transurethral resection of bladder tumour (TURBT) procedures undertaken should be of good quality. TURBT is considered to be the gold standard initial treatment of non-muscle-invasive bladder cancer (NMIBC), with the aim of completely removing all macroscopic tumours and obtaining tissue for essential pathological evaluation¹. It is recommended that a TURBT is performed in a systematic manner; a complete resection with detrusor muscle in the sample is the ultimate aim. Adequate documentation (use of a bladder diagram) with a conclusion regarding radicality or residual tumour is recommended¹.

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

Numerator:	Number of patients with bladder cancer who undergo TURBT where a bladder diagram / detailed description with documentation of tumour location, size, number and appearance has been used at initial resection.
Denominator:	All patients with bladder cancer who undergo TURBT.
Exclusions:	<ul style="list-style-type: none"> • Patients undergoing palliative resection. • Patients with very small tumours ($\leq 5\text{mm}$).
Target:	95%

Fig 4: The proportion of patients with bladder cancer who undergo TURBT with a bladder diagram / detailed description was used at initial resection from 2018/19 – 2020/21.



The overall performance for the WoS was 88.2%, with all the Boards showing continuous improvement in the last three reporting years. NHS Ayrshire & Aran (95.2%) and NHS Lanarkshire (97.3%) met the target of 95%.

Boards have reviewed cases not meeting the target and provided feedback.

NHS Forth Valley commented that for three patients the TURBT proforma was not used and the last patient failed due to being a carpet of tumour with no real number. The Board added that previous issues where the OPERA surgical system was not displaying the TURBT form has now been resolved and proforma accessible to use.

NHSGGC reviewed all cases not meeting the QPI and the vast majority of cases not meeting the target lacked one or two of the four required elements. NHSGGC noted that Bladder diagram was the most commonly omitted element. NHSGGC added that 46 of the cases not meeting the QPI were from the North Glasgow/Clyde sector whilst the South Glasgow sector met the target.

Action required:

- NHS GGC to continue to monitor performance and reiterate the need to use the proforma for documentation of TURBT.
- MCN to explore the possibility of enhancing the bladder proforma to highlight essential items for QPI measurement.

(ii) Documented whether complete resection or not

Numerator: Number of patients with bladder cancer who undergo TURBT where it is documented whether the resection was complete or not at initial resection.

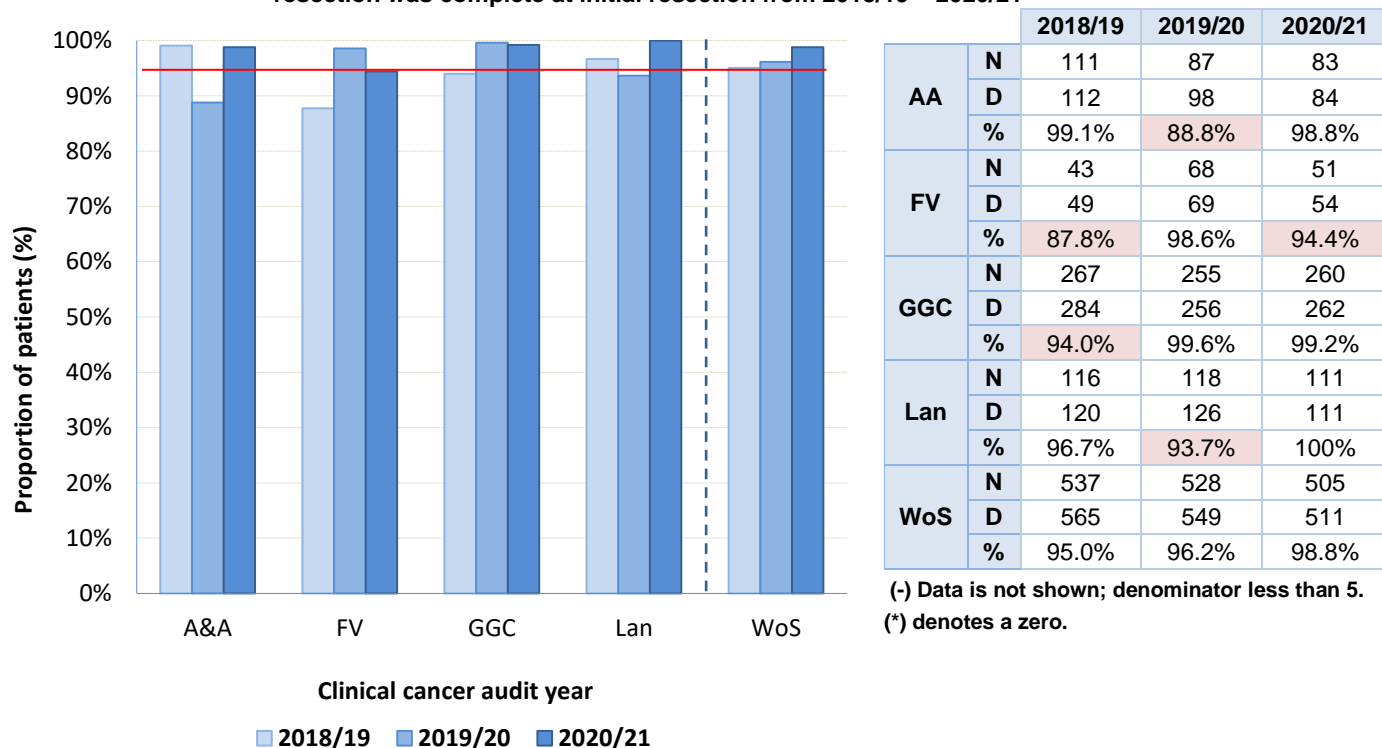
Denominator: All patients with bladder cancer who undergo TURBT.

Exclusions:

- Patients undergoing palliative resection.
- Patients with very small tumours ($\leq 5\text{mm}$).

Target: 95%

Fig 5: The proportion of patients with bladder cancer who undergo TURBT where it has been documented if resection was complete at initial resection from 2018/19 – 2020/21



Of the 511 patients identified as undergoing TURBT, 98.8% had it documented whether the resection was complete or not at initial resection, which meets the QPI target of 95%. All the Boards achieved the target except NHS Forth Valley, just narrowly missing the target with 94.4%

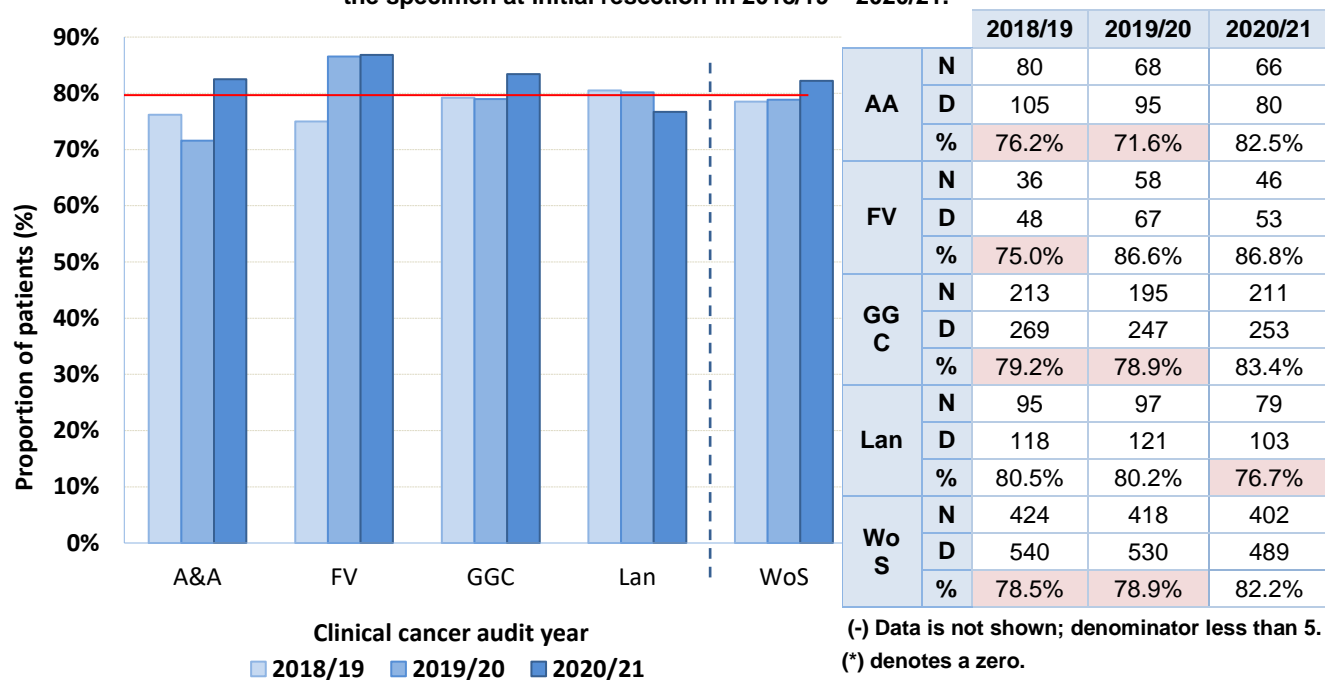
NHS Forth Valley provided feedback on cases not meeting the QPI. A proforma was not used in three cases due to it not being available on the OPERA surgical system. The Board added that previous issues where the OPERA surgical system was not displaying the TURBT form have now been resolved and the proforma is accessible to use.

The MCN acknowledges that the current bladder diagram used across the region is very detailed. The ongoing development of a digital version on TRAK care is welcomed by the MCN and it is anticipated that this will be adopted in the future, and resolve some of the issues associated with the paper based diagram.

(iii) Detrusor muscle included in the specimen at initial resection

Numerator:	Number of patients with bladder cancer who undergo TURBT where detrusor muscle is included in the specimen at initial resection.
Denominator:	All patients with bladder cancer who undergo TURBT.
Exclusions:	<ul style="list-style-type: none"> • Patients undergoing palliative resection. • Patients with very small tumours ($\leq 5\text{mm}$). • Patients with bladder diverticular tumours.
Target:	80%

Fig 6: The proportion of patients with bladder cancer who undergo TURBT where detrusor muscle was included in the specimen at initial resection in 2018/19 – 2020/21.



Overall in the WoS, 82.2 % of patients with bladder cancer undergoing TURBT had detrusor muscle included in the specimen at initial resection, achieving the target of 80%. All the Boards except NHS Lanarkshire achieved the target.

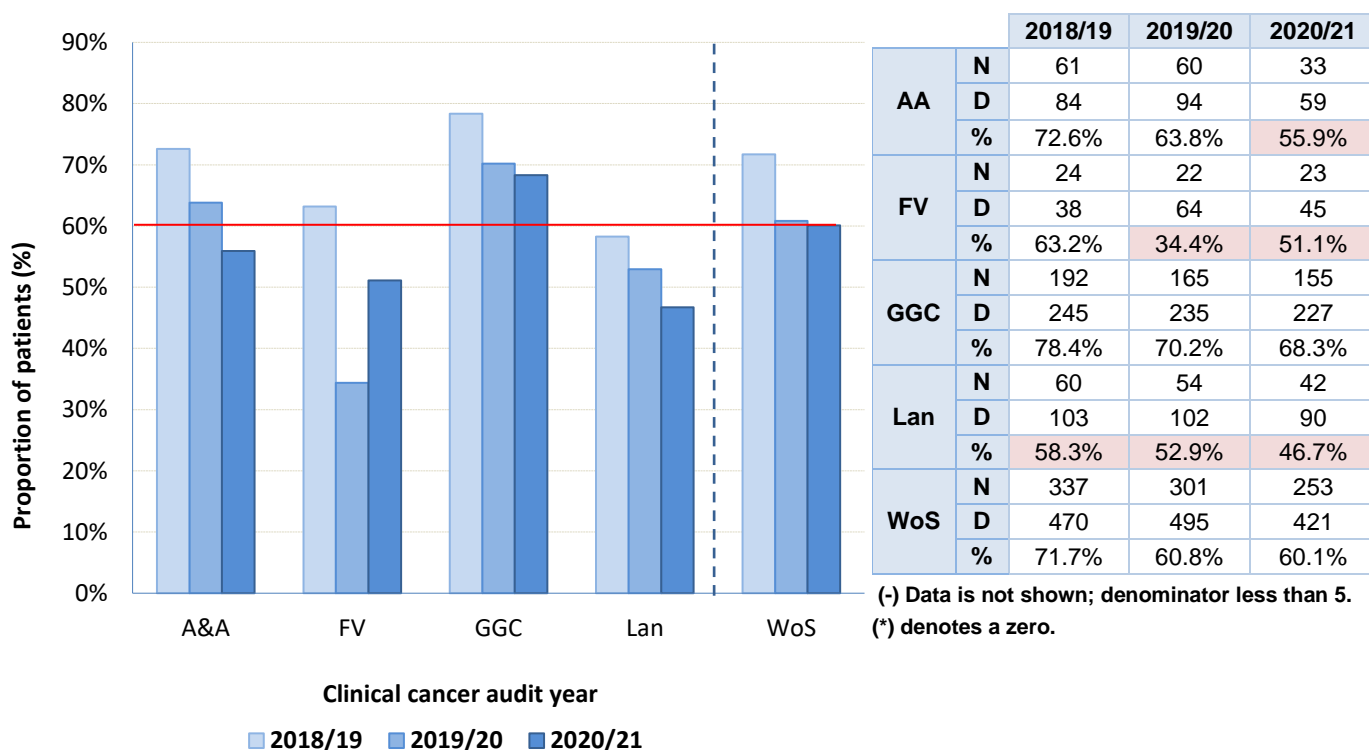
NHS Lanarkshire clinically reviewed the 24 patients that did not meet this target and noted that 46% of these cases were pathologically G1 low grade or G2 low grade pTa tumours, which under proposed QPI changes will be excluded.

QPI 3: Mitomycin C Following Transurethral Resection of Bladder Tumour (TURBT)

Patients with non-muscle-invasive bladder cancer (NMIBC) who undergo TURBT should receive a single instillation of mitomycin C within 24 hours of resection, unless contraindicated. The recurrence rate in NMIBC is as high as 70%¹. Tumour features (number, size, grade and stage) and quality of TURBT determine overall recurrence rates. However, TURBT causes tumour cells to be dispersed within the bladder during the procedure and these could be re-implanted in the bladder mucosa, subsequently being detected as recurrence¹. By destroying floating cancer cells and those that have been implanted on the resection site, a single instillation of intravesical chemotherapy confers an absolute reduction in tumour recurrence of 12%¹.

Description:	Proportion of patients with NMIBC who undergo TURBT who receive a single instillation of mitomycin C within 24 hours of resection.
Numerator:	Number of patients with NMIBC who undergo TURBT who receive a single instillation of mitomycin C within 1 day of initial TURBT.
Denominator:	All patients with NMIBC who undergo initial TURBT.
Exclusions:	None.
Target:	60%

Fig 7: The proportion of patients with NMIBC who undergo TURBT who receive a single instillation of mitomycin C within 24 hours of resection from 2018/19 – 2020/21.



Overall performance in the WoS was 60.1% meeting the 60% target. All the Boards except NHS GGC missed the target of 60%. NHS GGC achieved the target with 68.3%.

NHS Ayrshire & Arran commented that 26 patients failed the target as no Mitomycin was given due to either thin walled bladder or tumour appearing solid.

NHS Forth Valley achieved 51.1% against the 60% QPI target. The Board reviewed all cases and commented that 19 patients did not get post-operative mitomycin C (MMC) due to various clinical reasons. The Board noted that the majority of the TURBT procedures are carried out by junior doctors and this may have impacted the patients who have a deep resection and did not have MMC. The Board will continue current working practice and continued supervision of all TURBTs by senior medical staff.

NHS Lanarkshire stated that the majority of cases not meeting the QPI had deep resection, incomplete resection, multi-focal tumours, solid tumours and thin walled bladders. There were a small number of cases that had MMC out with the 24-hour period. All cases that do not meet the target will continue to be reviewed clinically.

Action Required:-

- NHS Forth Valley to ensure TURBTs are closely supervised by senior medical staff.
- NHS Lanarkshire to ensure Clinical lead reminds staff that MMC must be given within 24-hour period of TURBT.

QPI 4: Early Re-Transurethral Resection of Bladder Tumour (TURBT)

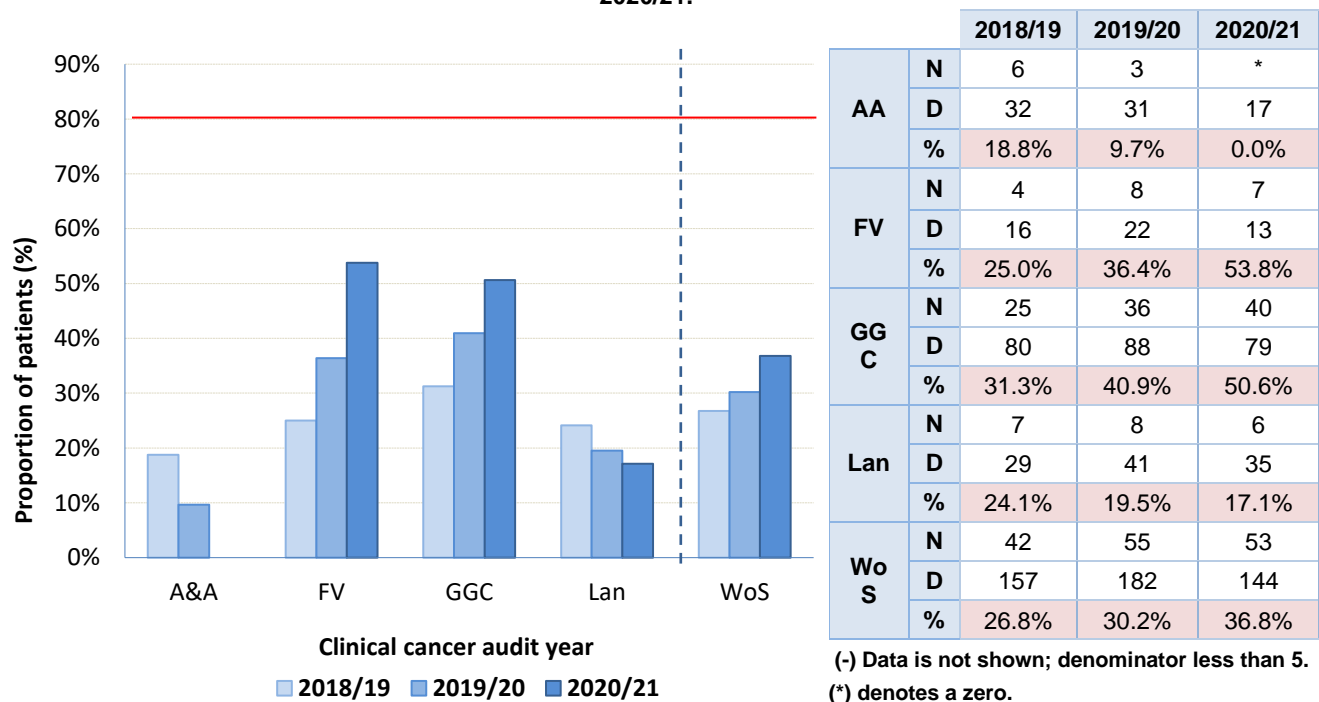
It is well established from white light TURBT series that 33%-53% of high risk NMIBC have residual disease following an initial TURBT¹. This risk is high when detrusor muscle is absent in the initial resection specimen. The presence of residual disease is a poor prognostic indicator, especially in pT1 disease. A second TURBT in high risk NMIBC improves the recurrence-free survival. Understaging, i.e. not detecting muscle invasive bladder cancer in the initial TURBT, occurs in 4%-25% pT1 cancers and can potentially be detrimental to the patient¹.

Evidence suggests that re-TURBT should be performed if the primary resection was not radical, e.g. if there is no detrusor muscle in the sample (with the exception of TaG1 tumours and primary CIS) and/or where the initial specimen shows a T1 tumour¹. The second TURBT should be performed at 2-6 weeks after initial resection¹.

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

Numerator:	Number of patients with T1 (all grades) or select high grade Ta* NMIBC who have undergone TURBT who have a second TURBT or early cystoscopy (± biopsy) within 6 weeks (42 days) of initial resection.
Denominator:	All patients with T1 (all grades) or select high grade Ta* NMIBC who have undergone TURBT.
Exclusions:	<ul style="list-style-type: none"> • Patients where TURBT has been carried out for palliation. • Patients who have undergone early cystectomy. • Patients with confirmed metastatic disease.
Target:	80%

Fig 8: The proportion of patients with T1 (all grades) or select high grade Ta* NMIBC who have undergone TURBT who have a second TURBT or early cystoscopy (± biopsy) within 6 weeks (42 days) of initial resection, 2018/19 – 2020/21.



All Boards within the WoS fell significantly short of the 80% target for this QPI for the three consecutive years. Overall WoS performance was 36.8% with individual Board performance ranging from 0% in NHS Ayrshire & Arran to 50.6% in NHSGGC. Improvement is noted in NHS Forth Valley and NHSGGC.

NHS Ayrshire & Arran commented that of the 17 cases failing to meet the target, the MDT felt re-TURBT was not appropriate for 13 of the patients and the remaining four patients waited longer than 6 weeks for re-TURBT due to pressures related to COVID and lack of general anaesthetic theatre time.

NHS Forth Valley reviewed the six cases and provided detailed reasons for cases not meeting the target. Co-morbidities, patient fitness and requirement for MMC impacted on timelines for treatment.

NHSGGC commented that majority of cases not meeting the target had re-resection after 42 days and in the remainder of cases, patients had either proceeded directly to radical treatment in the first instance, were not fit for re-resection, were delayed by COVID or declined. In the North Glasgow/Clyde sector, the Board is expecting recent data to show improved performance with the inclusion of Clyde sector in the project to identify high-risk patients and with the recent merger of Glasgow and Clyde MDTs providing full integration in this regard. The project to identify high-risk cases at an early stage has provided an improvement in performance in South Glasgow sector from 51.9% to 68.8%. However COVID-19 continues to affect service delivery performance at the target level.

NHS Lanarkshire clinically reviewed the cases not meeting the QPI target and commented that five patients had a re-resection over the 6-week target. Some patients had a course of BCG/MMC followed by check scope and a small number of patients were not suitable for re-resection given age and co-morbidities. Capacity issues were also a factor with a significant reduction in available theatre space. Priority is given to new cancer cases but emphasis on patients with confirmed high grade disease requiring re-resection will be given same priority for theatre lists going forward.

Action Required:

- NHS Lanarkshire to give same priority to patients with confirmed high grade disease requiring re-resection and new cancer cases for theatre lists.

(ii) High grade or low grade G2 NMIBC where detrusor muscle absent from specimen

Numerator: Number of patients with high grade or low grade G2 NMIBC who have undergone TURBT where detrusor muscle absent from specimen who have a second TURBT or early cystoscopy (\pm biopsy) within 6 weeks (42 days) of initial resection.

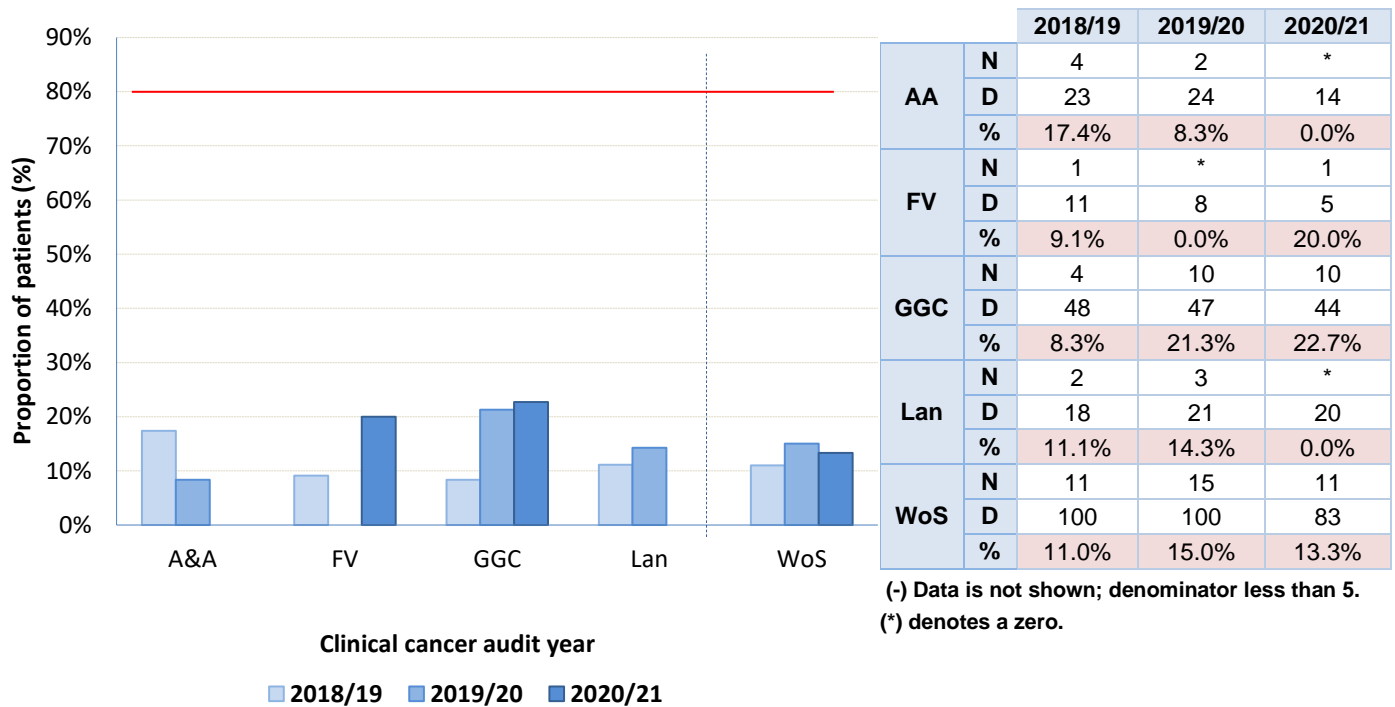
Denominator: All patients with high grade or low grade G2 NMIBC who have undergone TURBT where detrusor muscle absent from specimen.

Exclusions:

- Patients where TURBT has been carried out for palliation.
- Patients who have undergone early cystectomy.
- Patients with confirmed metastatic disease.

Target: **80%**

Fig 9: The proportion of patients with high grade or low grade G2 NMIBC who have undergone TURBT where detrusor muscle absent from specimen who have a second TURBT or early cystoscopy (\pm biopsy) within 6 weeks (42 days) of initial resection in 2018/19 – 2020/21.



The 80% target for QPI 4 (ii) was not achieved for the third consecutive year. In the WoS 13.3% of patients with high grade or low grade G2 NMIBC who underwent TURBT where detrusor muscle absent from specimen had a second TURBT or early cystoscopy (\pm biopsy) within 6 weeks of initial resection. No board met the target with performance ranging from 0% in NHS Ayrshire & Arran to 22.7% in NHSGGC.

Following the QPI review, Low grade G2 tumours are no longer included within this QPI going forward.

All Boards reviewed cases not meeting the QPI and comments provided reflected the points provided for 4(i).

NHS Ayrshire & Arran commented that of the 14 cases failing to meet the target, the MDT felt re-TURBT was not appropriate for majority of the patients and two patients waited longer than 6 weeks for re-TURBT due to pressures related to COVID and lack of general anaesthetic theatre time.

NHS Forth Valley commented that of the four patients that failed, three, having low grade G2 pTa disease, were for 3/12 check cystoscopy only and one patient had a course of MMC before re-resection/check cystoscopy.

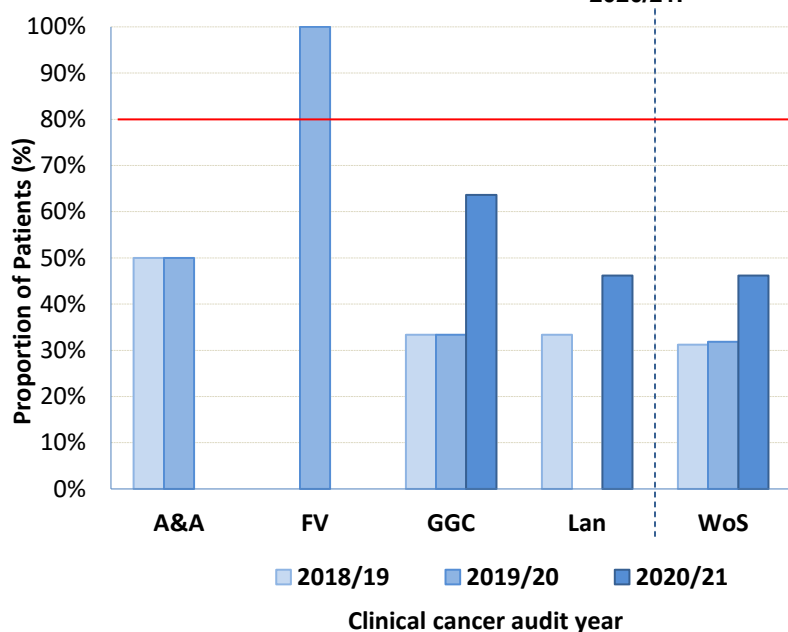
NHSGGC commented that majority of cases not meeting the target had re-resection after 42 days and in the remainder of cases, patients had either proceeded directly to radical treatment, were unfit for re-resection, did not attend or died.

NHS Lanarkshire stated that no patients had a re-resection for various reasons. Majority of cases were for a check scope only or a course of BCG/MMC followed by a check scope. All individual cases not meeting the target will continue to be clinically reviewed.

(iii) NMIBC where initial resection is incomplete

Numerator:	Number of patients with NMIBC who have undergone TURBT where initial resection is incomplete who have a second TURBT or early cystoscopy (± biopsy) within 6 weeks (42 days) of initial resection.
Denominator:	All patients with NMIBC who have undergone TURBT where initial resection is incomplete.
Exclusions:	<ul style="list-style-type: none"> • Patients where TURBT has been carried out for palliation. • Patients who have undergone early cystectomy. • Patients with confirmed metastatic disease.
Target:	80%

Fig 10: The proportion of patients with NMIBC who have undergone TURBT where initial resection is incomplete who have a second TURBT or early cystoscopy (± biopsy) within 6 weeks (42 days) of initial resection in 2018/19 – 2020/21.



		2018/19	2019/20	2020/21
AA	N	-	-	*
	D	-	-	5
	%	50.0%	50.0%	0.0%
FV	N	-	-	-
	D	-	-	-
	%	0.0%	100.0%	-
GGC	N	3	4	14
	D	9	12	22
	%	33.3%	33.3%	63.6%
Lan	N	-	*	6
	D	-	6	13
	%	33.3%	0.0%	46.2%
WoS	N	5	7	20
	D	16	22	40
	%	31.3%	31.8%	50.0%

(-) Data is not shown; denominator less than 5.

(*) denotes a zero.

Overall WoS performance was 50.0% against the 80% target. Improvement is noted in NHS GGC and NHS Lanarkshire. However it should be noted that numbers are small and this can have a greater effect on proportions.

NHS Ayrshire & Arran commented that 5 patients failed the target either due to pressures related to COVID and lack of general anaesthetic theatre time or the patients were deemed not appropriate for re-TURBT.

NHSGGC commented that whilst the South Glasgow sector met the target, North Glasgow/Clyde sector had four cases not meeting the target as they had re-resection after 6 weeks. The Board noted that the COVID-19 pandemic has had an impact on performance and is the likely cause of delay in these cases.

NHS Lanarkshire clinically reviewed the seven cases that did not meet the target. Covid capacity problems were also an issue for theatre lists due to staffing problems.

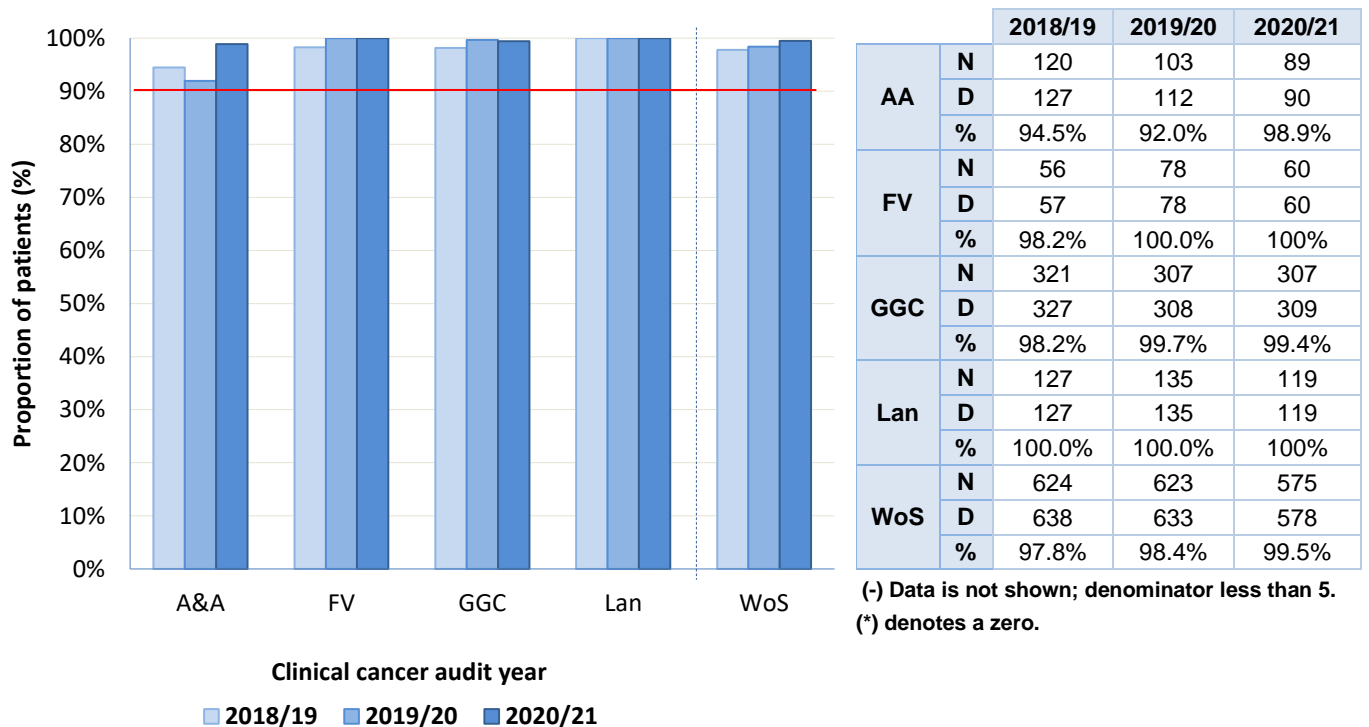
QPI 5: Pathology Reporting

All pathology reports for transurethral resection of bladder tumour (TURBT) and cystectomy specimens should contain comprehensive, standardised information according to the guidelines provided by the Royal College of Pathology (RCP). To help plan treatment for patients diagnosed with bladder cancer, prognostic information from the TURBT and cystectomy is necessary¹. Standardising the information contained with pathology reports is useful in order to ensure that important prognostic information which is required to inform patients' clinical management is available, for example the staging and grading of tumours¹.

(i) TURBT

Numerator:	Number of patients with bladder cancer who undergo TURBT where pathology report contains all relevant data items.
Denominator:	All patients with bladder cancer who undergo TURBT.
Exclusions:	None.
Target:	90%

Fig 11: The proportion of patients with bladder cancer who undergo TURBT where pathology report contains all relevant data items according to the guidelines provided by the Royal College of Pathology from 2018/19 – 2020/21.



Overall in the WoS 99.5% of patients with bladder cancer who underwent TURBT had a pathology report containing all relevant data items, which meets the 90% QPI target. All NHS Boards met the target with NHS Forth Valley and NHS Lanarkshire achieving 100%.

(ii) Cystectomy

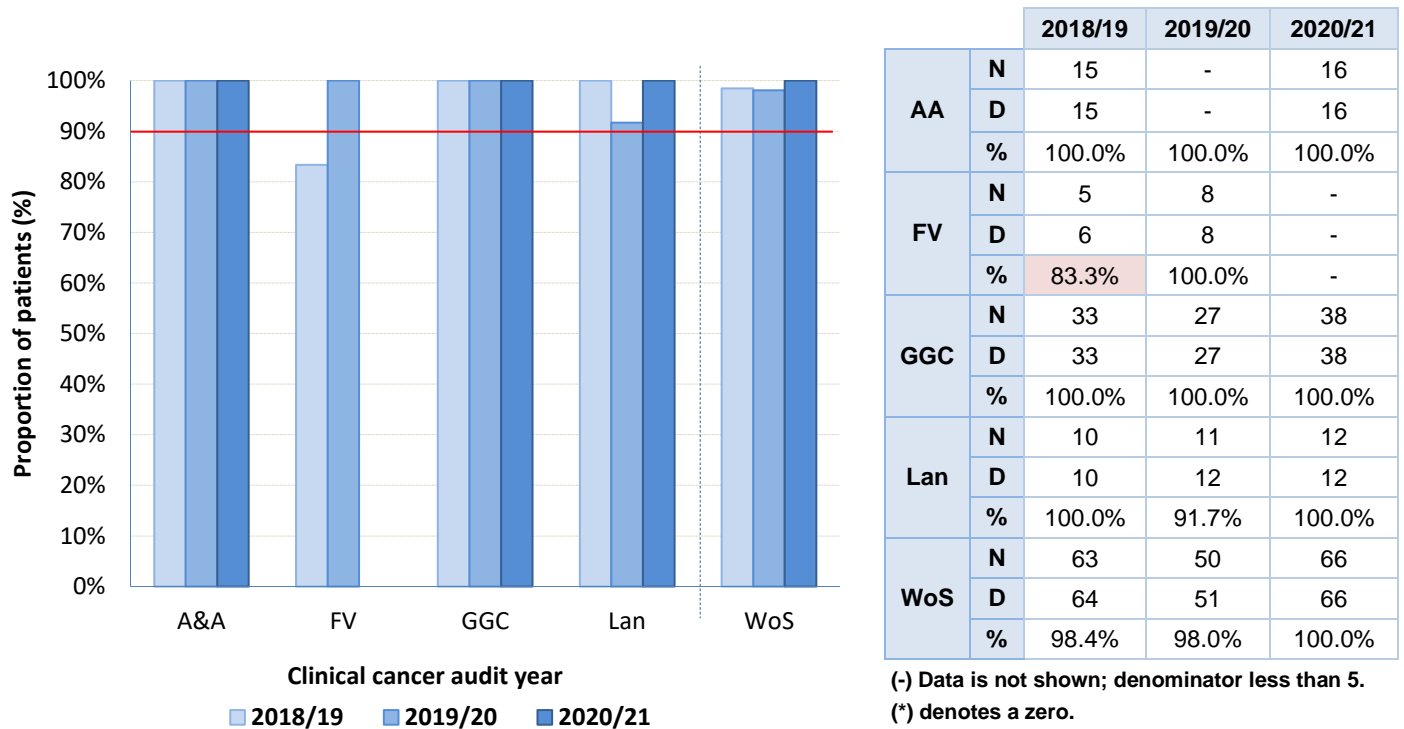
Numerator: Number of patients with bladder cancer who undergo cystectomy where pathology report contains all relevant data items.

Denominator: All patients with bladder cancer who undergo cystectomy.

Exclusions: None.

Target: 90%

Fig 12: The proportion of patients with bladder cancer who undergo cystectomy where pathology report contains all relevant data items according to the guidelines provided by the Royal College of Pathology from 2018/19 – 2020/21.



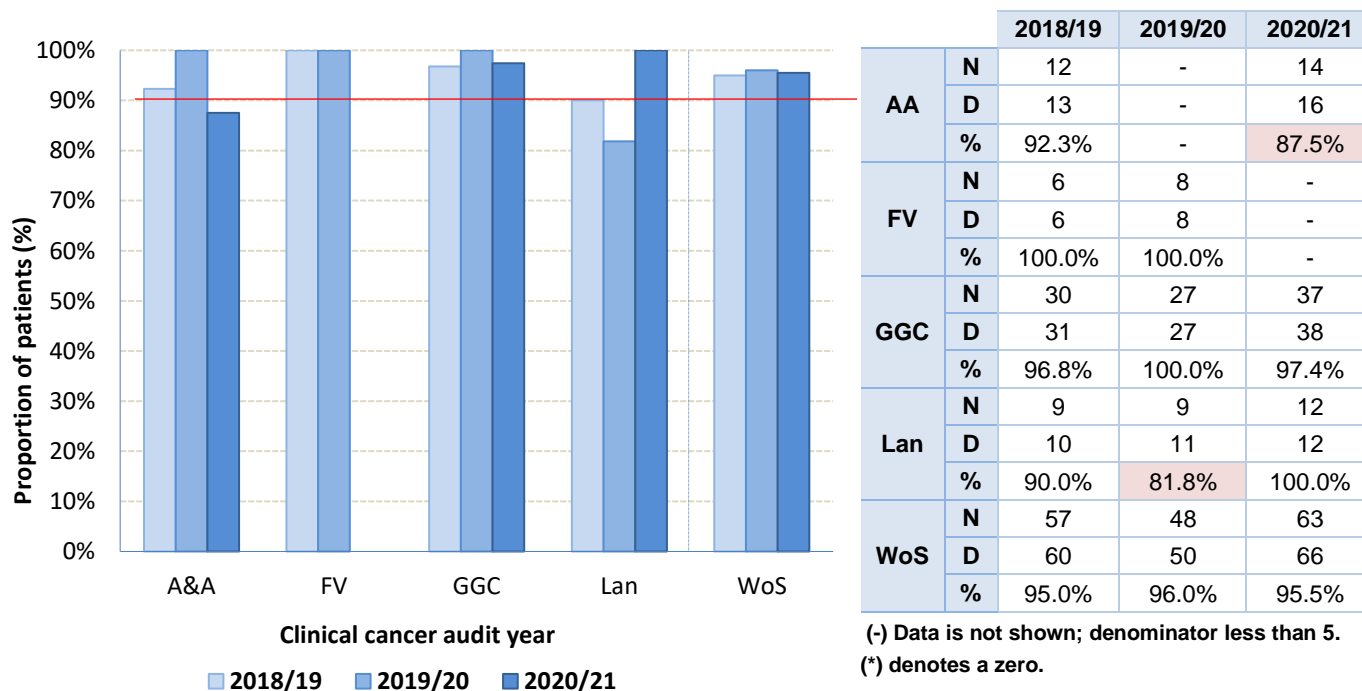
All Boards met the 90% target with overall performance for the WoS was 100%.

QPI 6: Lymph Node Yield

Adequate lymph node yield is important for accurate staging. Evidence suggests that this should be an integral part of cystectomy¹. It is important that at least the area of the standard node dissection needs to be removed¹. It is therefore important that a meticulous lymph node dissection is performed to obtain the maximum number of nodes¹.

Description:	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.
Numerator:	Number 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.
Denominator:	All patients with bladder cancer who undergo primary radical cystectomy.
Exclusions:	<ul style="list-style-type: none"> Patients undergoing salvage cystectomy.
Target:	90%

Fig 13: The 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 in 2018/19 – 2020/21.



The overall performance for the WoS was 95.5% against the 90% target. NHS GGC and NHS Lanarkshire met the target with 97.4% and 100% respectively. NHS Ayrshire and Arran was short of the 90% target with 87.5%.

NHS Ayrshire & Arran commented that the patients that failed to meet the target had extensive nodal disease at time of surgery which was felt unsafe to remove.

QPI 7: Time to Treatment

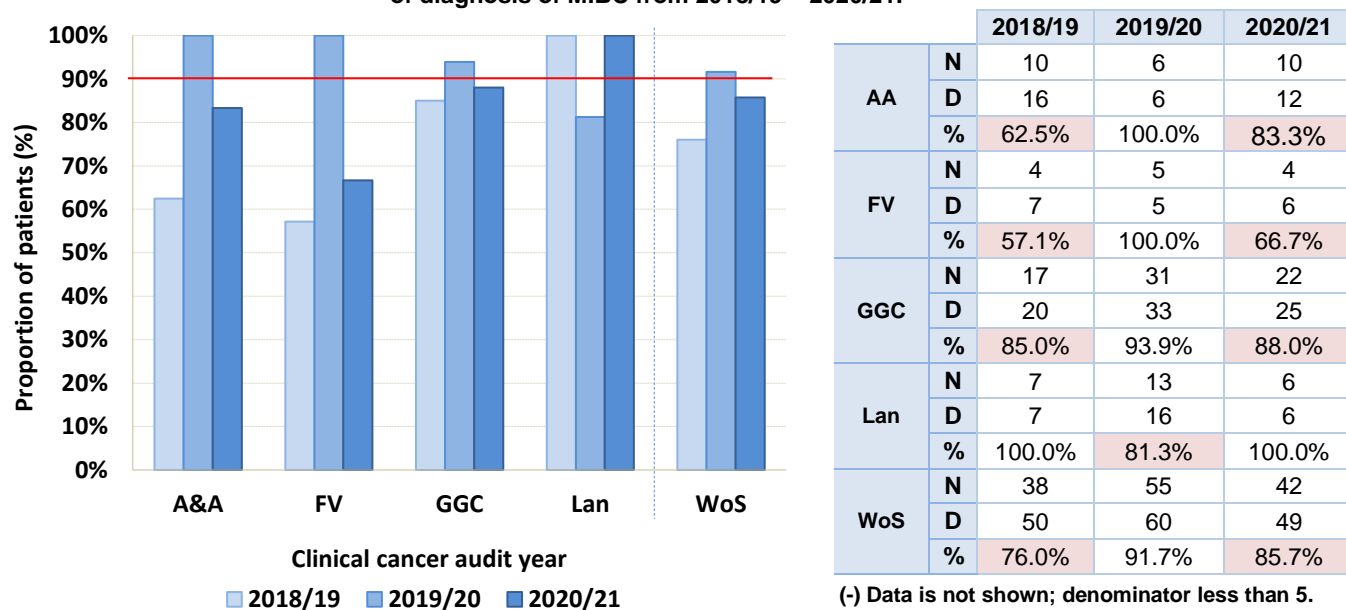
Patients with bladder cancer should have cystectomy within 3 months of diagnosis as this has optimum survival benefit, if delayed for more than this time it can increase the risk of progression and cancer specific death¹.

Neo-adjuvant chemotherapy should be offered to suitable patients prior to definitive radical therapy (this includes radical cystectomy, radical radiation therapy, or preoperative radiotherapy and cystectomy)¹. This treatment should be commenced as soon as possible following diagnosis. Evidence suggests that patients who undergo radical cystectomy up to 12 weeks after neo-adjuvant chemotherapy show no increased risk of complications or nodal metastases¹.

(i) Radical treatment (cystectomy or radiotherapy)

Numerator:	Number of patients with MIBC who undergo radical cystectomy or radiotherapy only within 3 months of diagnosis of MIBC.
Denominator:	All patients with MIBC undergoing radical cystectomy or radiotherapy only.
Exclusions:	None.
Target:	90%

Fig 14: The proportion of patients with MIBC who undergo radical cystectomy or radiotherapy only within 3 months of diagnosis of MIBC from 2018/19 – 2020/21.



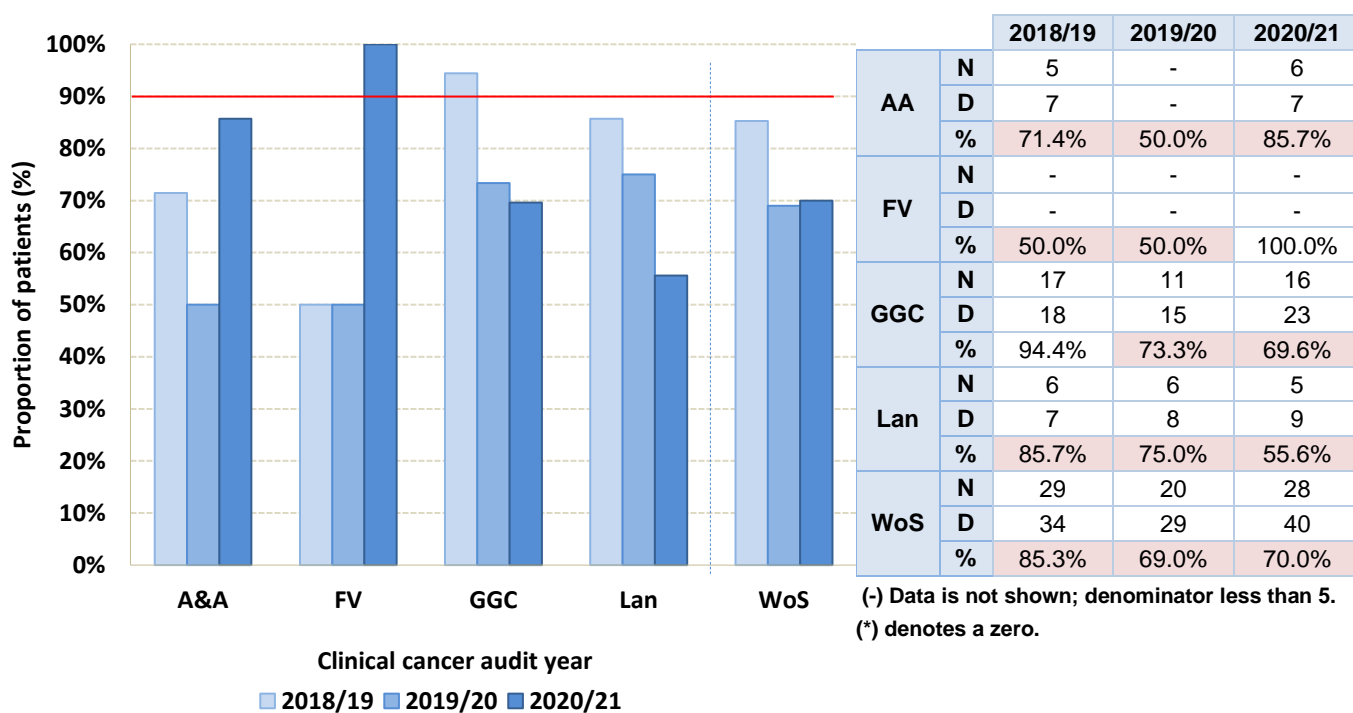
The overall performance for the WoS was 85.7% falling short of 90% target. Whilst NHS Lanarkshire achieved the target with 100%, the other three Boards missed the 90% target. NHS GGC slightly missed the target with 88%. It should be noted that small numbers mean that comparison between Boards should be made with caution.

NHS Ayrshire & Arran provided detailed reasons for patients not meeting the target and noted that comorbidities and the requirement for other medical procedures impacted on timelines for cystectomy. NHS Forth Valley commented that the two cases missed the target due to patient induced delay.

(ii) Neo-adjuvant chemotherapy

Numerator:	Number of patients with MIBC who have neo-adjuvant chemotherapy who undergo cystectomy or chemoradiation within 8 weeks of completing treatment.
Denominator:	All patients with MIBC undergoing neo-adjuvant chemotherapy.
Exclusions:	None.
Target:	90%

Fig 15: The proportion of patients with MIBC who have neo-adjuvant chemotherapy who undergo cystectomy or chemoradiation within 8 weeks of completing treatment from 2018/19 – 2020/21.



Of the 40 patients diagnosed with MIBC who underwent neo-adjuvant chemotherapy, 28 of these patients had cystectomy or chemoradiotherapy within 8 weeks of initial treatment. This equates to a 70.0% WoS performance against the 90% target. NHS Forth Valley achieved the target with 100% whilst the other three Boards missed the 90% target. It should be noted that numbers are low across all four Boards.

NHS Ayrshire & Arran provided detailed clinical reasons for the single patient not meeting the target.

NHSGGC has reviewed the cases not meeting the target, and provided valid clinical reasons for the delay in five cases. Comorbidity, positive covid test and patient fitness impacted on time to treatment. The reason for delay was not clear in the two remaining cases.

NHS Lanarkshire clinically reviewed the four patients that did not meet the target, three patients had surgery between 64 to 74 days from completing neo-adjuvant chemotherapy and COVID impact on ITU beds delayed the remaining case.

QPI 8: Volume of Cases per Surgeon/Centre

Radical cystectomy should be performed by surgeons who perform the procedure routinely. Although evidence has shown varied results, recent studies have shown that there is a positive relationship between volume and re-intervention rates¹. Within each network, bladder cancer should be managed by multidisciplinary teams, with surgical and other radical treatments administered by those with appropriate expertise and caseloads¹.

Please note this QPI is reported using SMR01 data instead of clinical audit data.

Description:	Number of radical cystectomy procedures performed by a specialist centre, and surgeon over a one year period.
Exclusions:	None.
Target:	Minimum of 20 procedures per centre in a one year period. Minimum of 10 procedures per surgeon in a one year period.

Table 1: The number of patients undergoing radical cystectomy in each NHS Board and the total number of surgeons recorded as having carried out procedures in each Board in 2020/21.

	No. of Operating Surgeons	No. of Procedures	No. of Surgeons Meeting Target
AA	1	11	1
FV	0*	0*	na
GGC	6*	38	2*
Lan	3	20	2*
WoS	10	70	5

**Board adjusted results*

There are a number of known coding issues with the SMR01 data used to calculate performance for this QPI. Boards have reviewed the data alongside local surgical data to provide an updated position on performance.

NHS Forth Valley reviewed SMR01 data and confirmed that no cystectomies were carried out within the Board.

NHS GGC provided detailed reasons for those surgeons not achieving the minimum target, including one surgeon leaving post early in the audit period and a general surgeon carrying out the procedure as part of a pelvic extenteration. Two surgeons were just short of the target, performing 5 and 6 procedures respectively. NHS GGC also noted that as a consequence of the COVID-19 pandemic overall cystectomy volumes were down by around 25% compared to the preceding year, with radical radiotherapy being preferred where appropriate in this period. In a normal year the Board would expect sufficient cases for four surgeons to comfortably meet the target. The Board will keep surgical volumes under review, however has not identified a need for improvement actions.

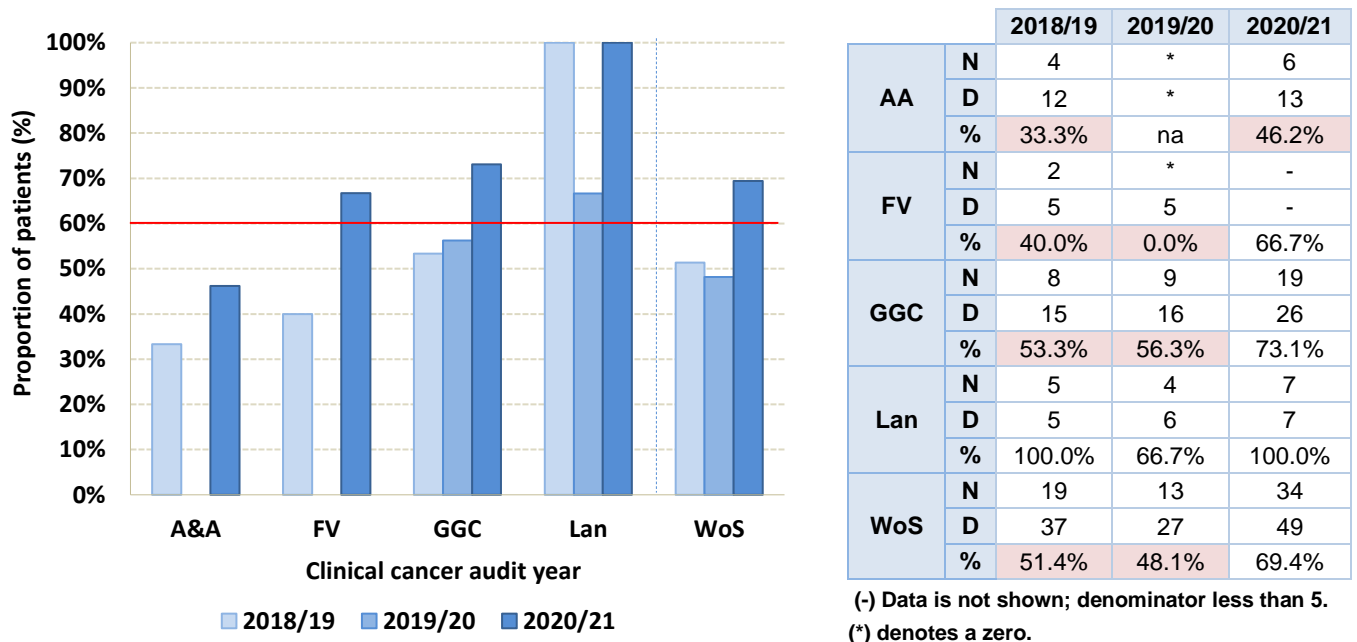
NHS Lanarkshire confirmed that local audit data indicated that two surgeons carried out 10 or more procedures. In addition, the third surgeon not meeting the target has been part of a number of procedures where three surgeons were involved in the operation. It should be noted that Lanarkshire consultants have been performing radical cystectomy on Forth Valley patients due to resource issues in Forth Valley, and these cases will be reflected in the Lanarkshire surgical numbers.

QPI 9: Oncological Discussion

Patients with muscle-invasive bladder cancer (MIBC) should have all treatment options discussed with them prior to radical cystectomy. Clinical judgement is required to assess the risks and benefits of prescribing chemotherapy. Evidence has shown that an informed discussion with patients to outline the aims, benefits and toxicity of treatment is necessary before therapy begins¹. In elderly patients or in those with significant co-morbid illness, treatment-related toxicity may outweigh any advantages to chemotherapy¹.

Description:	Proportion of patients with MIBC who have radical surgery who met with an oncologist prior to radical cystectomy.
Numerator:	Number of patients with MIBC who undergo cystectomy who met with an oncologist prior to radical cystectomy.
Denominator:	All patients with MIBC who undergo radical cystectomy.
Exclusions:	None.
Target:	60%

Fig 16: The proportion of patients with MIBC who have radical surgery who met with an oncologist prior to radical cystectomy from 2018/19 – 2020/21.



Overall performance in the WoS was 69.4% meeting the 60% target. Whilst NHS Lanarkshire achieved 100%, NHS Forth Valley and NHSGGC met the target with 66.7% and 73.1% respectively. Small denominator numbers also impacted upon the attainment percentages for this measure.

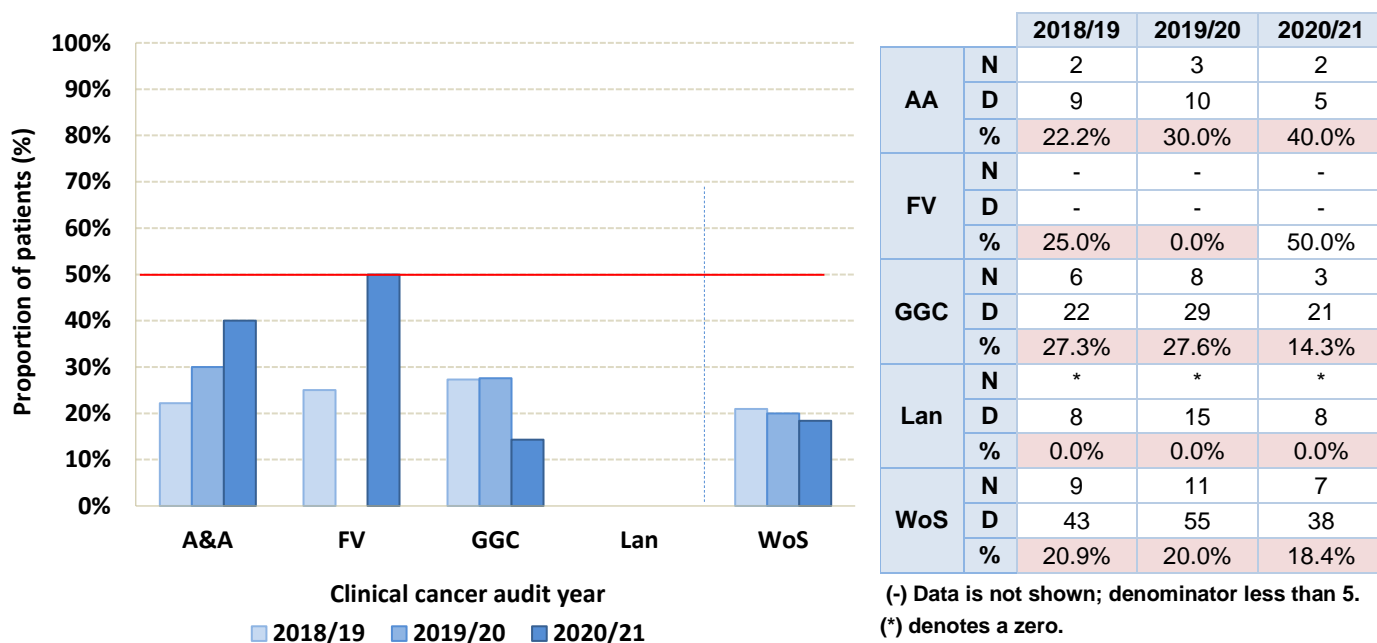
NHS Ayrshire & Arran commented that one case was an incidental finding of bladder cancer at simple cystectomy and the other patients proceeded straight to cystectomy in view of either pathology, patient's symptoms, patient's wishes or poor renal function.

QPI 10: Radical Radiotherapy with Chemotherapy

Patients undergoing radical radiotherapy for transitional cell carcinoma of bladder should be considered for concomitant chemotherapy. A well-conducted randomised trial concluded treating patients with transitional cell carcinoma of the bladder with combined chemotherapy (5FU and mitomycin C) as opposed to radiotherapy alone significantly improves local control with no significant increase in toxicity¹.

Description:	Proportion of patients with transitional cell carcinoma of the bladder (T2-T4) undergoing radical radiotherapy receiving concomitant chemotherapy.
Numerator:	Number of patients with transitional cell carcinoma of the bladder (T2-T4) receiving radical radiotherapy treated concomitantly with chemotherapy.
Denominator:	All patients with transitional cell carcinoma of the bladder (T2-T4) receiving radical radiotherapy.
Exclusions:	<ul style="list-style-type: none"> Patients enrolled in a clinical trial.
Target:	50%

Fig 17: The proportion of patients with transitional cell carcinoma of the bladder (T2-T4) undergoing radical radiotherapy receiving concomitant chemotherapy from 2018/19 – 2020/21.



WoS have consistently failed to achieve the 50% target over the past 3 years; however NHS Forth Valley achieved the target with 50%. Small denominator numbers also impacted upon the attainment percentages for this measure.

NHS Ayrshire & Arran commented that the patients failed to meet the target were not fit enough for concomitant chemotherapy.

NHSGGC commented that in 13 of 18 failed cases, patients were unfit for chemotherapy, or contradicted by their comorbidities. There were local data errors in two cases, one patient did receive concomitant chemotherapy so should meet the QPI, and another patient was treated with palliative intent so should be excluded. Amending these errors would make performance 20%.

NHS Lanarkshire clinically reviewed the eight cases. No patients were given concomitant treatment for various reasons. Two patients had neo-adjuvant chemotherapy followed by radical radiotherapy and six patients were deemed not suitable for chemotherapy.

Action Required:

- MCN to continue to monitor the development of the new service being led by the clinical team in radiation oncology at BWoSCC, and MCN uro-oncology lead to provide an update to the MCN Advisory Board.

QPI 11: 30/90-Day Mortality after Treatment for Bladder Cancer

Treatment-related mortality is a marker of the quality and safety of the whole service provided by the multidisciplinary team (MDT)¹. Outcomes of treatment, including treatment-related morbidity and mortality, should be regularly assessed. Treatment should only be undertaken in individuals that may benefit from that treatment, that is, treatments should not be undertaken in futile situations¹. This QPI is intended to ensure treatment is given appropriately, and the outcome reported on and reviewed.

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.

(i) 30/90 Day Mortality – Surgery (Radical Cystectomy)

Numerator:	Number of patients with bladder cancer who receive treatment with curative intent (radical cystectomy or radiotherapy) that die within 30/90 days of treatment.	
Denominator:	All patients with bladder cancer who receive treatment with curative intent (radical cystectomy or radiotherapy).	
Exclusions:	None.	
Target:	(i)	30 days <3%
	(ii)	90 days <5%

Table 2: The proportion of patients with bladder cancer who receive treatment with curative intent (radical cystectomy) that die within 30 or 90 days of treatment from in 2018/19 – 2020/21.

		Surgery – Radical Cystectomy					
		30 Day mortality			90 Day mortality		
		2018/19	2019/20	2020/21	2018/19	2019/20	2020/21
AA	N	1	0	1	1	-	1
	D	14	0	16	13	-	16
	%	7.1%	na	6.3%	7.7%	0.0%	6.3%
FV	N	0	0	0	0	0	0
	D	6	8	0	6	8	0
	%	0.0%	0.0%	na	0.0%	0.0%	na
GGC	N	0	0	1	0	0	1
	D	31	27	38	31	27	37
	%	0.0%	0.0%	2.6%	0.0%	0.0%	2.7%
Lan	N	0	0	0	0	0	0
	D	10	11	12	10	11	12
	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
WoS	N	1	0	2	1	0	2
	D	61	50	66	60	50	65
	%	1.6%	0.0%	3.0%	1.7%	0.0%	3.1%

(-) Data is not shown; denominator less than 5.

30 and 90 day mortality, within the WoS, after surgical treatment with curative intent was 3.0% and 3.1% respectively. Two patients died within 30 days of curative treatment and these same two patients were included in the 90 day mortality figure.

NHS Ayrshire & Arran provided detailed clinical commentary for the single death within 30 days of surgery.

(ii) 30/90 Day Mortality - Radiotherapy

Table 5: The proportion of patients with bladder cancer who receive treatment with curative intent (radiotherapy) that die within 30 or 90 days of treatment from in 2018/19 – 2020/21.

		Radiotherapy					
		30 Day mortality			90 Day mortality		
		2018/19	2019/20	2020/21	2018/19	2019/20	2020/21
AA	N	0	0	0	0	0	0
	D	11	9	6	11	8	6
	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FV	N	-	-	0	-	-	0
	D	-	-	4	-	-	4
	%	-	-	0.0%	-	-	0.0%
GGC	N	0	0	0	1	1	0
	D	24	34	25	23	34	25
	%	0.0%	0.0%	0.0%	4.3%	2.9%	0.0%
Lan	N	0	0	0	0	0	0
	D	9	19	9	9	19	9
	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
WoS	N	0	0	0	1	1	0
	D	48	64	44	47	63	44
	%	0.0%	0.0%	0.0%	2.1%	1.6%	0.0%

(-) Data is not shown; denominator less than 5.

30 and 90 day mortality, within the WoS, after radiotherapy treatment with curative intent was within the 3% and 5% target for all treatment modalities. No patients died within 30 or 90 days of radiotherapy treatment with curative intent.

QPI 12: Clinical Trial and Research Study Access

Clinical trials are necessary to demonstrate the efficacy of new therapies and other interventions. Evidence suggests improved patient outcomes from participation in clinical trials¹. Clinicians are therefore encouraged to enter patients into well-designed trials and to collect longer-term follow-up data. High accrual activity into clinical trials is used as a goal of an exemplary clinical research site¹.

The clinical trials QPI is measured utilising Scottish Cancer Research Network (SCRN) data and ISD incidence data, as is the methodology currently utilised by the Chief Scientist Office (CSO) and the National Cancer Research Institute (NCRI). The principal benefit of this approach is that this data is already collected utilising a robust mechanism¹.

Description:	Proportion of patients diagnosed with bladder cancer who are consented for a clinical trial / research study.
Numerator:	Number of patients diagnosed with bladder cancer consented for a clinical trial / research study.
Denominator:	All patients with bladder cancer.
Exclusions:	None.
Target:	15%

Table 3: The proportion of patients consented for clinical trials with bladder cancer, by NHS Board of residence in 2018-2020.

NHS Board of Residence	Consented - QPI Target 15%								
	2018			2019			2020		
	N	D	%	N	D	%	N	D	%
Ayrshire & Arran	2	123	1.6%	1	123	0.8%	0	123	0.0%
Forth Valley	2	99	2.0%	2	99	2.0%	0	99	0.0%
GGC	17	374	4.5%	33	374	8.8%	4	374	1.1%
Lanarkshire	1	143	0.7%	5	143	3.5%	2	143	1.4%
WoS	22	739	3.0%	41	739	5.5%	6	739	0.8%

The denominator represents the 5 year average of ISD incidence data for bladder cancer between 2003 and 2007.

Note: 2003-2007 is the last point where MIBC and NMIBC were both included.

No Boards met the 15% target. A list of active bladder cancer clinical trials in 2020 is shown below.

Project Short Title	NHS A&A	NHS FV	NHS GGC	NHS Lan	Total
ATLANTIS	0	0	2	0	2
Durvalumab + BCG in NMIBC	0	0	1	2	3
ECMC biomarker	0	0	1	0	1
Total	0	0	4	2	6

The clinical trial access QPI for bladder cancer was not met in 2020. This was anticipated as the COVID-19 pandemic forced most clinical trials in the UK to stop recruiting patients for several months in 2020. Pandemic related factors impacting on trials recruitment included:

- Researchers needed to minimise the number of patients visiting hospitals, as these visits risked infecting their patients with COVID-19.
- Patients were reluctant to attend hospitals and participate in trials due to concerns around COVID infection.
- Some clinical staff usually dedicated to cancer research needed to support frontline services as part of the NHS's response to COVID-19 or to support research into COVID-19 vaccination and treatments.
- Sponsor trial personnel were unable to visit sites to perform data safety checks during monitoring visits.
- Formal risk assessments had to be carried out for every trial before it re-opened. This was mandated by sponsors and R&D Director in NHS GGC and the process for this didn't start until the beginning of June.

Going forward Clinical Trials data will be reported via the SCRN and therefore the current Clinical Trials QPI will no longer be included in the cancer QPI publications.

5. Next Steps

The MCN will actively take forward regional actions identified and NHS Boards are asked to develop local Action/Improvement Plans in response to the findings presented in the report. A summary of actions for each NHS Board has been included within the Action Plan templates in Appendix I.

Acknowledgement

This report has been prepared using clinical audit data provided by the following NHS Boards in the WoSCAN area:

NHS Ayrshire & Arran
NHS Forth Valley
NHS Greater Glasgow and Clyde
NHS Lanarkshire

We would like to thank all members and active participants in the cancer network for their continued support of the MCN, and the many hospitals that are committed to making the audit succeed. We also acknowledge the efforts of the clinical effectiveness staff, nurses, and other service users for their work in ensuring the data are available to enable analysis to take place each year. Without their considerable efforts this level of progress would not be possible.

Abbreviations

5FU	5-Fluorouracil
AA	NHS Ayrshire & Arran
ACaDMe	Acute Cancer Deaths and Mental Health
BCG	Bacillus Calmette-Guérin (therapy)
CEL	Chief Executive Letter
CIS	Carcinoma in situ
eCASE	Electronic Cancer Audit Support Environment
FV	NHS Forth Valley
GGC	NHS Greater Glasgow and Clyde
HIS	Healthcare Improvement Scotland
ISD	Information Services Division
LAN	NHS Lanarkshire
MCN	Managed Clinical Network
MDT(s)	Multidisciplinary Team(s)
MIBC	Muscle-Invasive Bladder Cancer
NCQSG	National Cancer Quality Steering Group
NHSGGC	NHS Greater Glasgow and Clyde
NMIBC	Non-Muscle-Invasive Bladder Cancer
QPI(s)	Quality Performance Indicator(s)
RCAG	Regional Cancer Advisory Group
RCP	Royal College of Pathologists
SACT	Systemic Anti-Cancer Therapy
SMR01	General/Acute Inpatient and Day Case (Scottish Morbidity Records)
TCC	Transitional Cell Carcinoma
TURBT	Transurethral Resection of Bladder Tumour
WoS	West of Scotland
WoSCAN	West of Scotland Cancer Network

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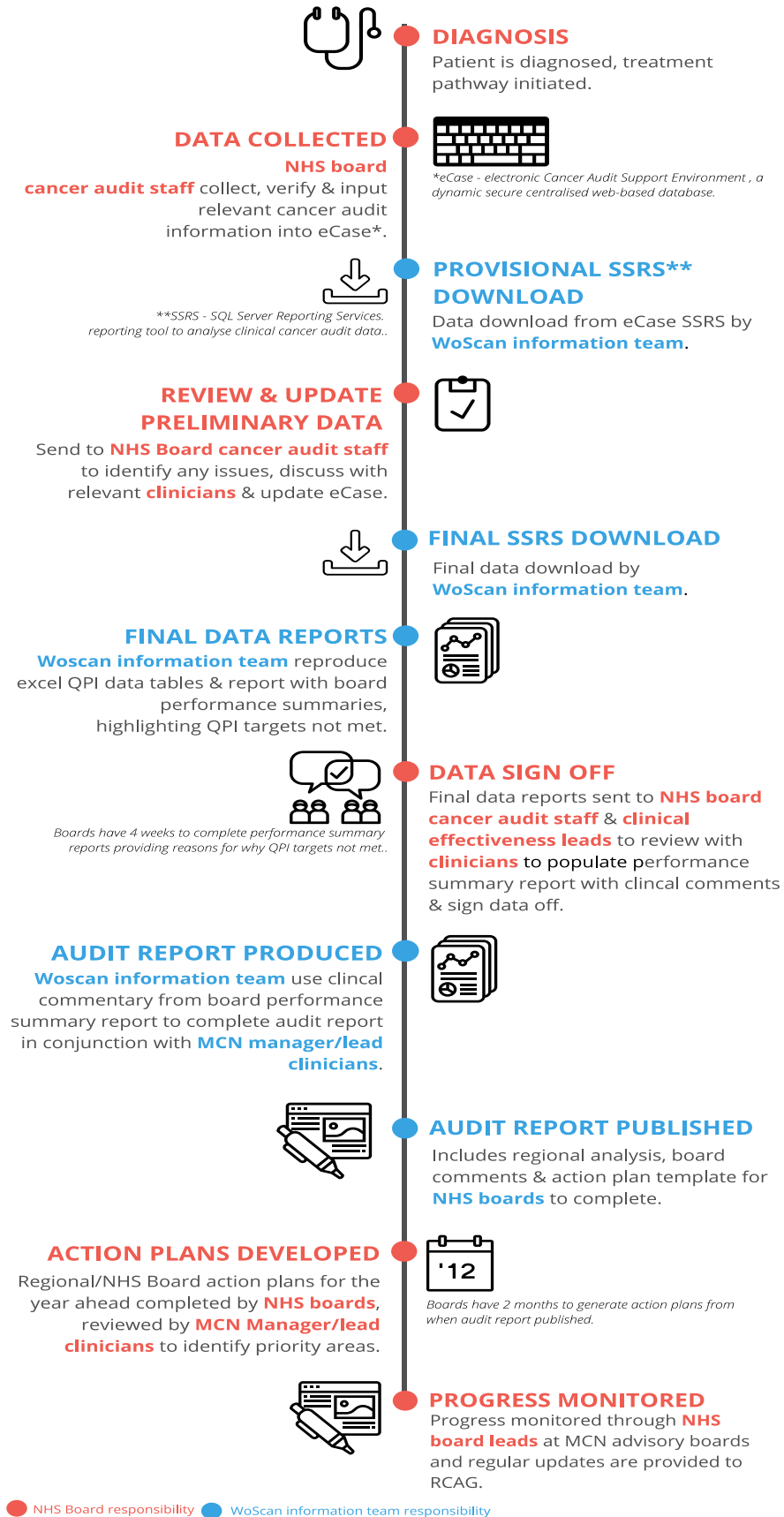
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Appendix 1: Meta Data

Report Title	Cancer Audit Report: Bladder Cancer Quality Performance Indicators																												
Time Period	Patients diagnosed between 1st April 2020 and 31st March 2021																												
Data Source	Cancer Audit Support Environment (eCASE). A secure centralised web-based database which holds cancer audit information in Scotland.																												
Data extraction date	2200 hrs on 22 nd February 2022																												
Methodology	<p>Analysis was performed centrally for the region by the WoSCAN Information Team. The timescales agreed took into account the patient pathway to ensure that a complete treatments record was available for the majority of patients.</p> <p>Initial results were provided to Boards to check for inaccuracies, inconsistencies or obvious gaps and a subsequent download taken upon which final analysis was carried out.</p> <p>The final data analysis was disseminated for NHS Board verification in line with the regional audit governance process to ensure that the data was an accurate representation of service in each area. Please see info graphic in appendix 2 for a more detailed look at the reporting process.</p>																												
Data Quality	<p>Audit data completeness can be assessed by estimating the proportion of expected patients that have been identified through audit compared to the number reported by the National Cancer registry (provided by ISD, National Services Division); this is known as case ascertainment. Figures should only be used as a guide as it is not possible to compare the same exact cohort from each data source. Note that a 5 year average is taken for cancer registry cases to take account of annual fluctuations in incidence within NHS Boards.</p> <table border="1"> <thead> <tr> <th></th> <th>Ayrshire & Arran</th> <th>Forth Valley</th> <th>GGC</th> <th>Lanarkshire</th> <th>WoS</th> </tr> </thead> <tbody> <tr> <td>Cases from audit</td> <td>99</td> <td>77</td> <td>332</td> <td>127</td> <td>635</td> </tr> <tr> <td>Cases from ISD (2003-2007)*</td> <td>123</td> <td>99</td> <td>374</td> <td>143</td> <td>739</td> </tr> <tr> <td>Case ascertainment</td> <td>80.5%</td> <td>77.8%</td> <td>88.8%</td> <td>88.8%</td> <td>85.9%</td> </tr> </tbody> </table>						Ayrshire & Arran	Forth Valley	GGC	Lanarkshire	WoS	Cases from audit	99	77	332	127	635	Cases from ISD (2003-2007)*	123	99	374	143	739	Case ascertainment	80.5%	77.8%	88.8%	88.8%	85.9%
	Ayrshire & Arran	Forth Valley	GGC	Lanarkshire	WoS																								
Cases from audit	99	77	332	127	635																								
Cases from ISD (2003-2007)*	123	99	374	143	739																								
Case ascertainment	80.5%	77.8%	88.8%	88.8%	85.9%																								

Appendix 2: Cancer Audit Timeline



Appendix 3: NHS Board Action Plans

A summary of actions for each NHS Board has been included within the following Action Plan templates. Completed Action Plans should be returned to WoSCAN within two months of publication of this report.

Bladder Cancer QPI Action / Improvements Plan

Area:	NHS Greater Glasgow & Clyde
Action Plan Lead:	
Date:	

KEY (Status)	
1	Action fully implemented
2	Action agreed but not yet implemented
3	No action taken (please state reason)

QPI No.	Action Required	Health Board Action Taken	Timescales		Lead	Progress/Action Status	Status (see Key)
			Start	End			
	<i>Ensure actions mirror those detailed in Audit Report.</i>	<i>Detail specific actions that will be taken by the NHS Board.</i>	<i>Insert date</i>	<i>Insert date</i>	<i>Insert name of responsible lead for each specific action.</i>	<i>Provide detail of action in progress, change in practices, problems encountered or reasons why no action taken.</i>	<i>Insert No. from key above.</i>
QPI 2 (i): Quality of Transurethral Resection of Bladder Tumour Recording	NHS GGC to continue to monitor performance and reiterate the need to use the proforma for documentation of TURBT.						

Bladder Cancer QPI Action / Improvements Plan

Area:	NHS Forth Valley
Action Plan Lead:	
Date:	

KEY (Status)	
1	Action fully implemented
2	Action agreed but not yet implemented
3	No action taken (please state reason)

QPI No.	Action Required	Health Board Action Taken	Timescales		Lead	Progress/Action Status	Status (see Key)
			Start	End			
	<i>Ensure actions mirror those detailed in Audit Report.</i>	<i>Detail specific actions that will be taken by the NHS Board.</i>	<i>Insert date</i>	<i>Insert date</i>	<i>Insert name of responsible lead for each specific action.</i>	<i>Provide detail of action in progress, change in practices, problems encountered or reasons why no action taken.</i>	<i>Insert No. from key above.</i>
QPI 3: Mitomycin C Following Transurethral Resection of Bladder Tumour (TURBT)	NHS Forth Valley to ensure TURBTs are closely supervised by senior medical staff						

Bladder Cancer QPI Action / Improvements Plan

Area:	NHS Lanarkshire
Action Plan Lead:	
Date:	

KEY (Status)	
1	Action fully implemented
2	Action agreed but not yet implemented
3	No action taken (please state reason)

QPI No.	Action Required	Health Board Action Taken	Timescales		Lead	Progress/Action Status	Status (see Key)
			Start	End			
	<i>Ensure actions mirror those detailed in Audit Report.</i>	<i>Detail specific actions that will be taken by the NHS Board.</i>	<i>Insert date</i>	<i>Insert date</i>	<i>Insert name of responsible lead for each specific action.</i>	<i>Provide detail of action in progress, change in practices, problems encountered or reasons why no action taken.</i>	<i>Insert No. from key above.</i>
QPI 3: Mitomycin C Following Transurethral Resection of Bladder Tumour (TURBT)	Clinical lead to remind staff that MMC must be given within 24-hour period of TURBT.						
QPI 4 (i): Early Re-Transurethral Resection of Bladder Tumour (TURBT)	NHS Lanarkshire to give same priority to patients with confirmed high grade disease requiring re-resection and new cancer cases for theatre lists.						

Bladder Cancer QPI Action / Improvements Plan

Area:	MCN
Action Plan Lead:	
Date:	

KEY (Status)	
1	Action fully implemented
2	Action agreed but not yet implemented
3	No action taken (please state reason)

QPI No.	Action Required	Health Board Action Taken	Timescales		Lead	Progress/Action Status	Status (see Key)
			Start	End			
	<i>Ensure actions mirror those detailed in Audit Report.</i>	<i>Detail specific actions that will be taken by the NHS Board.</i>	<i>Insert date</i>	<i>Insert date</i>	<i>Insert name of responsible lead for each specific action.</i>	<i>Provide detail of action in progress, change in practices, problems encountered or reasons why no action taken.</i>	<i>Insert No. from key above.</i>
QPI 2 (i): Quality of Transurethral Resection of Bladder Tumour Recording	MCN to explore the possibility of enhancing the bladder proforma to highlight essential items for QPI measurement.						
QPI 10 : Radical Radiotherapy with Chemotherapy	MCN to monitor the development of the new service being led by the clinical team in radiation oncology at BWoSCC, and MCN uro-oncology lead to provide an update to the MCN Advisory Board. (Oncology)						

