SCAN
South East Scotland Cancer Network

NHS SCOTLAND

Working regionally to improve cancer services

SOUTH EAST SCOTLAND CANCER NETWORK (SCAN)
PROSPECTIVE CANCER AUDIT

Bladder Cancer 2019-20 Comparative Audit Report

Patients diagnosed 1st April 2019 to 31st March 2020

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Document History

Version	Circulation	Date	Comments
1	SCAN leads sign off meeting	16/03/2021	Agree actions and comments
2	SCAN Sign off group	17/03/2021	For confirmation of actions and comments. For insertion of clinical Lead's commentary
3	SCAN Urology Group	24/03/2021	For final approval / comments
4	SCAN Clinical Governance Framework, Action Plan Leads and SCAN Urology Group	08/04/2021	
4w	Report assessed for disclosive data and report to be added to SCAN Website	2022	

Lead clinician summary

This is year 6 of the Bladder Cancer QPIs and I am pleased to note the audit findings from SCAN – It has been 2 years since incorporating changes to QPIs and measurability criteria following the formal national review meeting. In addition, having recently published results from our large Scottish collaborative project on post-QPI NMIBC clinical outcomes (DOI: 10.1016/j.eururo.2020.06.051), where we described low early recurrence and accurate staging across centres managing 2/3rds of Scotland's Bladder Cancer patients; I am particularly keen for us to gauge progress in the second 3 years (i.e. 2017/18 to 2019/20) of the bladder cancer QPI dataset - this 2019/20 data will form a key part of this future analysis.

The case attainment for the QPIs has been extremely good and I continue to be impressed by the high quality and diligence in the data collection process practiced by the audit personnel within the region. Regular, necessary dialogue between audit and clinical staff has ensured data accuracy, particularly where discrepancy exists between pathology and staging scans (QPI 4, for example). I am confident that the audit data reflects the clinical experience.

The action points and recommendations following the 2018-19 audit have also been explored in my comments. NB: As we have the formal review process this year, I have highlighted (with *) the QPIs that SCAN recommends should be considered for revision.

QPI 1– SCAN has done very well with this QPI with 99% compliance in ensuring almost all NMIBC and MIBC patients being discussed at the MDM.

QPI 2(i) – Documentation of tumour characteristics are essential in the management of NMIBC. SCAN had a shortfall of 8% (a small improvement from 2018-19, nonetheless) with shortfalls of approx. 50% (an improvement from the previous year) and 4% from D&G and Fife, respectively. The emphasis is to utilise the standard operation proforma and it is anticipated that the national roll out of the electronic TRAKcare version later this year (developed by and currently being used in Lothian) will facilitate improved compliance with this QPI.

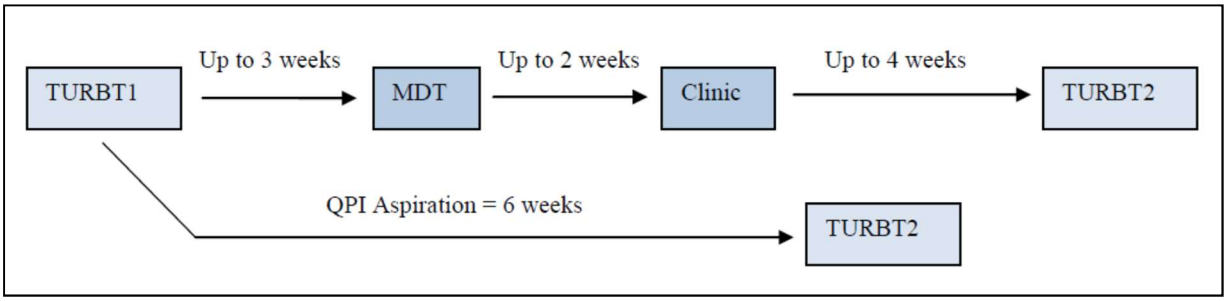
QPI 2(ii) – Unfortunately, SCAN missed this target by about 1% - however, on a positive note, despite significantly missing the target for the related QPI 2(i), close to 90% of NMIBC patients in D&G have had the completeness of TURBT documented. Once again the electronic proforma/ operation note is anticipated to help compliance with this QPI too.

QPI 2(iii)* – Despite SCAN missing the 80% target by 1.5%, this is still a very high proportion of TURBTs with Detrusor muscle sampled at initial TURBT. As it is critical to achieve this benchmark particularly in patients with high grade cancer (supported by findings in our published study), I am keen for us to consider modifying this QPI at the upcoming formal review - the denominator should be focussed on patients with high grade cancer and not all NMIBC. Training in TURBT plays an important part in ensuring we comply with this QPI.

QPI 3* - Our clinical study has revealed (for the first time in a large real-world cohort) that the use of a single instillation of Mitomycin-C following the initial TURBT is the most important factor that reduces recurrence at the first check cystoscopy in patients with low grade non-invasive bladder cancer. Despite a small improvement from 2018-19, SCAN has not met the target for this important QPI, with a shortfall of 5.1%. Lothian and Fife have achieved this target and the Borders (for the first time in 6 years) had missed the target by approx. 5%. D&G on the other hand, sadly, had a shortfall of 40%. We have been advised by audit personnel from D&G that there were several reasons noted, which includes Mitomycin-C not being requested and bleeding following TURBT. It is anticipated that the recent appointment of permanent consultant staff will help with a streamlined, consistent process. Use of the electronic operation note/ proforma will also facilitate consistency. I will also seek for modification to this QPI so that it focusses on patients with Low Grade non-invasive bladder cancer as the denominator to better reflect the ideal utility of the single instillation of Mitomycin.

QPI 4* (i), (ii), (iii) – SCAN and each constituent health board have failed to meet the target of carrying out re-TURBT (in selected patients) within 42 days of the initial TURBT. It must be noted that the significant shortfall is the result of not meeting the timing, as opposed to actually performing the re-TURBT when indicated (as also corroborated by our clinical study on outcomes).
Despite best intention and attempting to ring-fence spaces on theatre lists (as in NHS Lothian) for the early re-TURBT (or GA cystoscopy) within 42 days of the initial TURBT, there has been a significant shortfall in being able to meet this target in the SCAN region for a variety of reasons (as described in my summary last year):
(a) Capacity - There was a shortfall in capacity, despite taking up extra lists to accommodate patients with bladder cancer. In Lothian, the main reason for the capacity shortfall is the specific loss of lists to support bladder cancer capacity.
(b) Timing - With the MDM and pathology reporting based in Lothian, timescales for pathology results and discussion at the MDM have affected the ability of Borders and D&G to achieve compliance in carrying out the re-TURBT within 42 days. Suggestions have been made to ring-fence spaces/ slots on theatre lists to allow for placement as soon as the patient is discussed at the MDM. This can be challenging and in fact, based on the timeline below it is close to impossible to achieve this QPI in SCAN, given the current capacity and processes:

2019/20 Re-TURBT (QPI 4) practice in Lothian v QPI aspiration:



However, reassuringly, from our clinical study across two-thirds of Scotland (where SCAN centres and clinicians have contributed data), the risk of under-staging with the initial TURBT (the main reason for performing re-TURBT) in high risk NMIBC is very low (2.9%), therefore clinicians are reassured that consequent to a complete TURBT at the outset, the need for repeat TURBT within 42 days is becoming less and that we can be even more selective. I feel the process needs to be more nuanced. Further analysis, as part of the larger project, is being undertaken to assess if there are indeed longer term clinical disadvantages to having the re-TURBT beyond 42 days. As suggested last year, I will seek to review, with a view to modifications to this QPI at the upcoming formal review. In the meanwhile, I anticipate improved compliance to this QPI with expected added capacity following appointment of a new consultant colleague to support Bladder Cancer in NHS Lothian. An efficient processing towards MDM and ring-fenced spaces in theatre lists will certainly help.

QPI 5(i) and 5(ii) – SCAN has comfortably met the target for this very important QPI that involves standardised pathology reporting of TURBT and cystectomy specimens. We are very grateful to our Pathologists. Sustained support for our pathology colleagues across SCAN (and Scotland) is vital to achieving this crucial QPI.

QPI 6 – This is the 2nd reporting of this QPI using the new definitions of lymph node (anatomical) extent as opposed to the lymph node count. SCAN has met this target. We have agreed that, going forward, audit personnel will evaluate compliance to this QPI using the operation note description as opposed to Pathology reports - SCAN cystectomists will endeavour to use a standardised reporting template/ operation note to facilitate this.

QPI 7(i) - Following the 18.6% shortfall last year, I am pleased to note that SCAN has met this target that ensures radical treatment is commenced within 92 days of diagnosis of MIBC in 2019/20. Inadequate capacity to see 2 patients in Fife (they were subsequently seen in Lothian) prior to radical radiotherapy, resulted in the Fife shortfall.

QPI 7(ii) – There was a shortfall of 4% for this QPI (that has a very small denominator) in SCAN, with 1 patient having experienced a delay (beyond the 56-day benchmark) between completing neo-adjuvant chemotherapy and radical radiotherapy.

QPI 8 – This is the 2nd year of reporting using the new target of 20%. Radical surgery for SCAN is only carried out in Lothian and Fife. The shortfall (2 patients less than the target) for the Fife surgeon was felt to be due to an apparent reduction in patients suitable for radical treatment in 2019/20. We agreed that the surgeons' log of operations should be shared with audit personnel to ensure accurate representation of cystectomy numbers.

QPI 9* – As in the previous 6 years, this continues to be a difficult QPI to meet for SCAN with a shortfall of 12%. This trend has been noted in the other networks as well. The vast majority of patients with MIBC not meeting this QPI are noted to have a specific surgical option recommended at the MDM, i.e. there is no oncology option – oncologists for SCAN were satisfied that patients in this cohort received appropriate treatment without the potential delays associated with an additional (oncology) clinic appointment. SCAN oncologists agreed that this QPI should be considered for revision at the formal review - the options suggested are: (a) change the denominator to include only patients suitable for all radical treatment options with the numerator being number of these patients seen by an oncologist; or (b) remove QPI 9 but include an extension to QPI 1 that stipulates clearly that an oncology opinion was given.

QPI 10* – This is also another QPI that SCAN have never met in the past 6 years - the shortfall this time is about 28%. SCAN oncologists felt that the reason for patients not having concurrent chemotherapy with radical radiotherapy (not unlike previous years) was mainly because patients were clinically unsuitable for concurrent chemotherapy. Our oncology colleagues were satisfied that all patients undergoing radical radiotherapy were being assessed for concurrent chemotherapy and that there were documented clear reasons for not giving this combined

treatment. Consequently, we agreed that this QPI should be considered for revision at the formal review. Perhaps the national compliance data accumulated over the past 6 years might inform the introduction of a more achievable target for the patients in Scotland.

QPI 11* – Of 77 patients who underwent radical treatment for muscle invasive bladder cancer in SCAN, there was 1 death within 30 days of undergoing radical surgery. This patient was discussed at the Urology monthly morbidity and mortality (M&M) meeting where it was deemed that this mortality, whilst unfortunate, was within the accepted risk in patients with higher risk undergoing major surgery. No change in practice was recommended. Although SCAN met this QPI target, as the denominator is small, it would be more representative of overall clinical practice to analyse this QPI over the 3-year QPI cycle and I look forward to the collated site-specific, regional and national data being presented by PHS (NB: the Scottish overall 30-day mortality following radical surgery in the first 3-year QPI cycle was 0.9%).

The 90-day mortality rate in SCAN following radical radiotherapy exceeded the target by 8% (consequent to 3 patients, sadly passing away within 90 days of radical radiotherapy). SCAN oncology colleagues await the discussion at their M&M.
It was felt during the previous formal review, as the denominators are small, that performance against this QPI will be analysed/ reviewed in 5-year cycles to allow for more accurate interpretation of trends. In addition, as QPIs need to reflect and measure quality of care as opposed to cancer biology, perhaps the definitions and measurability criteria should be altered to only measure 30 and 90 day mortality consequent to causes un-related to the Bladder Cancer. We will discuss this at the formal review.

QPI 12 - Clinical trials access QPI – With all the NMIBC clinical trials closed to recruitment, and the numbers recruited into MIBC trials being small, we have experienced a shortfall in achieving the target for this QPI in SCAN. Although new clinical trials have been opened recently with several more in development, and we have a very active monthly GU (Genito-Urinary) Trials team meeting, recruitment to clinical trials were ceased following Covid-19. We will, consequently, see a further reduction in compliance in the 2020/21 QPI report

Param Mariappan
March 2021

Clinical Recommendation Summary from 2019-20

QPI	Action required	Lead	Date for update
2	Clinical colleagues to use bladder proforma.	Regional Lead Clinicians	7th May and ongoing
	Audit staff to annotate comments box in eCase as to whether proforma used or not (or missing from notes).	Leanne Robinson Campbell Wallis Julie Whyte Adam Steenkamp	7th May and ongoing
	QPI requires review at the forthcoming formal review (due to commence May 2021).	Lorna Bruce QPI formal review	Commences May 2021
3	Locum consultants have been covering the D&G Urology service for several years which has led to problems with continuity and general service cover. A permanent Urology consultant appointment has now commenced meaning more consistent TURBTs. The D&G proforma has been changed to include a checkbox for Mitomycin (indicated/prescribed and comments for reasons not to give, this coupled with on-going audit of cases, should result in improvement going forward. Options to deliver mitomycin within theatre are also being explored, which would also highlight decision on delivery at the time of operation. Progress should be continued to be monitored closely.	Ongoing audit D&G audit team and Lead clinician	7th May and ongoing
4	There is not enough capacity in Lothian, a new consultant appointed in October 2020 will help with future results. However, indications and timelines need revised at Formal Review.	Lorna Bruce QPI formal review	Commences May 2021
9	This QPI requires revision at the Formal review	Lorna Bruce QPI formal review	Commences May 2021
10	Changes in practice have affected the denominator for this QPI, which probably needs revised at FR.	Lorna Bruce QPI formal review	Commences May 2021

Clinical Recommendation Summary from 2018-19

QPI	Action required	Progress
1	D&G local urology MDT are not in line with the other SCAN Boards for MDM referrals / documentation. This should be addressed.	Cancer tracking staff ensure all pTa cancer are now registered for MDT regardless of fitness/treatment options. As D&G pathology is now processed in Lothian these patients also appear on the pathology output for the MDT as well as a "failsafe"
3	Streamlining the ordering and distribution of Mitomycin C post TURBT is required and discussions in Lothian with Pharmacy and SACT team are ongoing. Review of 20 cases is outstanding for D&G 2017-18 and is required for 29 patients in the 2018-19 cohort.	**D&G:** Casenote review by Mr Chaudhry - Some issues with bleeding and difficulties assessing perception of depth of resection. On-going audit of cases going forward. TURBT operative note proforma changed to include checkbox for Mitomycin indicated and prescribed and comments for reasons not to give. CNS workload not thought to be a factor but currently exploring options to deliver Mitomycin within theatre. This would also highlight decision on delivery at the time of operation. New permanent Urology consultant appointment commencing this month meaning consistent TURBT operators. **Lothian:** The Lothian arrangements and training for bedside preparation and delivery of Mitomycin C is progressing well. Awaiting SACT update.
4	Consequent to a complete TURBT at the outset, the need for repeat TURBT within 42 days is becoming smaller. However, this QPI is not met due to a capacity issue within the NHS setting. Ring-fencing lists would help but this is also a challenge. This QPI will need to be reviewed nationally once we've published the clinical data and at the next formal review.	**Lothian:** Clinical study has been published now and reveals a very low risk of under-staging with TURBT1. We need to discuss modifications to this QPI at the next formal review. In the meanwhile, for Lothian, we will be appointing another consultant and consequently increase capacity for re-TURBT.
6	Documentation needs to be explicit in operation notes. SCAN cystectomy surgeons to agree and implement standard nomenclature.	**Fife:** Consultant agreed to document specific lymph nodes taken on both the operation note and specimen sent to pathology. **Lothian:** Standard nomenclature to reflect extent of lymphadenectomy already implemented in Lothian.
8	Surgeons should share their operative logs with audit personnel for completion and accurate representation of total cystectomies performed.	**Fife:** Cancer Audit Facilitator to contact consultant when information is required for comparison. **Lothian:** Operative log shared with audit personnel in Lothian.

Bladder Cancer QPI Attainment Summary 2019-20			Target%	Borders		D&G		Fife		Lothian		SCAN	
QPI 1: MDT Discussion	Before definitive treatment (MIBC)		95	N 10 D 10	100%	N 15 D 15	100%	N 26 D 26	100%	N 55 D 56	98.2%	N 106 D 107	99.1%
	NMIBC discussed at the MDT after histological confirmation of NMIBC		95	N 30 D 31	96.8%	N 39 D 39	100%	N 64 D 64	100%	N 115 D 116	99.1%	N 248 D 250	99.2%
QPI 2: Quality of TURBT at initial resection	Detailed description with tumour location, size, number, appearance		95	N 38 D 39	97.4%	N 22 D 48	45.8%	N 63 D 69	91.3%	N 145 D 152	95.4%	N 268 D 308	87.0%
	Where the resection is documented as complete or not		95	N 38 D 39	97.4%	N 43 D 48	89.6%	N 63 D 69	91.3%	N 145 D 152	95.4%	N 289 D 308	93.8%
	Where detrusor muscle is included in the specimen at initial TURBT.		80	N 33 D 35	94.3%	N 37 D 47	78.7%	N 47 D 64	73.4%	N 113 D 147	76.9%	N 230 D 293	78.5%
QPI 3: Mitomycin C following TURBT			60	N 17 D 31	54.8%	N 8 D 42	19.0%	N 39 D 65	60.0%	N 81 D 126	64.3%	N 145 D 264	54.9%
QPI 4: Early TURBT	All T1 or Ta where multifocal or >3cm NMIBC to have re TURBT within 42 days from TURBT1		80	N 1 D 10	10.0%	N 1 D 16	6.3%	N 1 D 24	4.2%	N 0 D 45	0%	N 3 D 95	3.2%
	HG or LG G2 NMIBC with no Detrusor muscle at TURBT1 to have re TURBT in 42 days		80	N 0 D 2	0%	N 0 D 9	0%	N 2 D 17	11.8%	N 1 D 23	4.3%	N 3 D 51	5.9%
	NMIBC where resection was incomplete at TURBT1 to have re TURBT in 42 days.		80	N 0 D 2	0%	N 0 D 3	0%	N 1 D 4	25.0%	N 1 D 12	8.3%	N 2 D 21	9.5%
QPI 5: Pathology Reporting: reported according to the guidelines by the RCPath		TURBT	90	N 38 D 39	97.4%	N 52 D 54	96.3%	N 84 D 88	95.5%	N 156 D 163	95.7%	N 330 D 344	95.9%
		Cystectomy	90	Presented by Board of surgery				N 10 D 11	90.9%	N 28 D 28	100%	N 38 D 39	97.4%
QPI 6: Lymph Node Yield. Pelvic lymph node dissection to at least level 2 undertaken at radical cystectomy			90	Presented by Board of surgery				N 9 D 10	90.0%	N 27 D 28	96.4%	N 36 D 38	94.7%
QPI 7: Time to Treatment (MIBC)	Radical treatment within 3 months of diagnosis of MIBC		90	N 4 D 4	100%	N 8 D 8	100%	N 8 D 10	80.0%	N 18 D 20	90.0%	N 38 D 42	90.5%
	Cystectomy or chemoradiotherapy within 8 weeks of neoadjuvant chemotherapy		90	N 1 D 2	50.0%	N 0 D 0	N/A	N 1 D 1	100%	N 4 D 4	100%	N 6 D 7	85.7%
QPI 8: Volume of Cases / Surgeon: number of radical cystectomy procedures performed by a surgeon over a 1 year.			≥20	1 Surgeon met the QPI Target in SCAN.									
QPI 9: Oncological Discussion: MIBC patients who had radical surgery who met with an oncologist prior to radical cystectomy.			60	N 3 D 4	75.0%	N 1 D 1	100%	N 4 D 8	50.0%	N 4 D 12	33.3%	N 12 D 25	48.0%

Bladder Cancer QPI Attainment Summary 2019-20		Target%	Borders	D&G	Fife	Lothian	SCAN
QPI 10 Patients with TCC of the bladder (stageT2-T4) undergoing radical radiotherapy who receive concomitant chemotherapy.		50	N 0 D 2 0%	N 1 D 6 16.7%	N 1 D 3 33.3%	N 3 D 12 25.0%	N 5 D 23 21.7%
QPI 11: 30 Day Mortality. Patients with bladder cancer who die within 30 days of treatment with curative intent for bladder cancer.	Radical Surgery	<3	Presented by Board of surgery		N 0 D 10 0%	N 1 D 28 3.6%	N 1 D 38 2.6%
	Radiotherapy	<3	N 0 D 2 0%	N 0 D 7 0%	N 0 D 7 0%	N 0 D 12 0%	N 0 D 28 0%
	Chemotherapy	<3	N 0 D 2 0%	N 0 D 1 0%	N 0 D 3 0%	N 0 D 5 0%	N 0 D 11 0%
QPI 11: 90 Day Mortality Patients with bladder cancer who die within 90 days of treatment with curative intent for bladder cancer.	Radical Surgery	<5	Presented by Board of surgery		N 0 D 10 0%	N 1 D 27 3.7%	N 1 D 37 2.7%
	Radiotherapy	<5	N 0 D 2 0%	N 1 D 7 14.3%	N 0 D 3 0%	N 2 D 11 18.2%	N 3 D 23 13.0%
	Chemotherapy	<5	N 0 D 2 0%	N 0 D 1 0%	N 0 D 3 0%	N 0 D 5 0%	N 0 D 11 0%
Clinical Trial Access. N = Consented to trials or research (SCRN database) D = 5 year average Cancer Registry incidence		15	N 1 D 19 5.3%	N 2 D 32 6.3%	N 1 D 60 1.7%	N 7 D 125 5.6	N 11 D 236 4.7%

Introduction and Methods

Cohort

This report covers patients newly diagnosed with bladder cancer in SCAN between 01/04/2019 and 31/03/2020. The results contained within this report have been presented by NHS board of diagnosis. Where the QPI relates to surgical outcomes the results are presented by hospital of surgery.

Dataset and Definitions

The QPIs have been developed collaboratively with the three Regional Cancer Networks, Public Health Scotland (PHS), and Healthcare Improvement Scotland. It is intended that QPIs will be kept under regular review and be responsive to changes in clinical practice and emerging evidence.

The overarching aim of the cancer quality work programme is to ensure that activity at NHS board level is focused on areas most important in terms of improving survival and patient experience, whilst reducing variance and ensuring safe, effective and person-centred cancer care.

Following a period of development, public engagement and finalisation, each set of QPIs is published by Healthcare Improvement Scotland.

Accompanying datasets and measurability criteria for QPIs are published on the PHS website link. NHS boards are required to report against QPIs as part of a mandatory, publicly reported, programme at a national level.

The QPI dataset for bladder cancer was implemented from 01/04/2014, and this is the sixth publication of QPI results for bladder cancer within SCAN.

After Formal Review of QPIs the following QPIs were amended.

QPI 1, QPI 2, QPI 4, QPI 6, QPI 7, QPI 8, QPI 9 and QPI 11.

The standard QPI format is shown below:

QPI Title:	Short title of Quality Performance Indicator (for use in reports etc.)	
Description:	Full and clear description of the Quality Performance Indicator.	
Rationale and Evidence:	Description of the evidence base and rationale which underpins this indicator.	
Specifications:	Numerator:	Of all the patients included in the denominator those who meet the criteria set out in the indicator.
	Denominator:	All patients to be included in the measurement of this indicator.
	Exclusions:	Patients who should be excluded from measurement of this indicator.
	Not recorded for numerator	Include in the denominator for measurement against the target. Present as *not recorded* only if the patient cannot otherwise be identified as having met/not met the target
	Not recorded for exclusion	Include in the denominator for measurement against the target unless there is other definitive evidence that the record should be excluded. Present as *not recorded* only where the record cannot otherwise be definitively identified as an inclusion/exclusion for this standard.
	Not recorded for denominator	Exclude from the denominator for measurement against the target. Present as *not recorded* only where the patient cannot otherwise be definitively identified as an inclusion/exclusion for this standard
Target:	Statement of the level of performance to be achieved.	

[1] QPI documents are available at www.healthcareimprovementscotland.org
[2] Datasets and measurability documents are available at www.isdscotland.org

Audit Processes

Data was analysed by the audit facilitators in each NHS board according to the measurability document provided by ISD. SCAN data was collated by Adam Steenkamp, SCAN Audit Facilitator for Urological cancer.

Data capture focuses around the process for the weekly multidisciplinary meetings (MDM), ensuring that information is collected through routine processes. Data is recorded in eCase for Borders, Dumfries & Galloway, Fife and Lothian.

Clinical Sign-Off: This report compares analysed data from Borders, D&G, Fife and Lothian and was signed off as accurate following review by the lead clinicians from each board. The collated SCAN results were reviewed jointly by the lead clinicians, including oncologists, to assess variances and provide comments on results.

Lead Clinicians and Audit Personnel

SCAN Region	Hospital	Lead Clinician	Audit Support
NHS Borders	Borders General Hospital	Mr Ben Thomas	Leanne Robinson
NHS Dumfries & Galloway	Dumfries & Galloway Royal Infirmary	Miss Maria Bews-Hair	Campbell Wallis
NHS Fife	Queen Margaret Hospital	Mr I Mitchell	Julie Whyte
SCAN & NHS Lothian	Western General Hospital and St John's Hospital	Mr P Mariappan Dr D Noble	Adam Steenkamp

Data Quality

Estimate of Case Ascertainment

An estimate of case ascertainment (the percentage of the population with bladder cancer recorded in the audit) is made through comparison with the Scottish Cancer Registry five year average data from 2014 to 2018. High levels of case ascertainment provide confidence in the completeness of the audit recording and contribute to the reliability of results presented. Levels greater than 100% may be attributable to an increase in incidence. Allowance should be made when reviewing results where numbers are small and variation may be due to chance.

Number of cases recorded in audit: Patients diagnosed between 01/04/2019 and 31/03/2020

	Borders	D&G	Fife	Lothian	SCAN
Bladder Cancer	42	57	99	198	396

Estimate of Case Ascertainment: Calculated using the average of the most recent available five years of Cancer Registry Data 2014 – 2018.

	Borders	D&G	Fife	Lothian	SCAN
Cases from Audit	42	57	99	198	396
Cancer Registry 5 Year Average	19	32	60	125	236
Case Ascertainment %	**221**	**178**	**165**	**158**	**168**

Note: Extract of data taken from PHS Cancer Registry data mart ACaDMe on 30/01/2021

Quality Assurance

All hospitals in the region participate in a Quality Assurance (QA) programme provided by Public Health Scotland (PHS). QA of the bladder cancer data has been carried out on year 1 QPI data. Performance was above 90% in each SCAN Health Board but numerous dataset changes and different interpretation by ISD mean that the performance is not a true reflection of audit practice in SCAN and around the country.

Clinical Sign-Off

This report compares data from reports prepared for individual hospitals and was signed off as accurate following review by the lead clinicians from each service. The collated SCAN results are reviewed jointly by the lead clinicians, to assess variances and provide comments on results:

- Individual health board results were reviewed and signed-off locally.
- Regional sign off meeting achieved remotely on 16th March 2021.
- Final report circulated to SCAN Urology Group and Clinical Governance Groups on 8th April 2021.

Actions for Improvement

After final sign off, the process is for the report to be sent to the Clinical Governance groups with action plans for completion at Health Board level which are returned to SCAN Audit and subsequently reported to the Regional Cancer Planning Group.

The final report is placed on the SCAN website, with completed action plans, once it has been fully signed-off and checked for any disclosive information.

QPI 1i - Multi-Disciplinary Team Meeting Discussion - Target = 95%

Title: Patients with bladder cancer should be discussed by a multidisciplinary team (MDT) prior to definitive treatment.

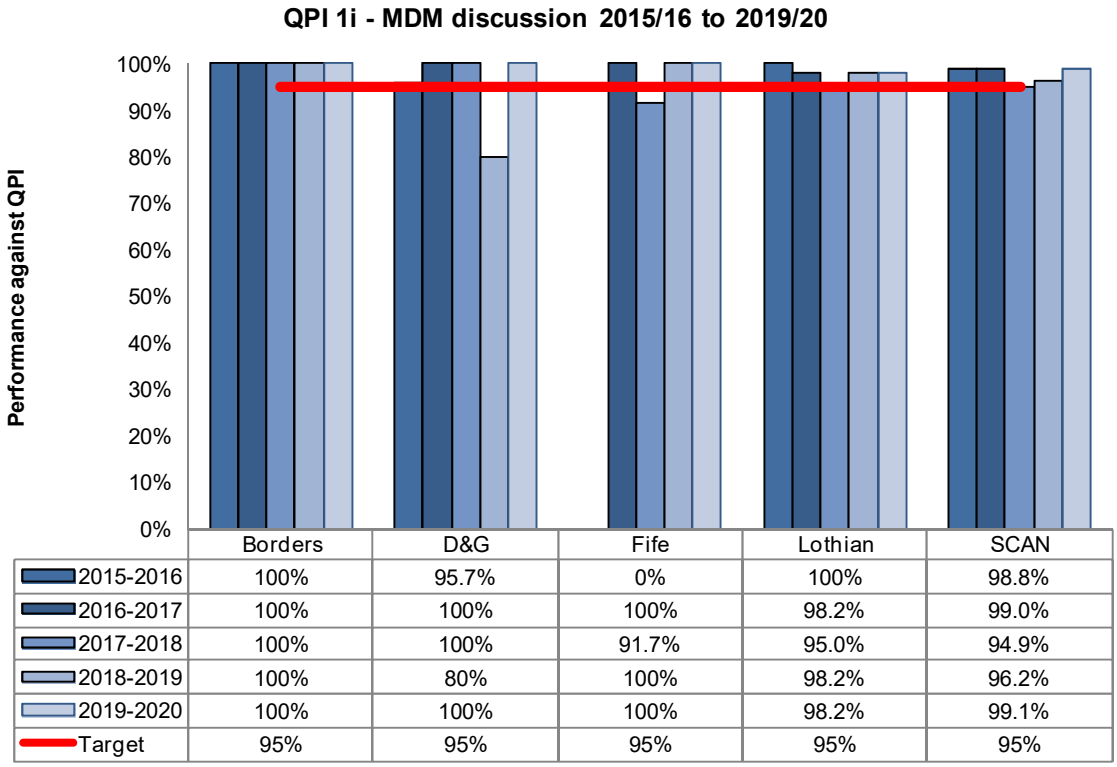
Numerator = Patients with muscle invasive bladder cancer (MIBC) discussed at the MDT before definitive treatment (this includes: neo-adjuvant SACT, radical cystectomy, radiotherapy and supportive care only).

Denominator = All patients with MIBC, excluding patients who died before first treatment.

The tolerance within this target is designed to account for situations where patients require treatment urgently.

Presented by Board of Diagnosis

Target 95%	Borders	D&G	Fife	Lothian	SCAN
2019-20 cohort	42	57	99	198	396
Ineligible for analysis	32	42	73	142	289
Excluded from analysis	0	0	0	0	0
Numerator	10	15	26	55	106
Not recorded for numerator	0	0	0	0	0
Denominator	10	15	26	56	107
Not recorded for exclusion	0	0	0	0	0
Not recorded for denominator	0	0	0	0	0
% Performance	**100**	**100**	**100**	**98.2**	**99.1**



	Borders	D&G	Fife	Lothian	SCAN
2015-2016	100%	95.7%	0%	100%	98.8%
2016-2017	100%	100%	100%	98.2%	99.0%
2017-2018	100%	100%	91.7%	95.0%	94.9%
2018-2019	100%	80%	100%	98.2%	96.2%
2019-2020	100%	100%	100%	98.2%	99.1%
Target	95%	95%	95%	95%	95%

QPI 1ii - Multi-Disciplinary Team Meeting Discussion - Target = 95%

Title: Patients with bladder cancer should be discussed by a multidisciplinary team (MDT) prior to definitive treatment.

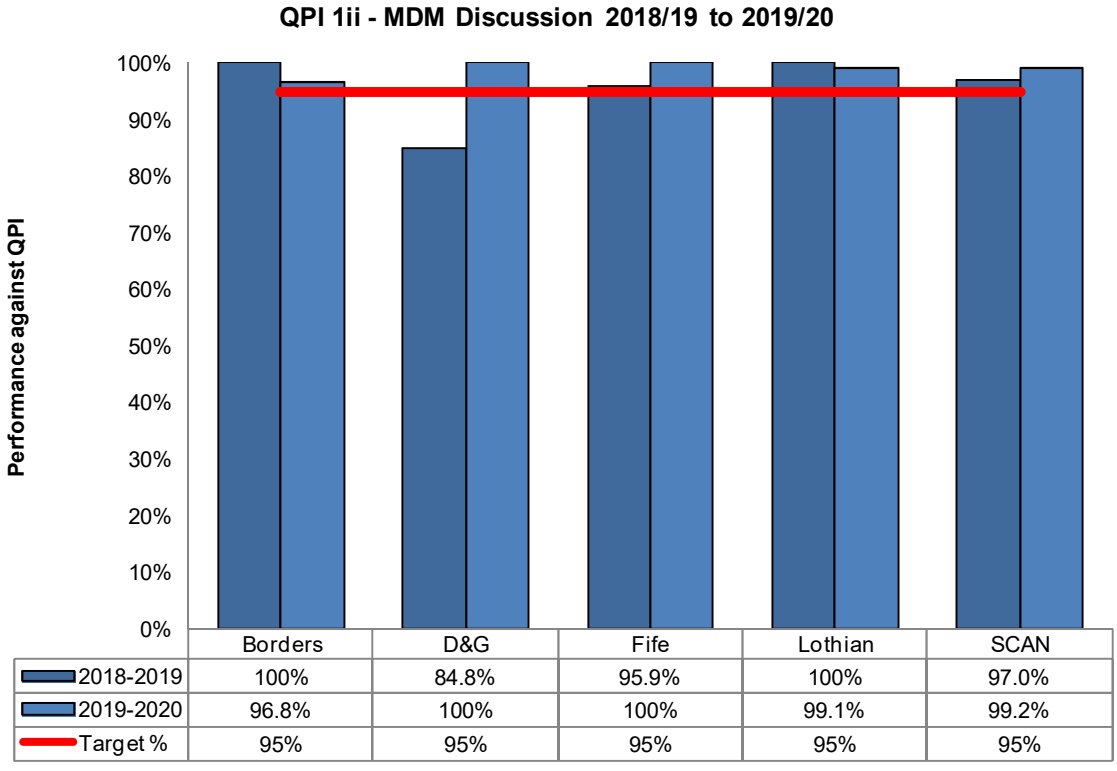
Numerator = Patients with NMIBC discussed at the MDT following histological confirmation of bladder cancer.

Denominator = All patients with NMIBC.

The tolerance within this target is designed to account for situations where patients require treatment urgently.

Presented by Board of Diagnosis

Target 95%	Borders	D&G	Fife	Lothian	SCAN
2019-20 cohort	42	57	99	198	396
Ineligible for analysis	11	18	34	82	145
Excluded from analysis	0	0	0	0	0
Numerator	30	39	64	115	248
Not recorded for numerator	0	0	0	0	0
Denominator	31	39	64	116	250
Not recorded for exclusion	0	0	0	0	0
Not recorded for denominator	0	0	1	0	1
% Performance	**96.8**	**100**	**100**	**99.1**	**99.2**



QPI 2i - Quality of Transurethral Resection of Bladder Tumour - Target = 95%

Title: Transurethral resection of bladder tumour (TURBT) procedures undertaken should be of good quality.

Numerator = 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 = Patients undergoing palliative resection or very small tumours (≤5mm).

The tolerance within this target level accounts for the fact that it is not always possible to include detrusor muscle within the specimen.

Target 95%	Borders	D&G	Fife	Lothian	SCAN
2019-20 cohort	42	57	99	198	396
Ineligible for analysis	3	3	11	35	52
Excluded from analysis	0	6	19	11	36
Numerator	38	22	63	145	268
Not recorded for numerator	0	0	0	0	0
Denominator	39	48	69	152	308
Not recorded for exclusion	1	19	4	6	30
Not recorded for denominator	0	0	0	0	0
% Performance	**97.4**	**45.8**	**91.3**	**95.4**	**87.0**

Comment:

D&G: The QPI target was not met showing a shortfall of 49.2% (26 cases) size and number the most common items missing. There is now a proforma for operative notes for TURBT with a bladder diagram on it that is put out by theatre staff for each case. This was not always happening and the form has not been used by all locums. This has been raised with the team.

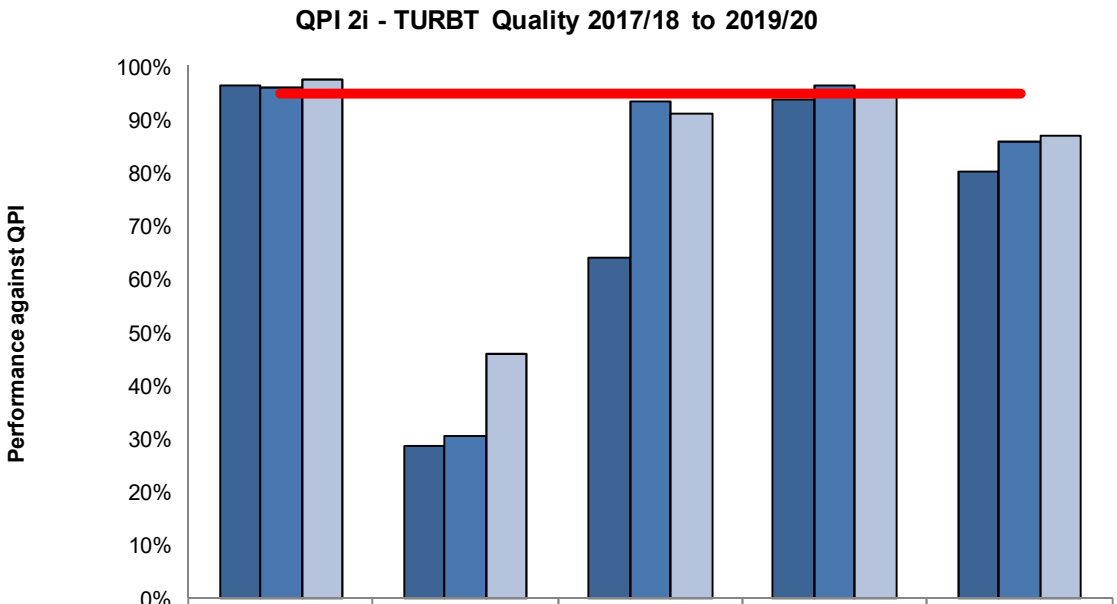
Fife: The QPI target was not met showing a shortfall of 3.7% (6 cases) 3 TURBT pro-forma was not used. 1 operation note had number of tumours missing. 1 op note was missing from the casenotes (no electronic version) 1 CAF was unable to access the casenotes/op note (no electronic version) prior to analysis. Going forward, we are working on how we can place op notes on the portal system electronically. The 4 NR for exclusion did not have any reference to the size of the tumour.

Comment: Electronic proforma currently being developed for TRAK nationally.

Action: Clinical colleagues in D&G and Fife to use paper proforma.

Audit staff to annotate comments box in eCase as to whether proforma used or not (or missing from notes).

QPI requires review at the forthcoming formal review (due to commence May 2021).



	Borders	D&G	Fife	Lothian	SCAN
2017-2018	96.3%	28.6%	63.9%	93.7%	80.2%
2018-2019	96.2%	30.4%	93.5%	96.4%	86.0%
2019-2020	97.4%	45.8%	91.3%	95.4%	87.0%
Target %	95%	95%	95%	95%	95%

QPI 2ii - Quality of Transurethral Resection of Bladder Tumour - Target = 95%

Title: Transurethral resection of bladder tumour (TURBT) procedures undertaken should be of good quality.

Numerator = 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 or with very small tumours (≤5mm).

The tolerance within this target level accounts for the fact that it is not always possible to include detrusor muscle within the specimen.

Target 95%	Borders	D&G	Fife	Lothian	SCAN
2019-20 cohort	42	57	99	198	396
Ineligible for analysis	2	3	11	35	51
Excluded from analysis	1	6	19	11	37
Numerator	38	43	63	145	289
Not recorded for numerator	0	0	0	0	0
Denominator	39	48	69	152	308
Not recorded for exclusion	1	19	4	6	30
Not recorded for denominator	0	0	0	0	0
% Performance	**97.4**	**89.6**	**91.3**	**95.4**	**93.8**

Comment:

D&G: The QPI target was not met showing a shortfall of 5.4% (5 cases) not documented if resection complete.

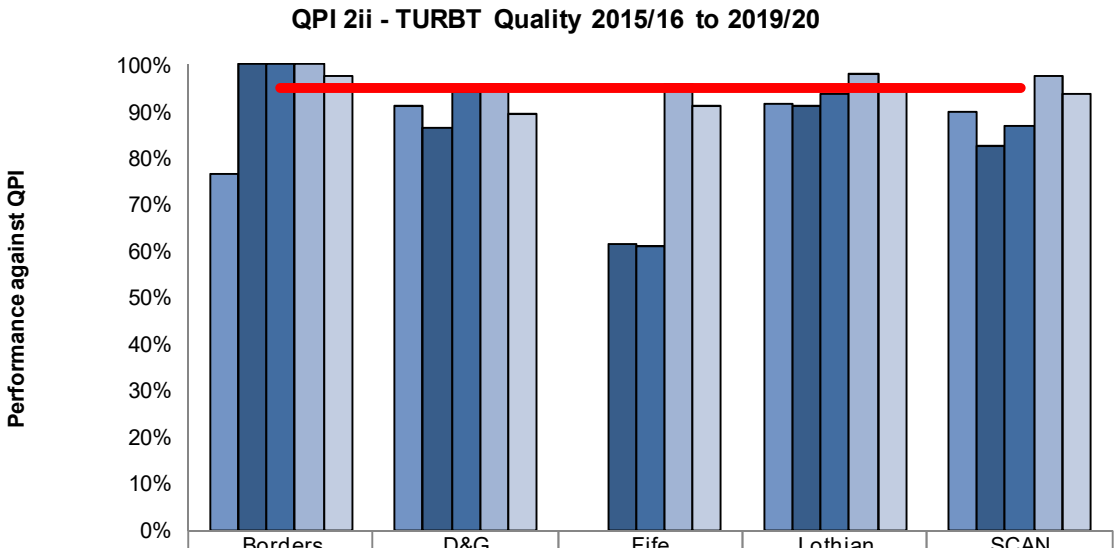
Fife: The QPI target was not met showing a shortfall of 3.7% (6 cases) 3 the TURBT pro-forma was not used. 1 operation note did not specify if the resection was complete or incomplete. 2 operation notes were missing from the casenotes (no electronic version). 4 NR

for exclusion did not have any reference to the size of the tumour. It is noted that due to changes in theatre usage due to COVID 19, there do seem to be occasions where the pro-forma was not available in theatre.

Action: Clinical colleagues to use paper proforma.

Audit staff to annotate comments box in eCase as to whether proforma used or not (or missing from notes).

QPI requires review at the forthcoming formal review (due to commence May 2021).



	Borders	D&G	Fife	Lothian	SCAN
2015-2016	76.7%	91.1%	0%	91.7%	89.8%
2016-2017	100%	86.4%	61.3%	91.1%	82.7%
2017-2018	100%	94.3%	61.1%	93.7%	87.0%
2018-2019	100%	95.7%	96.1%	98.2%	97.5%
2019-2020	97.4%	89.6%	91.3%	95.4%	93.8%
Target %	95%	95%	95%	95%	95%

QPI 2iii - Quality of Transurethral Resection of Bladder Tumour - Target = 80%

Title: Transurethral resection of bladder tumour (TURBT) procedures undertaken should be of good quality.

Numerator = 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 = Patients undergoing palliative resection, with very small tumours (≤5mm) or patients with bladder diverticular tumours.

The tolerance within this target level accounts for the fact that it is not always possible to include detrusor muscle within the specimen.

Target 80%	Borders	D&G	Fife	Lothian	SCAN
2019-20 cohort	42	57	99	198	396
Ineligible for analysis	1	3	11	34	49
Excluded from analysis	6	7	24	17	54
Numerator	33	37	47	113	230
Not recorded for numerator	0	0	1	1	2
Denominator	35	47	64	147	293
Not recorded for exclusion	0	47	4	6	57
Not recorded for denominator	0	0	0	0	0
% Performance	**94.3**	**78.7**	**73.4**	**76.9**	**78.5**

Comment:

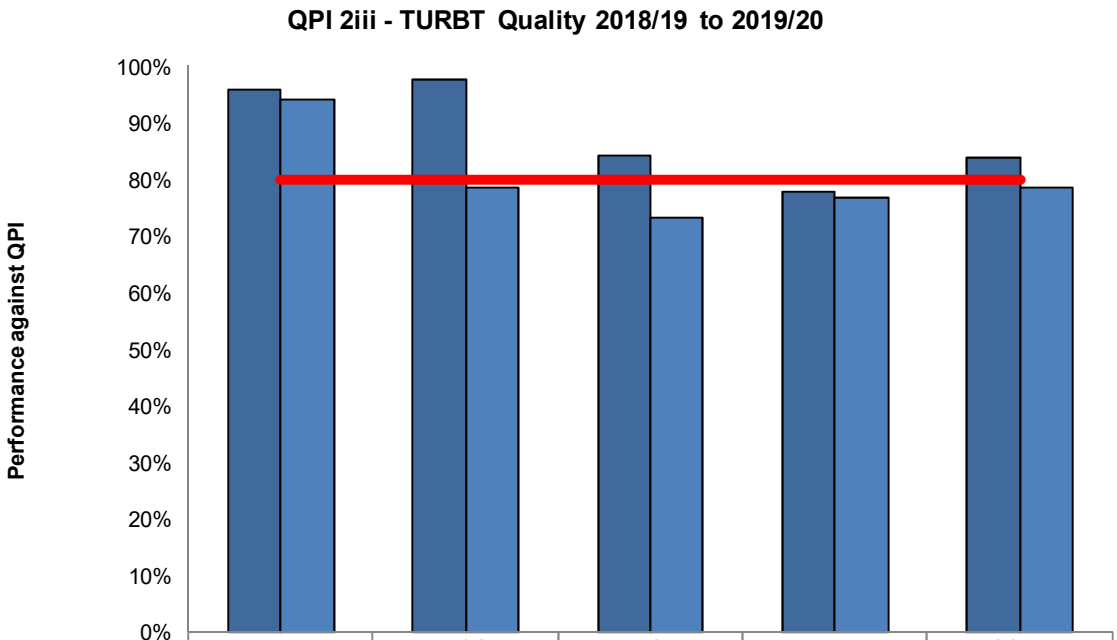
D&G: The QPI target was not met showing a shortfall of 1.3% (10 cases) detrusor muscle was not sampled in these cases.

Fife: The QPI target was not met showing a shortfall of 6.6% (17 cases) Detrusor Muscle not included in specimens. 4 NR for exclusion were due to tumour size not being recorded.

Lothian: The QPI target was not met showing a shortfall of 3.1% (33 cases) Detrusor muscle not present in TURBT1.

Action: Use of proforma encouraged as per parts (i) and (ii).

QPI needs changed at formal review, inclusion of detrusor muscle is not important in low grade cancers.



	Borders	D&G	Fife	Lothian	SCAN
2018-2019	95.8%	97.8%	84.4%	77.8%	83.8%
2019-2020	94.3%	78.7%	73.4%	76.9%	78.5%
Target %	80%	80%	80%	80%	80%

QPI 3 - Mitomycin C Following TURBT - Target = 60%

Title: Patients with non muscle invasive bladder cancer (NMIBC) who undergo TURBT should receive a single instillation of Mitomycin C (MMC) within 24 hours of resection, unless contraindicated.

Numerator = 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 (no exclusions).

The tolerance within this target is designed to account for situations where patients have severe haematuria which requires continuous irrigation or surgical intervention. At time of TURBT it is often difficult to identify if the disease is superficial or invasive; therefore in order to minimise over-treatment, some patients with suspected MIBC may not receive (MMC.

Target 60%	Borders	D&G	Fife	Lothian	SCAN
2019-20 cohort	42	57	99	198	396
Ineligible for analysis	11	15	33	72	131
Excluded from analysis	0	0	0	0	0
Numerator	17	8	39	81	145
Not recorded for numerator	0	0	1	4	5
Denominator	31	42	65	126	264
Not recorded for exclusion	0	0	0	0	0
Not recorded for denominator	0	0	1	0	1
% Performance	**54.8**	**19.0**	**60.0**	**64.3**	**54.9**

Further analysis in Lothian to exclude clinically diagnosed MIBC (where Mitomycin C does not apply) Shows a numerator of 81 (4 NR) and denominator of 119 giving a performance of 68.1%

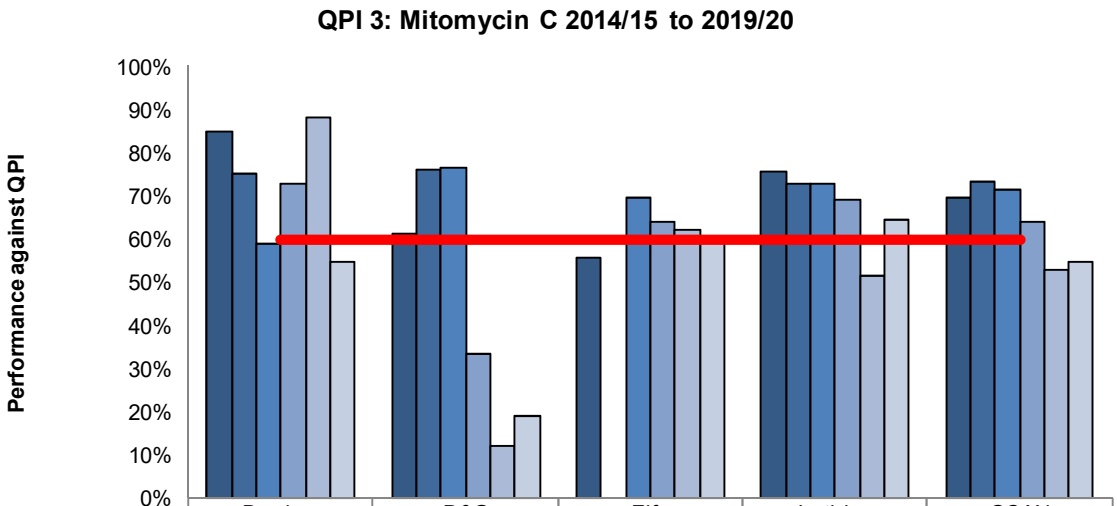
Comment:

BGH: The QPI target was not met showing a shortfall of 5.2% (14 cases) 4 bladder wall too thin. 3 solid tumours. 4 deep resections. 2 low suspicion of cancer cases. 1 lesion too small. No actions identified.

D&G: The QPI target was not met showing a shortfall of 41% (34 cases) 33 cases Mitomycin was not given. Contributing factors included haemorrhage, uncertainty of depth of resection, infection and locums performing TURBTs. To improve this going forward documentation of whether or not Mitomycin to be given has been added to operation note proforma and the administration of Mitomycin in day surgery is being progressed.

D&G Comment: Locum consultants have been covering the D&G Urology service for several years which has led to problems with continuity and general service cover. A permanent Urology consultant appointment has now commenced meaning more consistent TURBTs. The D&G proforma has been changed to include a checkbox for Mitomycin (indicated/prescribed and comments for reasons not to give, this coupled with on-going audit of cases, should result in improvement going forward. Options to deliver mitomycin within theatre are also being explored, which would also highlight decision on delivery at the time of operation. Progress should be continued to be monitored closely.

Action: No further actions identified.



	Borders	D&G	Fife	Lothian	SCAN
2014-2015	85.0%	61.1%	55.8%	75.7%	69.5%
2015-2016	75.0%	75.9%	0%	72.7%	73.5%
2016-2017	58.8%	76.5%	69.4%	72.8%	71.5%
2017-2018	72.7%	33.3%	63.8%	69.2%	64.1%
2018-2019	88.0%	12.1%	62.0%	51.4%	52.8%
2019-2020	54.8%	19.0%	60.0%	64.3%	54.9%
Target	60%	60%	60%	60%	60%

QPI 4i - Early TURBT - Target = 80%

Title: Patients who have undergone TURBT with high grade Ta* (multifocal - more than 2 or large >3cm) 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.

Numerator = Patients with T1 (all grades) or select high grade Ta* (multifocal - more than 2 or large >3cm) 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.

Exclusion = Where TURBT has been carried out for palliation, undergone early cystectomy or where metastatic disease is confirmed.

The tolerance within this target is designed to account for situations where patients are not fit enough for a further operation, where patients are frail and a thin bladder wall is suspected and where there is imaging which suggests re-TURBT is not required or where PDD (photodynamic diagnosis) TURBT has been carried out. It also accounts for those patients where there has been intra or extraperitoneal perforation.

Target 80%	Borders	D&G	Fife	Lothian	SCAN
2019-20 cohort	42	57	99	198	396
Ineligible for analysis	26	39	68	127	260
Excluded from analysis	6	2	6	26	40
Numerator	1	1	1	0	3
Not recorded for numerator	0	0	0	0	0
Denominator	10	16	24	45	95
Not recorded for exclusion	0	0	0	0	0
Not recorded for denominator	0	0	1	2	3
% Performance	**10.0**	**6.3**	**4.2**	**0**	**3.2**

Comment:

BGH: The QPI target was not met showing a shortfall of 70% (9 cases) 5 MDT decision for BCG rather than re-resection. 1 for cystoscopy only as per MDT decision. 2 had treatment delays. 2 with no comment.

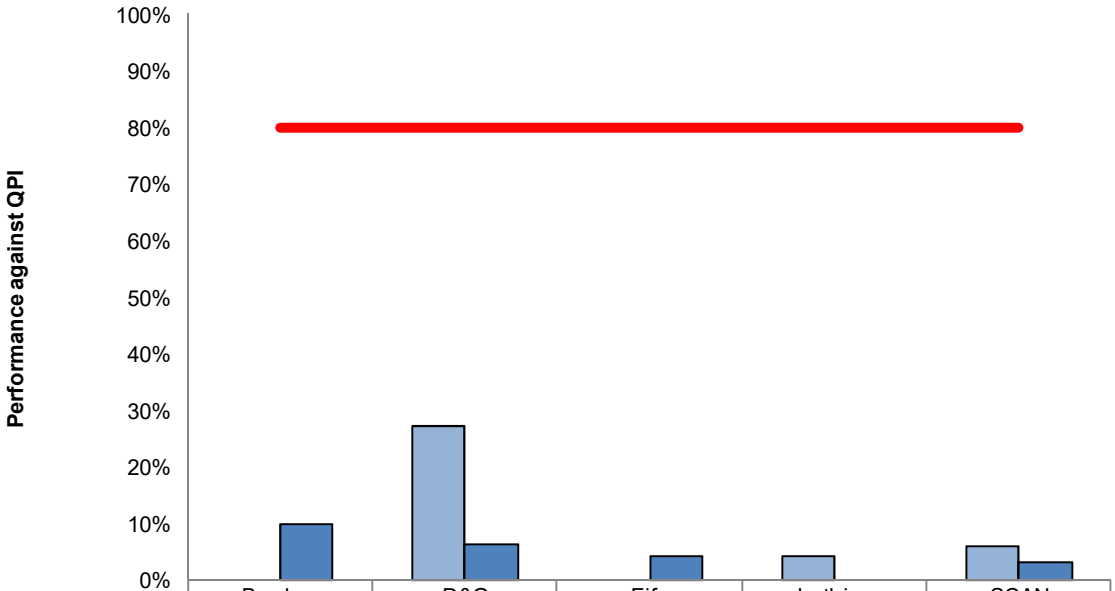
D&G: The QPI target was not met showing a shortfall of 73.7% (15 cases) 8 did not have a repeat TURBT. 7 second TURBT dates ranged between 67 and 140 days. Patients requiring repeat TURBT were being requested slots 4-6 weeks post MDT. Due to timescales for pathology and MDT discussion following initial TURBT the scheduling of re-TURBT post MDT will look to be brought forward.

Fife: The QPI target was not met showing a shortfall of 75.8% (23 cases) 9 recommended for 3 month follow up at MDM. 5 were given a course of BCG/MMC following TURBT1. 1 did not have a second procedure due to rapid progression of disease. 8 waited more than 42 days for their second procedure. It is suggested that this QPI may need reviewed at the forthcoming QPI Formal Review.

Lothian: The QPI target was not met showing a shortfall of 80% (45 cases) 18 MDM recommended options other than re-resection due to factors like overall lack of fitness (Including BSC) and concurrent cancers taking priority in treatment pathway. 4 had COVID 19 pathway delays / diversions on treatment options recorded. 1 died few days after TURBT1. 1 continued to not attend follow up appointments. 21 did not meet the criteria due to possible service limitations (including possible capacity issues) Overall pathway timeline need to be re-examined to identify possible pathway delays vs. realistic measurement of this QPI.

Action: There is not enough capacity in Lothian, a new consultant appointed in October 2020 will help with future results. However, indications and timelines need revised at Formal Review.

QPI 4i - Re-TURBT - High Grade 2018/19 to 2019/20



	Borders	D&G	Fife	Lothian	SCAN
2018-2019	0%	27.3%	0%	4.3%	6.1%
2019-2020	10.0%	6.3%	4.2%	0%	3.2%
Target %	80%	80%	80%	80%	80%

QPI 4ii - Early TURBT - Target = 80%

Title: Patients who have undergone TURBT with high grade Ta* (multifocal - more than 2 or large >3cm) 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.

Numerator = 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 (± 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.

Exclusion = Where TURBT has been carried out for palliation, undergone early cystectomy or where metastatic disease is confirmed.

The tolerance within this target is designed to account for situations where patients are not fit enough for a further operation, where patients are frail and a thin bladder wall is suspected and where there is imaging which suggests re-TURBT is not required or where PDD (photodynamic diagnosis) TURBT has been carried out. It also accounts for those patients where there has been intra or extraperitoneal perforation.

Target 80%	Borders	D&G	Fife	Lothian	SCAN
2019-20 cohort	42	57	99	198	396
Ineligible for analysis	34	48	79	149	310
Excluded from analysis	6	0	2	26	34
Numerator	0	0	2	1	3
Not recorded for numerator	0	0	0	0	0
Denominator	2	9	17	23	51
Not recorded for exclusion	0	0	0	0	0
Not recorded for denominator	0	0	1	0	1
% Performance	**0**	**0**	**11.8**	**4.3**	**5.9**

Comment:

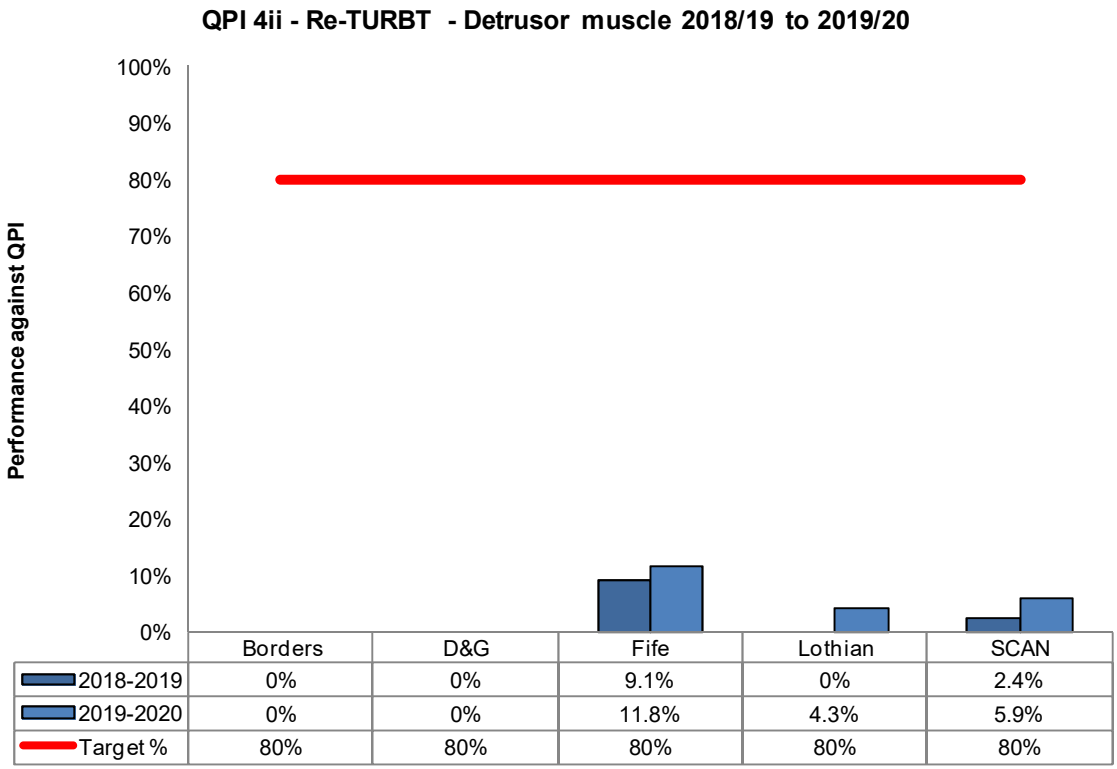
BGH: The QPI target was not met showing a shortfall of 80% (2 cases) 1 MDT recommended Mitomycin C vs. Surveillance. 1 had no comment.

D&G: The QPI target was not met showing a shortfall of 80% (9 cases) 7 did not have a repeat TURBT. 2 cases resection times ranged between 103 and 140 days.

Fife: The QPI target was not met showing a shortfall of 68.2% (15 cases) 9 were for 3 month follow up as recommended at MDM. 4 waited longer than 42 days for their second procedure. 1 did not have a second procedure due to rapid progression of disease. 1 was due a second procedure but at that time the patient was deemed no longer fit to undergo procedure. 1 Detrusor muscle status was not documented thus NR for Denominator. It is suggested that this QPI may need reviewed at the forthcoming QPI Formal Review.

Lothian: The QPI target was not met showing a shortfall of 75.7% (22 cases) 9 MDM recommended options other than re-resection due to factors like overall lack of fitness (including BSC) and concurrent cancers taking priority in treatment pathway. 1 COVID 19 delay recorded. 9 did not have re-resection - Low Grade disease pathway recorded as pathway change. 3 did not meet the criteria due to possible service limitations (including possible capacity issues) Overall pathway need to be re-examined to identify possible pathway change vs realistic measurement of this QPI.

Action: Indications and timelines need revised at Formal Review.



QPI 4iii - Early TURBT - Target = 80%

Title: Patients who have undergone TURBT with high grade Ta* (multifocal - more than 2 or large >3cm) 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.

Numerator = 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.

Exclusion = Where TURBT has been carried out for palliation, undergone early cystectomy or where metastatic disease is confirmed.

The tolerance within this target is designed to account for situations where patients are not fit enough for a further operation, where patients are frail and a thin bladder wall is suspected and where there is imaging which suggests re-TURBT is not required or where PDD (photodynamic diagnosis) TURBT has been carried out. It also accounts for those patients where there has been intra or extraperitoneal perforation.

Target 80%	Borders	D&G	Fife	Lothian	SCAN
2019-20 cohort	42	57	99	198	396
Ineligible for analysis	34	54	88	160	336
Excluded from analysis	6	0	2	26	34
Numerator	0	0	1	1	2
Not recorded for numerator	0	0	0	0	0
Denominator	2	3	4	12	21
Not recorded for exclusion	0	0	0	0	0
Not recorded for denominator	0	6	5	2	13
% Performance	**0**	**0**	**25.0**	**8.3**	**9.5**

Comment:

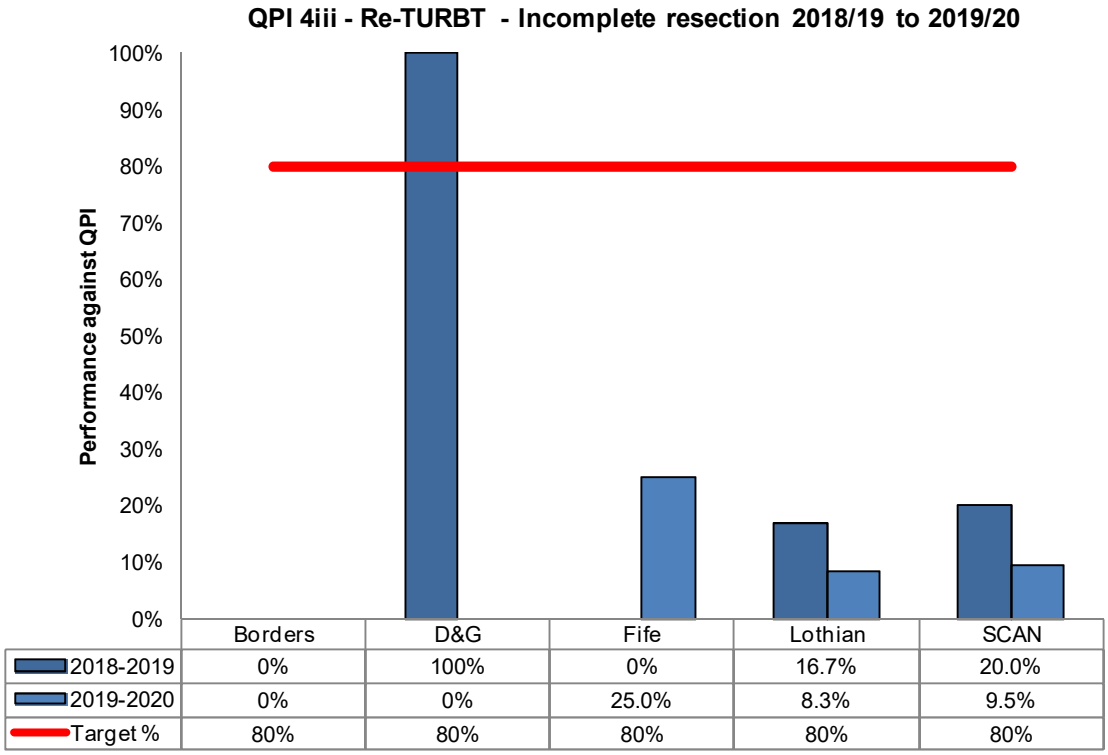
BGH: The QPI target was not met showing a shortfall of 80% (2 cases) No comments.

D&G: The QPI target was not met showing a shortfall of 80% (3 cases) re-resection times ranging from 67 to 140 days.

Fife: The QPI target was not met showing a shortfall of 55% (3 cases) (Small numbers account for large percentage variation in performance measurement). 1 was for 3 month follow up as recommended at MDM. 1 had a BCG course post-TURBT1. 1 did not have a second procedure due to rapid progression of disease. 5 NR for Denominator cases as either the pro-forma was not used or the op note was missing from the casenotes. Resection status could not be confirmed.

Lothian: The QPI target was not met showing a shortfall of 71.7% (11 cases) 4 MDM recommended options other than re-resection due to factors like overall lack of fitness (including BSC) and concurrent cancers taking priority in treatment pathway. 2 COVID 19 delay recorded. 5 did not meet the criteria due to possible service limitations (including possible capacity issues) Overall pathway need to be re-examined to identify possible pathway delays vs. realistic measurement of this QPI.

Action and Lead comment: Indications and timelines need revised at Formal Review.



	Borders	D&G	Fife	Lothian	SCAN
2018-2019	0%	100%	0%	16.7%	20.0%
2019-2020	0%	0%	25.0%	8.3%	9.5%
Target %	80%	80%	80%	80%	80%

QPI 5i – Pathology Reporting (TURBT) - Target = 90%

Title: All pathology reports for transurethral resection of bladder tumour (*TURBT*) specimens should contain comprehensive, standardised information according to the guidelines provided by the Royal College of Pathology.

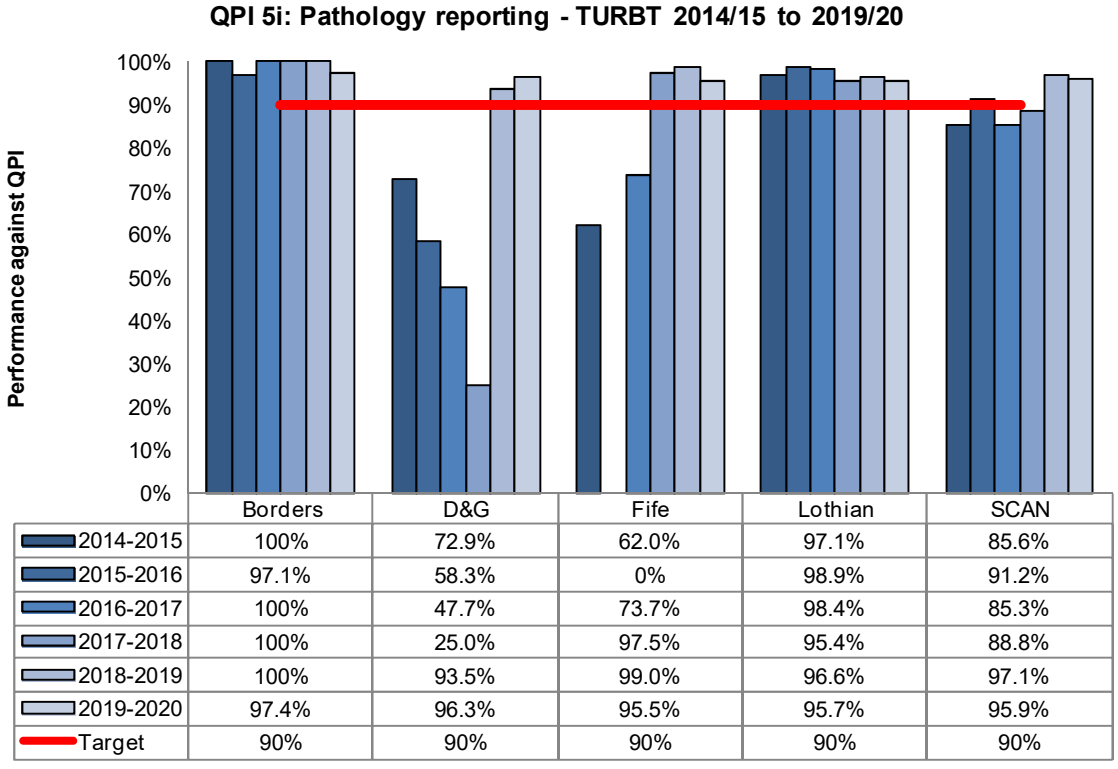
Numerator = Number of patients with bladder cancer who undergo *TURBT* or Cystectomy where pathology report contains all relevant data items.

Denominator = All patients with bladder cancer who undergo *TURBT* or Cystectomy.

Exclusions = No exclusions.

The tolerance within this target is designed to account for situations where it is not possible to report on all components of the dataset, due to specimen size and where the specimen is diathermised and unsuitable for assessment.

Target 90%	Borders	D&G	Fife	Lothian	SCAN
2019-20 cohort	42	57	99	198	396
Ineligible for analysis	3	3	11	35	52
Excluded from analysis	0	0	0	0	0
Numerator	38	52	84	156	330
Not recorded for numerator	0	0	0	0	0
Denominator	39	54	88	163	344
Not recorded for exclusion	0	0	0	0	0
Not recorded for denominator	0	3	0	0	3
% Performance	**97.4**	**96.3**	**95.5**	**95.7**	**95.9**



	Borders	D&G	Fife	Lothian	SCAN
2014-2015	100%	72.9%	62.0%	97.1%	85.6%
2015-2016	97.1%	58.3%	0%	98.9%	91.2%
2016-2017	100%	47.7%	73.7%	98.4%	85.3%
2017-2018	100%	25.0%	97.5%	95.4%	88.8%
2018-2019	100%	93.5%	99.0%	96.6%	97.1%
2019-2020	97.4%	96.3%	95.5%	95.7%	95.9%
Target	90%	90%	90%	90%	90%

QPI 5ii – Pathology Reporting (Cystectomy) - Target = 90%

Title: All pathology reports for cystectomy specimens should contain comprehensive, standardised information according to the guidelines provided by the Royal College of Pathology.

Numerator = Number of patients with bladder cancer who undergo TURBT or Cystectomy where pathology report contains all relevant data items.

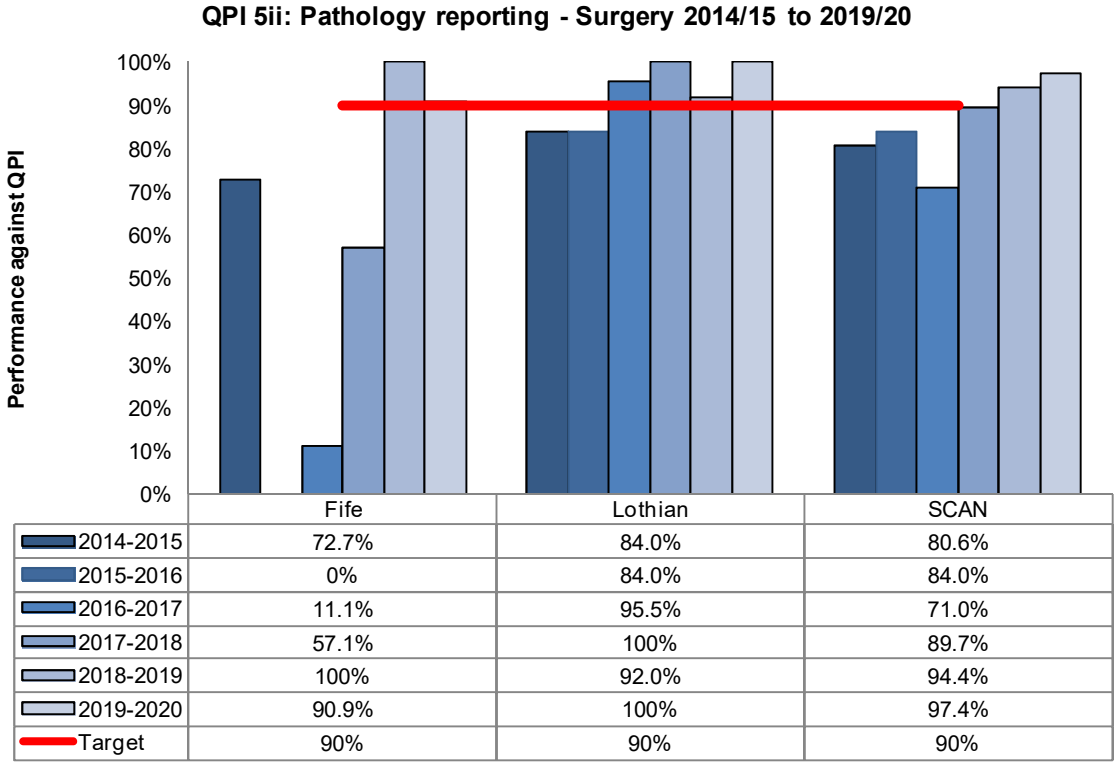
Denominator = All patients with bladder cancer who undergo TURBT or Cystectomy (no exclusions).

The tolerance within this target is designed to account for situations where it is not possible to report on all components of the dataset, due to specimen size and where specimen is diathermised and unsuitable for assessment.

Presented by Board of Surgery

Target 90%	Borders	D&G	Fife	Lothian	SCAN
2019-20 cohort	42	57	99	198	396
Ineligible for analysis	35	53	88	170	346
Excluded from analysis	0	0	0	0	0
Numerator	-	-	10	28	38
Not recorded for numerator	-	-	0	0	0
Denominator	-	-	11	28	39
Not recorded for exclusion	-	-	0	0	0
Not recorded for denominator	-	-	0	0	0
% Performance	**N/A**	**N/A**	**90.9**	**100**	**97.4**

All Cystectomies are done in Fife and Lothian. QPI targets are presented by Board of surgery where the pathology is also done.



	Fife	Lothian	SCAN
2014-2015	72.7%	84.0%	80.6%
2015-2016	0%	84.0%	84.0%
2016-2017	11.1%	95.5%	71.0%
2017-2018	57.1%	100%	89.7%
2018-2019	100%	92.0%	94.4%
2019-2020	90.9%	100%	97.4%
Target	90%	90%	90%

QPI 6 – Lymph Node Yield - Target = 90%

Title: 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 = 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.

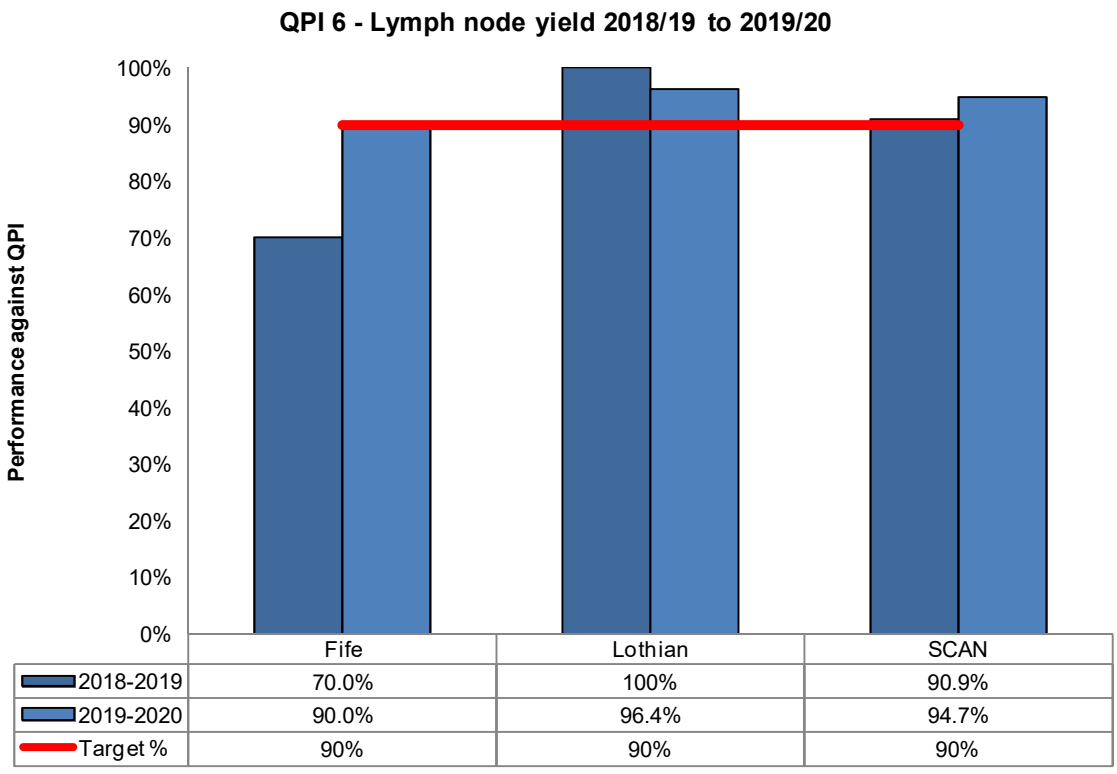
Denominator = All patients with bladder cancer who undergo primary radical cystectomy.

Exclusions = Patients undergoing salvage cystectomy.

The tolerance within this target accounts for situations where patients are not fit enough to undergo extensive lymphadenectomy.

Target 90%	Borders	D&G	Fife	Lothian	SCAN
2019-20 cohort	42	57	99	198	396
Ineligible for analysis	35	53	88	170	346
Excluded from analysis	0	0	1	0	1
Numerator	-	-	9	27	36
Not recorded for numerator	-	-	0	0	0
Denominator	-	-	10	28	38
Not recorded for exclusion	-	-	0	0	0
Not recorded for denominator	-	-	0	0	0
% Performance	**N/A**	**N/A**	**90.0**	**96.4**	**94.7**

Note: Some Fife cases taken from pathology notes rather than operation note.



QPI 7i – Time to Treatment - Target = 90%

Title: Patients with muscle invasive bladder cancer (MIBC) undergoing treatment with radical intent should commence treatment as soon as possible (within 3 months of diagnosis).

Numerator = Number of patients with MIBC who commence radical treatment (Radical cystectomy or radiotherapy) within 3 months (92 days) of diagnosis of MIBC.

Denominator = All patients with MIBC undergoing radical treatment (Radical cystectomy or radiotherapy). (No exclusions)

The tolerance within this target accounts for situations where patients are not fit enough to undergo treatment within 3 months, due to other medical conditions.

Target 90%	Borders	D&G	Fife	Lothian	SCAN
2019-20 cohort	42	57	99	198	396
Ineligible for analysis	40	49	89	170	348
Excluded from analysis	0	0	0	8	8
Numerator	4	8	8	18	38
Not recorded for numerator	0	0	0	0	0
Denominator	4	8	10	20	42
Not recorded for exclusion	0	0	0	0	0
Not recorded for denominator	0	0	0	0	0
% Performance	**100**	**100**	**80.0**	**90.0**	**90.5**

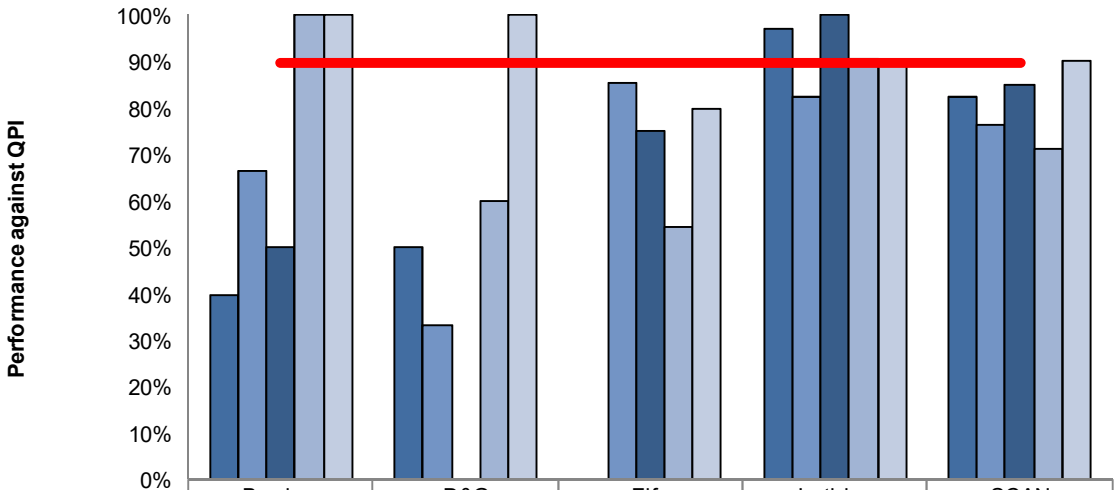
All radical treatment for patients from Borders and D&G is undertaken in NHS Lothian.

Comment:

Fife: The QPI target was not met showing a shortfall of 10% (2 case) 1 was initially for consideration of Neo-Adjuvant chemotherapy but treatment plan later changed - had a long wait on Oncology appointment due to capacity issues. 1 missed the target by 4 days with medical issues thought to be the main issue.

Action: Moves are in place to improve capacity in Fife with pre-booked urgent slots. No further actions were identified.

QPI 7i: Time to treatment 2015/16 to 2019/20



	Borders	D&G	Fife	Lothian	SCAN
2015-2016	40.0%	50.0%	0%	97.0%	82.6%
2016-2017	66.7%	33.3%	85.7%	82.4%	76.7%
2017-2018	50.0%	0.0%	75.0%	100%	85.2%
2018-2019	100%	60.0%	54.5%	90.9%	71.4%
2019-2020	100%	100%	80.0%	90.0%	90.5%
Target	90%	90%	90%	90%	90%

QPI 7ii – Time to Treatment - Target = 90%

Title: Patients with muscle invasive bladder cancer (MIBC) undergoing treatment with radical intent should commence treatment as soon as possible (within 3 months of diagnosis of MIBC) or (within 8 weeks of treatment where patients are undergoing neoadjuvant chemo).

Numerator = Number of patients with MIBC who have neo-adjuvant chemotherapy, who undergo cystectomy or chemoradiotherapy) within 8 weeks (56 days) of treatment.

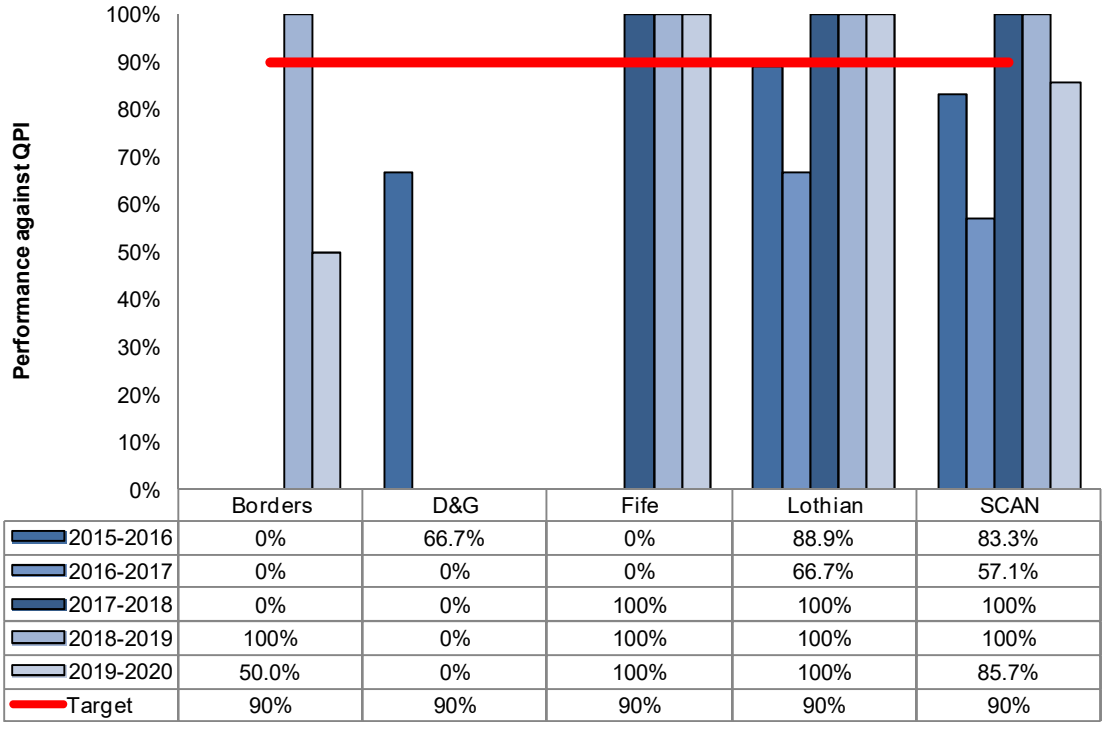
Denominator = All patients with MIBC undergoing neo-adjuvant (NA) chemotherapy (no exclusions).

The tolerance within this target accounts for situations where patients are not fit enough to undergo treatment within required timescales, due to other medical conditions.

Target 90%	Borders	D&G	Fife	Lothian	SCAN
2019-20 cohort	42	57	99	198	396
Ineligible for analysis	40	57	98	194	389
Excluded from analysis	0	0	0	0	0
Numerator	1	0	1	4	6
Not recorded for numerator	0	0	0	0	0
Denominator	2	0	1	4	7
Not recorded for exclusion	0	0	0	0	0
Not recorded for denominator	0	0	0	0	0
% Performance	**50.0**	**N/A**	**100**	**100**	**85.7**

Comment:

BGH: The QPI target was not met showing a shortfall of 40% (1 case) 6 week wait post Neo-Adjuvant chemotherapy for patient to recover before commencing surgery.



	Borders	D&G	Fife	Lothian	SCAN
2015-2016	0%	66.7%	0%	88.9%	83.3%
2016-2017	0%	0%	0%	66.7%	57.1%
2017-2018	0%	0%	100%	100%	100%
2018-2019	100%	0%	100%	100%	100%
2019-2020	50.0%	0%	100%	100%	85.7%
Target	90%	90%	90%	90%	90%

QPI 8 – Volume of Cases per Surgeon - Target = ≥ 20 cases per year.

Title: Radical cystectomy should be performed by surgeons who perform the procedure routinely.

Numerator = Number of radical cystectomy procedures performed by each surgeon in a given year.

Exclusions = No exclusions

All cystectomies are carried out in Fife and Lothian.

Board of Surgery*	Surgeon	Number of radical cystectomies
NHS Fife	A	18
NHS Lothian	B	44

*Data supplied by PHS SMR01 returns.

Comment: Lothian / SMR01 data comparison not possible during covid year.

Action: Small numbers in Fife, QPI target needs to be discussed at next FR.

QPI 9 – Oncological Discussion - Target = 60%

Title: Patients with muscle invasive bladder cancer should have all treatment options discussed with them prior to radical cystectomy.

Numerator = Number of patients with muscle invasive bladder cancer who undergo cystectomy who met with an oncologist prior to radical cystectomy.

Denominator = All patients with muscle invasive bladder cancer who undergo radical cystectomy (no exclusions)

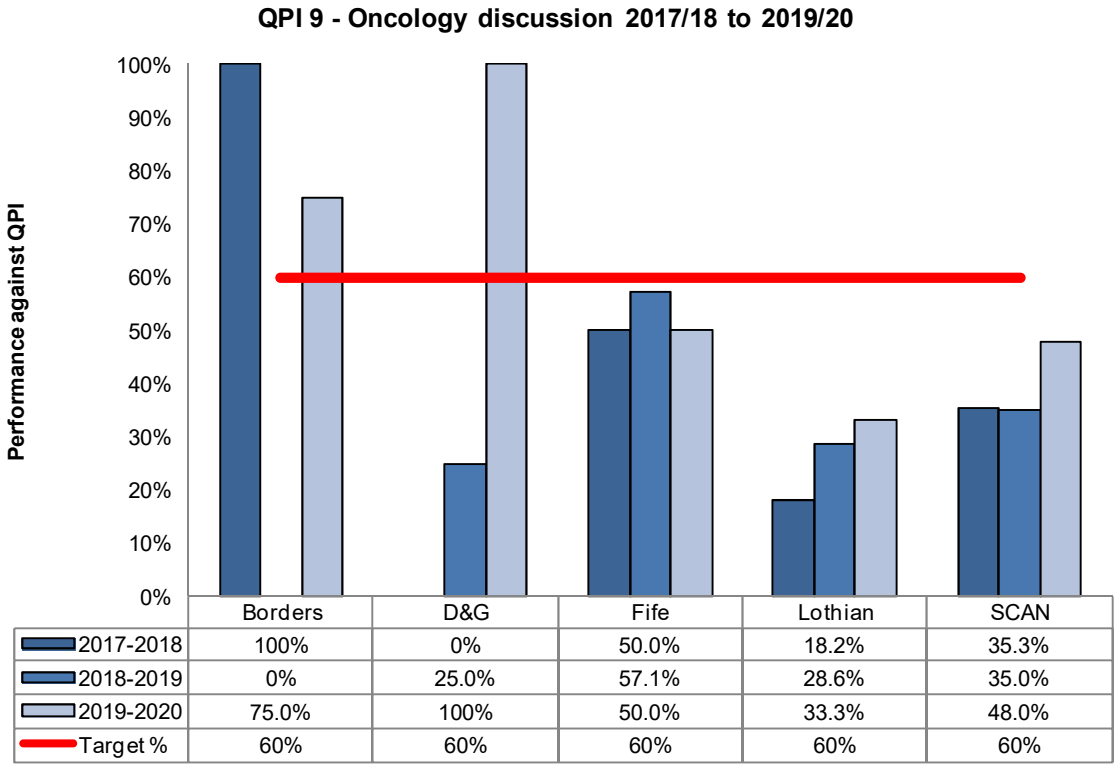
The tolerance accounts for the fact that patients might decline to see an oncologist, are deemed at multi-disciplinary team meeting to not be suitable for radical radiotherapy or neo-adjuvant chemotherapy, due to co-morbidities and for patients who undergo emergency cystectomy.

Target 60%	Borders	D&G	Fife	Lothian	SCAN
2019-20 cohort	42	57	99	198	396
Ineligible for analysis	38	56	91	186	371
Excluded from analysis	0	0	0	0	0
Numerator	3	1	4	4	12
Not recorded for numerator	0	0	0	0	0
Denominator	4	1	8	12	25
Not recorded for exclusion	0	0	0	0	0
Not recorded for denominator	0	0	0	0	0
% Performance	**75.0**	**100**	**50.0**	**33.3**	**48.0**

SCAN Oncology Comment: These patients always get discussed in MDT and for various reasons (multifocal disease, extensive CIS, symptoms and presence of hydronephrosis) would have surgery recommended as the better treatment option. There are no concerns about these cases. Given the trends over the past 6 years, this target might be too ambitious.

Action: This QPI requires revision at the Formal review.

Consider addition of specific question/domain in MDT template for MIBC as follows: “Requires joint appointment with surgery & oncology? Y/N”. For further QPI, the denominator would be patients for whom the answer to this question is Yes.’



	Borders	D&G	Fife	Lothian	SCAN
2017-2018	100%	0%	50.0%	18.2%	35.3%
2018-2019	0%	25.0%	57.1%	28.6%	35.0%
2019-2020	75.0%	100%	50.0%	33.3%	48.0%
Target %	60%	60%	60%	60%	60%

QPI 10 – Radical Radiotherapy with Chemotherapy - Target = 50%

Title: Patients undergoing radical radiotherapy for transitional cell carcinoma of bladder should be considered for 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 = Patients enrolled in a clinical trial.

The tolerance accounts for the fact that patients with cardiac disease may not be suitable to receive this type of treatment. It also accounts for the fact that due to co-morbidities and fitness, not all patients will require or be suitable for radical radiotherapy with chemotherapy.

Target 50%	Borders	D&G	Fife	Lothian	SCAN
2019-20 cohort	42	57	99	198	396
Ineligible for analysis	40	51	96	185	372
Excluded from analysis	0	0	0	1	1
Numerator	0	1	1	3	5
Not recorded for numerator	0	0	0	0	0
Denominator	2	6	3	12	23
Not recorded for exclusion	0	0	0	0	0
Not recorded for denominator	0	0	0	0	0
% Performance	**0**	**16.7**	**33.3**	**25.0**	**21.7**

Comment:

BGH: The QPI target was not met showing a shortfall of 50% (2 cases) 1 - Hydronephrosis, required nephrostomy – deemed too high risk of infection with chemotherapy.

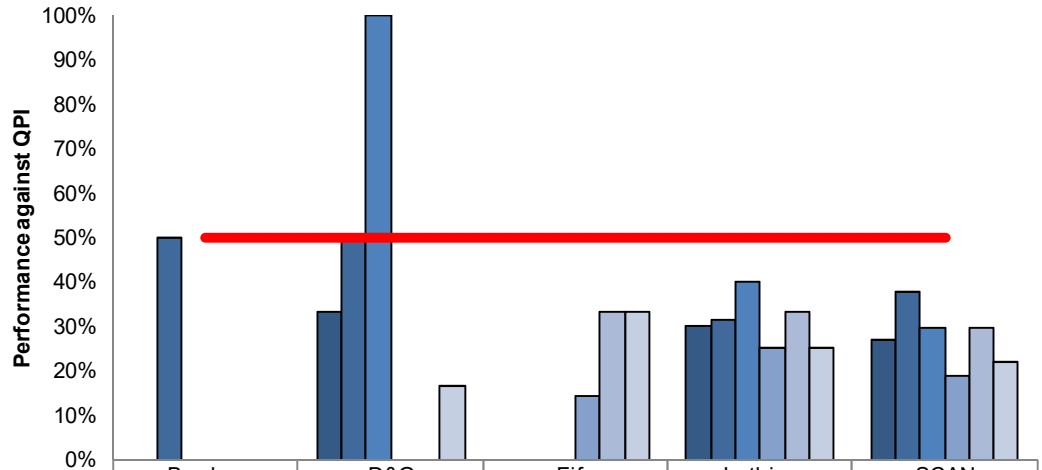
D&G: The QPI target was not met showing a shortfall of 33.3% (5 cases) 4 elderly and unfit. 1 with extensive disease documented as borderline for SACT by oncology.

Fife: The QPI target was not met showing a shortfall of 16.7% (2 cases) 2 did not receive Chemotherapy due to co-morbidities and/or patient choice.

Lothian: The QPI target was not met showing a shortfall of 25% (9 cases) all 9 cases the option of chemotherapy was thought not in the patients best interest due to multiple reasons, including pre existing conditions and other co-morbidities.

Action: All patients reviewed and treated appropriately.
Changes in practice affects denominator, this QPI probably needs revised at Formal review.

QPI 10: Radical radiotherapy with Chemotherapy 2014/15 to 2019/20



	Borders	D&G	Fife	Lothian	SCAN
2014-2015	0%	33.3%	0%	30.0%	26.9%
2015-2016	50.0%	50.0%	0%	31.3%	37.5%
2016-2017	0%	100%	0%	40.0%	29.4%
2017-2018	0%	0%	14.3%	25.0%	18.8%
2018-2019	0%	0%	33.3%	33.3%	29.4%
2019-2020	0%	16.7%	33.3%	25.0%	21.7%
Target	50%	50%	50%	50%	50%

QPI 11 – 30 day Mortality after radical treatment for Bladder cancer

Title: 30 day mortality following treatment with curative intent for bladder cancer.

Numerator: Number of patients with bladder cancer who receive treatment with curative intent (radical cystectomy, radiotherapy and chemotherapy) that die within 30 days of treatment.

Denominator: All patients with bladder cancer who receive treatment with curative intent (radical cystectomy, radiotherapy and chemotherapy).

Exclusion: No exclusions.

Surgery – Presented by Board of surgery

Target <3%	Borders	D&G	Fife	Lothian	SCAN
2019 - 2020 cohort	42	57	99	198	396
Ineligible for analysis	35	53	89	170	347
Excluded from analysis	0	0	0	0	0
Numerator – Surgery	-	-	0	1	1
Denominator – Surgery	-	-	10	28	38
% Performance	**N/A**	**N/A**	**0**	**3.6**	**2.6**

Comment:

Lothian: The QPI target was not met showing a shortfall of 0.7% (1 case) cause recorded as Myocardial Infarction and small bowel perforation. Case has been reviewed at Lothian M&M no further action identified.

Radiotherapy – Presented by Board of diagnosis

Target <3%	Borders	D&G	Fife	Lothian	SCAN
2019 - 2020 cohort	42	57	99	198	396
Ineligible for analysis	40	50	96	186	372
Excluded from analysis	0	0	0	0	0
Numerator	0	0	0	0	0
Denominator	2	7	3	12	24
% Performance	**0**	**0**	**0**	**0**	**0**

Chemotherapy – Presented by Board of diagnosis

Target <3%	Borders	D&G	Fife	Lothian	SCAN
2019 - 2020 cohort	42	57	99	198	396
Ineligible for analysis	40	56	96	193	385
Excluded from analysis	0	0	0	0	0
Numerator	0	0	0	0	0
Denominator	2	1	3	5	11
% Performance	**0**	**0**	**0**	**0**	**0**

QPI 11 90 day Mortality after radical treatment for Bladder cancer

Title: 90 day mortality following treatment with curative intent for bladder cancer.

Numerator: Number of patients with bladder cancer who receive treatment with curative intent (radical cystectomy, radiotherapy and chemotherapy) that die within 90 days of treatment.

Denominator: All patients with bladder cancer who receive treatment with curative intent (radical cystectomy, radiotherapy and chemotherapy).

Exclusion: No exclusions.

Surgery – Presented by Board of surgery

Target <5%	Borders	D&G	Fife	Lothian	SCAN
2019 - 2020 cohort	42	57	99	198	396
Ineligible for analysis	35	53	89	171	348
Excluded from analysis	0	0	0	0	0
Numerator – Surgery	-	-	0	1	1
Denominator – Surgery	-	-	10	27	37
% Performance	**N/A**	**N/A**	**0**	**3.7**	**2.7**

Radiotherapy – Presented by Board of diagnosis

Target <5%	Borders	D&G	Fife	Lothian	SCAN
2019- 2020 cohort	42	57	99	198	396
Ineligible for analysis	40	50	96	187	373
Excluded from analysis	0	0	0	0	0
Numerator	0	1	0	2	3
Denominator	2	7	3	11	23
% Performance	**0**	**14.3**	**0**	**18.2**	**13.0**

Comment:

D&G: The QPI target was not met showing a shortfall of 9.4% (1 case) Rapid progression for disease post treatment (metastatic).

Lothian: The QPI target was not met showing a shortfall of 13.3% (2 cases) No clinical concern identified with these 2 cases and pathways. These patients deaths were thought not to be bladder cancer related, but rather from pre existing conditions not exacerbated by receiving radiotherapy treatment.

Chemotherapy – Presented by Board of diagnosis

Target <5%	Borders	D&G	Fife	Lothian	SCAN
2019 - 2020 cohort	42	57	99	198	396
Ineligible for analysis	40	56	96	193	385
Excluded from analysis	0	0	0	0	0
Numerator	0	0	0	0	0
Denominator	2	1	3	5	11
% Performance	**0**	**0**	**0**	**0**	**0**

Clinical Trial Access QPI – Trials\Research Target = 15%

Title: All patients should be considered for participation in available clinical trials, wherever eligible.

Numerator = Number of patients with bladder cancer consented to an Interventional clinical trial or Translational research.

Denominator = 5 year average from Cancer Registry bladder cancer registrations.

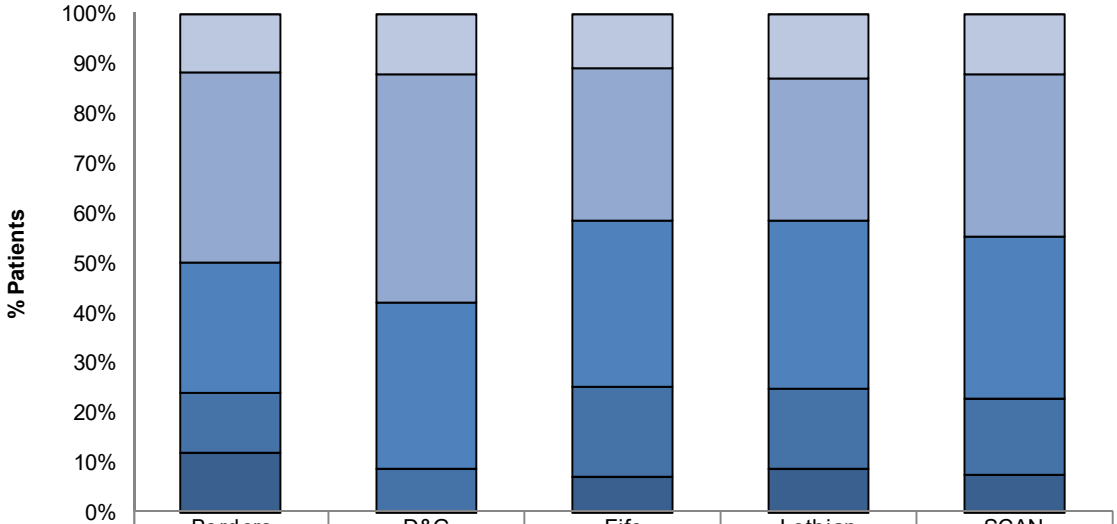
Trials Target 15%	Borders	D&G	Fife	Lothian	SCAN
Numerator	1	2	1	7	11
Denominator	19	32	60	125	236
% Performance	**5.3**	**6.3**	**1.7**	**5.6**	**4.7**

Trials in 2019	Number recruited
NET-02	1
ATLANTIS	2
QABC	7
Phase 3 Study of Durvalumab in MIBC	1

Age and Gender Analysis

Age and Gender Analysis		Borders	D&G	Fife	Lothian	SCAN
Under 45	M	2	0	1	3	6
	F	1	0	0	1	2
45 - 49	M	1	0	1	2	4
	F	1	0	0	2	3
50 - 54	M	0	0	3	4	7
	F	0	0	2	5	7
55 - 59	M	2	3	6	17	28
	F	0	0	3	3	6
60 - 64	M	2	1	7	7	17
	F	1	1	2	5	9
65 - 69	M	3	5	10	22	40
	F	1	1	4	10	16
70 - 74	M	5	11	16	19	51
	F	2	2	3	16	23
75 - 79	M	8	12	13	15	48
	F	2	4	4	9	19
80 - 84	M	5	6	10	21	42
	F	1	4	3	11	19
85+	M	2	3	9	15	29
	F	3	4	2	11	20
Total	M	30	41	76	125	272
	F	12	16	23	73	124

Age at Diagnosis 2019/20



	Borders	D&G	Fife	Lothian	SCAN
85+	11.9%	12.3%	11.1%	13.1%	12.4%
75 to 84	38.1%	45.6%	30.3%	28.3%	32.3%
65 to 74	26.2%	33.3%	33.3%	33.8%	32.8%
55 to 64	11.9%	8.8%	18.2%	16.2%	15.2%
<45 to 54	11.9%	0.0%	7.1%	8.6%	7.3%

Bladder Cancer QPI Attainment Summary 2018-19		Target%	Borders		D&G		Fife		Lothian		SCAN	
QPI 1: MDT Discussion	Before definitive treatment (MIBC)	95	N 4 D 4	100%	N 12 D 15	80.0%	N 29 D 29	100%	N 56 D 57	98.2%	N 101 D 105	96.2%
	NMIBC discussed at the MDT after histological confirmation of NMIBC	95	N 26 D 26	100%	N 28 D 33	84.8%	N 70 D 73	95.9%	N 135 D 135	100%	N 259 D 267	97.0%
QPI 2: Quality of TURBT at initial resection	Detailed description with tumour location, size, number, appearance	95	N 25 D 26	96.2%	N 14 D 46	30.4%	N 72 D 77	93.5%	N 160 D 166	96.4%	N 271 D 315	86.0%
	Where the resection is documented as complete or not	95	N 26 D 26	100%	N 44 D 46	95.7%	N 74 D 77	96.1%	N 163 D 166	98.2%	N 307 D 315	97.5%
	Where detrusor muscle is included in the specimen at initial TURBT.	80	N 23 D 24	95.8%	N 44 D 45	97.8%	N 65 D 77	84.4%	N 126 D 162	77.8%	N 258 D 308	83.8%
QPI 3: Mitomycin C following TURBT		60	N 22 D 25	88.0%	N 4 D 33	12.1%	N 44 D 71	62.0%	N 71 D 138	51.4%	N 141 D 267	52.8%
QPI 4: Early TURBT	All T1 or Ta where multifocal or >3cm NMIBC to have re TURBT within 42 days from TURBT1	80	N 0 D 8	0%	N 3 D 11	27.3%	N 0 D 17	0%	N 2 D 46	4.3	N 5 D 82	6.1%
	HG or LG G2 NMIBC with no Detrusor muscle at TURBT1 to have re TURBT in 42 days	80	N 0 D 1	0%	N 0 D 0	N/A	N 1 D 11	9.1%	N 0 D 30	0%	N 1 D 42	2.4%
	NMIBC where resection was incomplete at TURBT1 to have re TURBT in 42 days.	80	N 0 D 5	0%	N 2 D 2	100%	N 0 D 2	0%	N 1 D 6	16.7%	N 3 D 15	20.0%
QPI 5: Pathology Reporting: reported according to the guidelines by the Royal College of Pathologists	TURBT	90	N 29 D 29	100%	N 43 D 46	93.5%	N 96 D 97	99.0%	N 172 D 178	96.6%	N 340 D 350	97.1%
	Cystectomy	90	Presented by Board of surgery				N 11 D 11	100%	N 23 D 25	92.0%	N 34 D 36	94.4%
QPI 6: Lymph Node Yield	Level 2 pelvic lymph node dissection done at Radical Surgery	90	Presented by Board of surgery				N 7 D 10	70.0%	N 23 D 23	100%	N 30 D 33	90.9%
QPI 7: Time to Treatment (MIBC)	Radical treatment within 3 months of diagnosis of MIBC	90	N 1 D 1	100%	N 3 D 5	60.0%	N 6 D 11	54.5%	N 10 D 11	90.9%	N 20 D 28	71.4%
	Cystectomy or chemoradiotherapy within 8 weeks of neoadjuvant chemotherapy	90	N 1 D 1	100%	N 0 D 0	N/A	N 2 D 2	100%	N 7 D 7	100%	N 10 D 10	100%
QPI 8: Volume of Cases / Surgeon: number of radical cystectomy procedures performed by a surgeon over a 1 year.		≥20	1 Lothian surgeon performed 35 cystectomies 1 Fife surgeon performed 10 cystectomies									

Bladder Cancer QPI Attainment Summary 2018-19		Target%	Borders	D&G	Fife	Lothian	SCAN
QPI 9: Oncological Discussion: MIBC patients who had radical surgery who met with an oncologist prior to radical cystectomy.		60	N 0 D 2 0%	N 1 D 4 25.0%	N 4 D 7 57.1%	N 2 D 7 28.6%	N 7 D 20 35.0%
QPI 10 Patients with TCC of the bladder (stageT2-T4) undergoing radical radiotherapy who receive concomitant chemotherapy.		50	N 0 D 1 0%	N 0 D 1 0%	N 2 D 6 33.3%	N 3 D 9 33.3%	N 5 D 17 29.4%
QPI 11: 30 Day Mortality. Patients with bladder cancer who die within 30 days of treatment with curative intent for bladder cancer.	Radical Surgery	<3	Presented by Board of surgery		N 0 D 10 0%	N 0 D 23 0%	N 0 D 33 0%
	Radiotherapy	<3	N 0 D 1 0%	N 0 D 1 0%	N 0 D 7 0%	N 0 D 11 0%	N 0 D 20 0%
	Chemotherapy	<3	N 0 D 1 0%	N 0 D 1 0%	N 0 D 5 0%	N 0 D 8 0%	N 0 D 15 0%
QPI 11: 90 Day Mortality Patients with bladder cancer who die within 90 days of treatment with curative intent for bladder cancer.	Radical Surgery	<5	Presented by Board of surgery		N 2 D 10 20.0%	N 2 D 22 9.1%	N 4 D 32 12.5%
	Radiotherapy	<5	N 0 D 1 0%	N 0 D 1 0%	N 0 D 7 0%	N 0 D 11 0%	N 0 D 20 0%
	Chemotherapy	<5	N 0 D 1 0%	N 0 D 1 0%	N 0 D 5 0%	N 0 D 6 0%	N 0 D 13 0%
Clinical Trial Access QPI		15	N 1 D 18 5.6%	N 0 D 32 0%	N 1 D 59 1.7%	N 7 D 124 5.6%	N 9 D 233 3.9%