Scottish Cancer Strategic Board
National Cancer Quality Improvement Board

Bladder Cancer
Clinical Quality Performance Indicators

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Revision History

Version	Date	Summary of Changes
V1.0	January 2014	Initial publication
V2.0	June 2016	Baseline review changes
V3.0	October 2018	Formal review changes (1st Cycle)
V4.0	April 2022	Formal review changes (2nd Cycle)
V5.0	November 2024	Formal review changes (3rd Cycle)

Contents Update Record:

November 2024 (v5.0)
This document was updated following formal review (3rd cycle) of the Bladder Cancer Quality Performance Indicators (QPIs) which took place following analysis of year 9 of the Bladder Cancer QPI data.

The following QPIs have been updated:

- QPI 4 – Early Re-Transurethral Resection of Bladder Tumour (TURBT)
- QPI 6 – Lymph Node Yield
- QPI 8 – Volume of Cases per Centre / Surgeon
- QPI 9 – Oncological Discussion
- QPI 10 – Radical Radiotherapy Treatment with a Concomitant Radiosensitiser

The following QPI has been archived:

- QPI 1 – Multi-Disciplinary Team Meeting Discussion
- QPI 12 – Clinical Trials and Research Study Access*

***** This important indicator will continue to be monitored via other national reporting systems rather than through the QPI process.

As a result of the changes above, the contents page and page numbering differ from earlier versions of this document. Sections 1 – 10 and the appendices have also been updated.

Please note that this version of the Bladder Cancer QPI document applies to cases diagnosed from 1st April 2024. Where amended or new QPIs require new data items for measurement, this will apply for patients diagnosed from 1st April 2025.

Previous Updates:

April 2022 (v4.0)

This document was updated following formal review (2nd cycle) of the Bladder Cancer Quality Performance Indicators (QPIs) which took place following analysis of year 6 of the Bladder Cancer QPI data.

The following QPIs have been updated:

- QPI 2 – Quality of Transurethral Resection of Bladder Tumour (TURBT)
- QPI 3 – Mitomycin C Following Transurethral Resection of Bladder Tumour (TURBT)
- QPI 4 – Early Re-Transurethral Resection of Bladder Tumour (TURBT)
- QPI 6 – Lymph Node Yield

- QPI 7 – Time to Treatment
- QPI 10 – Radical Radiotherapy Treatment with a Concomitant Radiosensitiser
- QPI 11 – 30/90 Day Mortality after Treatment for Bladder Cancer

The following QPI has been archived:

- QPI 5 – Pathology Reporting

The following new QPI has been added:

- QPI 13 – Early Recurrence in Patients with Non-Muscle Invasive Bladder Cancer (NMIBC)

As a result of the changes above, the contents page and page numbering differ from earlier versions of this document. Sections 1 – 10 and the appendices have also been updated.

Please note that this version of the Bladder Cancer QPI Document applies to cases diagnosed from 1st April 2021 onwards. Where amended or new QPIs require new data items for measurement, this will apply to patients diagnosed from 1st April 2022.

October 2018 (v3.0)
This document was updated following formal review of the Bladder Cancer Quality Performance Indicators (QPIs) which took place following analysis of year 3 of the Bladder Cancer QPI data.

The following QPIs have been updated:

- QPI 1 – Multi-Disciplinary Team Meeting Discussion
- QPI 2 – Quality of Transurethral Resection of Bladder Tumour (TURBT)
- QPI 4 – Early Re-Transurethral Resection of Bladder Tumour (TURBT)
- QPI 6 – Lymph Node Yield
- QPI 7 – Time to Treatment
- QPI 8 – Volume of Cases per Centre / Surgeon
- QPI 9 – Oncological Discussion
- QPI 11 – 30/90 Day Mortality after Treatment for Bladder Cancer

Please note the Clinical Trial and Research Study Access has now been added into each tumour specific QPI document (see QPI 12: Clinical Trial and Research Study Access).

As a result of the changes above, the contents page and page numbering differ from earlier version of this document. Sections 1 – 10 and the appendices have also been updated.

Please note that this version of the Bladder Cancer QPI Document applies to cases diagnosed from 1st April 2017. Where amended or new QPIs require new data items for measurement, this will apply for patients diagnosed from 1st April 2018.

June 2016 (v2.0)

This document was updated following baseline review of the Bladder Cancer QPIs which took place following analysis of year 1 of the Bladder Cancer data.

The following QPIs have been updated:

- QPI 1 – Multidisciplinary Team Meeting Discussion
- QPI 2 – Quality of TURBT
- QPI 3 – Mitomycin C following TURBT

- QPI 4 – Early Re-TURBT
- QPI 6 – Lymph Node Yield
- QPI 7 – Time to Treatment
- QPI 8 – Volume of Cases per Surgeon
- QPI 9 – Oncological Discussion

In addition to the QPIs, Appendix 3: Pathology Reporting Requirements has also been updated.

Please note that this version of the Bladder Cancer QPI document applies to cases diagnosed from 1st April 2015.

Contents

1. National Cancer Quality Programme

Beating Cancer: Ambition and Action (2016)[1] details a commitment to delivering the National Cancer Quality Programme across NHSScotland, with a recognised need for national cancer QPIs to support a culture of continuous quality improvement. Addressing variation in the quality of cancer services is pivotal to delivering improvements in quality of care. This is best achieved if there is consensus and clear indicators for what good cancer care looks like.

Small sets of cancer specific outcome focussed, evidence based indicators are in place for 19 different tumour types. These QPIs ensure that activity is focused on those areas that are most important in terms of improving survival and individual care experience whilst reducing variation and supporting the most effective and efficient delivery of care for people with cancer. QPIs are kept under regular review and are responsive to changes in clinical practice and emerging evidence.

A programme to review and update the QPIs in line with evolving evidence is in place as well as a robust mechanism by which additional QPIs will be developed over the coming years.

1.1 Quality Assurance and Continuous Quality Improvement

The ultimate aim of the programme is to develop a framework, and foster a culture of continuous quality improvement, whereby real time data is reviewed regularly at an individual Multidisciplinary Team (MDT)/Unit level and findings actioned to deliver continual improvements in the quality of cancer care. This is underpinned and supported by a programme of regional and national comparative reporting and review.

NHS Boards are required to report against QPIs as part of a mandatory, publicly reported, programme at a national level. A rolling programme of reporting is in place, with approximately three national tumour specific summary reports published annually. These reports highlight the publication of performance data in the Cancer QPI Dashboard held within the Scottish Cancer Registry and Intelligence Service (SCRIS). The dashboard includes comparative reporting of performance against QPIs at MDT/Unit level across NHSScotland, trend analysis and survival. This approach helps to overcome existing issues relating to the reporting of small volumes in any one year.

In the intervening years, tumour specific QPIs are monitored on an annual basis through established Regional Cancer Network and local governance processes, with analysed data submitted to Public Health Scotland (PHS) for inclusion in the Cancer QPI Dashboard and subsequent national summary reports. This ensures that timely action is taken in response to any issues that may be identified through comparative reporting and systematic review.

2. Quality Performance Indicator Development Process

The QPI development process was designed to ensure that indicators are developed in an open, transparent and timely way. The development process can be found in appendix 1.

The Bladder Cancer QPI Development Group was convened in August 2012, chaired by Dr Sophie Barrett, Consultant Medical Oncologist. Membership of this group included clinical representatives drawn from the three regional cancer networks, Healthcare Improvement Scotland, ISD and patient/carer representatives.

The development process and membership of the development group can be found in appendix 1.

3. QPI Formal Review Process

As part of the National Cancer Quality Programme, a systematic rolling programme of national review process has been developed. This ensures all tumour specific QPIs are subject to formal review following every 3rd year of comparative QPI data analysis.

The formal review process is clinically driven with proposals for change sought from specialty specific representatives in each of the Regional Cancer Networks. It is designed to be flexible in terms of the extent of review required with tumour specific Regional Clinical Leads undertaking a key role in this decision making. Formal review meetings to further discuss proposals are arranged where deemed necessary. The review builds on existing evidence using expert clinical opinion to identify where new evidence is available, and a full public engagement exercise will take place where significant revisions have been made or new QPIs developed.

During formal review QPIs may be archived and replaced with new QPIs. Triggers for doing so include significant change to clinical practice, targets being consistently met by all Boards, and publication of new evidence. Where QPIs have been archived, associated data items will continue to be collected where these are utilised for other indicators, or measures such as survival analysis.

Any new QPIs are developed in line with the following criteria:

- **Overall importance** – does the indicator address an area of clinical importance that would significantly impact on the quality and outcome of care delivered?
- **Evidence based** – is the indicator based on high quality clinical evidence?
- **Measurability** – is the indicator measurable i.e. are there explicit requirements for data measurement and are the required data items accessible and available for collection?

Three formal reviews of the Bladder Cancer QPIs have been undertaken to date. Further information can be found in appendix 2.

4. Format of the Quality Performance Indicators

QPIs are designed to be clear and measurable, based on sound clinical evidence whilst also taking into account other recognised standards and guidelines.

- Each QPI has a **short title** which will be utilised in reports as well as a fuller **description** which explains exactly what the indicator is measuring.
- This is followed by a brief overview of the **evidence base and rationale** which explains why the development of this indicator was important.
- The measurability **specifications** are then detailed; these highlight how the indicator will actually be measured in practice to allow for comparison across NHSScotland.
- Finally a **target** is indicated, this dictates the level which each unit should be aiming to achieve against each indicator.

In order to ensure that the chosen target levels are the most appropriate and drive continuous quality improvement as intended they are kept under review and revised as necessary, if further evidence or data becomes available.

Rather than utilising multiple exclusions, a tolerance level has been built into the QPIs. It is very difficult to accurately measure patient choice, co-morbidities and patient fitness therefore target levels have been set to account for these factors. Further detail is noted within QPIs where there are other factors which influenced the target level.

Where ‘less than’ (<) target levels have been set the rationale has been detailed within the relevant QPI. All other target levels should be interpreted as ‘greater than’ (>) levels.

5. Supporting Documentation

A national minimum core dataset and a measurability specification have been developed in parallel with the indicators to support the monitoring and reporting of the Bladder Cancer QPIs. The latest version of these documents can be found at:

Public Health Scotland Cancer Audit

6. Quality Performance Indicators for Bladder Cancer

QPI 2: Quality of Transurethral Resection of Bladder Tumour (TURBT)

QPI Title:	Transurethral resection of bladder tumour (TURBT) procedures undertaken should be of good quality.
Description:	Proportion of patients with bladder cancer who undergo good quality TURBT. **Please note:** The specifications of this QPI are separated to ensure clear measurement of the following at initial resection: (i) Use of a bladder diagram / detailed description with documentation of tumour location, size, number and appearance; (ii) Whether the resection is complete or not; and (iii) Whether detrusor muscle included in the specimen.
Rationale and Evidence:	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 evaluation[2]. The risk of recurrence is as high as 70%[2,3]. Most recurrences are detected at the first check cystoscopy following initial TURBT and therefore attributable to residual disease or missed tumours at initial TURBT. These recurrences have been shown to vary according to the quality of the initial TURBT[4]. Several surgical factors have hence been found to be associated with a good quality TURBT; thereby have been shown to be a surrogate for quality of TURBT[5,6]. These factors have been incorporated into this QPI. It is recommended that a TURBT is performed in a systematic manner whereby a complete resection with detrusor muscle in the sample is the ultimate aim[3,5,6.7]. Adequate documentation (use of a bladder diagram – see Appendix 3) with a conclusion regarding radicality or residual tumour is recommended[3,4,5,7]. The procedure should be carried out by an experienced surgeon, and when carried out by a trainee this should be under supervision of an experienced operator[6]. Specifications (i) and (ii) of this QPI focus on the quality of documentation in relation to the TURBT (i.e. reflecting the attention to detail); while specification (iii) relates to the quality of the surgical TURBT procedure and is confirmed on histology.

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QPI 2: Quality of Transurethral Resection of Bladder Tumour……. (continued)

Specification (i):	**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:	• Patients undergoing palliative resection.
Specification (ii):	**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 (≤5mm).
Target:	Specifications (i) and (ii): 95% The tolerance within this target level accounts for cases where there may be uncertainty whether the resection was complete or not at initial resection.	
Specification (iii):	**Numerator:**	Number of patients with high grade NMIBC who undergo TURBT where detrusor muscle is included in the specimen at initial resection.
	Denominator:	All patients with high grade NMIBC who undergo TURBT.
	Exclusions:	• Patients undergoing palliative resection. • Patients with very small tumours (≤5mm). • Patients with bladder diverticular tumours.
Target:	Specification (iii): 90% The tolerance within this target level accounts for the fact that it is not always possible to include detrusor muscle within the specimen.	

Please note:
The total number of complete / incomplete resections will also be analysed across NHS Boards to provide additional information to support reporting of this QPI. This data will be reviewed to identify any variation in clinical outcomes for patients undergoing Transurethral Resection of Bladder Tumour (TURBT).

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

QPI Title:	Patients with low grade Ta non muscle invasive bladder cancer (NMIBC) who undergo TURBT should receive a single instillation of mitomycin C (or other alternative chemotherapy agent*) within 24 hours of resection, unless contraindicated.	
Description:	Proportion of patients with low grade Ta NMIBC who undergo TURBT who receive a single instillation of mitomycin C (or other alternative chemotherapy agent) within 24 hours of resection.	
Rationale and Evidence:	The recurrence rate in NMIBC is as high as 70%[8]. Treatment by TURBT alone can eliminate TaT1 tumours completely, however these tumours in particular commonly recur causing progression to MIBC[3]. 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 get re-implanted in the bladder mucosa, subsequently being detected as recurrence. 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%[9]. While there is no evidence to support any difference in efficacy between the various agents[3], the use of mitomycin C is ubiquitous in the UK and therefore specified as the main agent in the QPI. A single instillation of mitomycin C (or other alternative chemotherapy agent) within 24 hours of TURBT for NMIBC is recommended[2,3,6,7]. The single wash should not be given if perforation of the bladder wall has occurred during the TURBT. A single instillation of intravesical chemotherapy should be used to reduce the risk of recurrent disease following resection[9].	
Specifications:	**Numerator:**	Number of patients with low grade Ta NMIBC who undergo TURBT who receive a single instillation of mitomycin C (or other alternative chemotherapy agent) within 1 day of initial TURBT.
	Denominator:	All patients with low grade Ta NMIBC who undergo initial TURBT.
	Exclusions	• No exclusions.

(Continued overleaf)

* Other alternative chemotherapy agents include epirubicin, pirarubicin and gemcitabine.

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

Target:	80% The tolerance within this target is designed to account for situations where patients have severe haematuria, which requires continuous irrigation or surgical intervention. It also accounts for those patients where there has been intra or extraperitoneal perforation, and those with high risk of extravasation. Additionally, at time of TURBT it is often difficult to identify if disease is superficial, invasive or high/low grade therefore in order to minimise over-treatment some patients with suspected muscle invasive or high grade bladder cancer may not receive mitomycin C (or another alternative chemotherapy agent).

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

QPI Title:	A second resection or early cystoscopy (± biopsy) should be carried out in patients with non muscle invasive bladder cancer where clinically appropriate.
Description:	Proportion of patients with T1 (all grades) NMIBC where initial resection is complete, and all patients with NMIBC where initial resection is incomplete, who have a second resection or early cystoscopy (± biopsy). **Please note:** the specifications of this QPI are separated to ensure clear measurement of specific patients who have undergone TURBT: (i) All patients with T1 (all grades) NMIBC where initial resection is complete who have a second TURBT or early cystoscopy (± biopsy) within 3 months (90 days) of initial resection; and (iii) All patients with NMIBC where initial resection is incomplete who have a second TURBT or early cystoscopy (± biopsy) within 6 weeks (42 days) of initial resection. ***Note – specification (ii) has been archived.***
Rationale and Evidence:	It is well established from white light TURBT series that 33%-53% of high risk NMIBC have residual disease following an initial TURBT[4]. This risk is high when detrusor muscle is absent in the initial resection specimen[5]. The presence of residual disease is a poor prognostic indicator, especially in pT1 disease[2,3]. A second TURBT in high risk NMIBC improves 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 patient[2,3]. Evidence suggests that re-TURBT should be performed if the primary resection is incomplete or lacks diagnostic value. Based on historical data where the initial TURBT was not standardised, the second TURBT should be performed at 2-6 weeks after initial resection[2,3]. However, more recent analyses from the Scottish QPI programme suggests that selection of patients for re-TURBT is more nuanced and therefore can be omitted (e.g. High Grade Ta) or delayed in some patients (e.g. T1), provided the initial TURBT is complete[10]. NB: This guidance applies only to QPI context, wherein there are safeguards being placed for the quality of the initial TURBT (under QPI 1), i.e. a good quality/optimal initial TURBT negates the requirement for routine re-TURBT in high risk NMIBC.

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

Specification (i):	**Numerator:**	Number of patients with T1 (all grades) NMIBC who have undergone TURBT where initial resection is complete who have a second TURBT or early cystoscopy (± biopsy) within 3 months (90 days) of initial resection.
	Denominator:	All patients with T1 (all grades) NMIBC who have undergone TURBT where initial resection is complete.
	Exclusions	• Patients where TURBT has been carried out for palliation. • Patients who have undergone early cystectomy. • Patients with confirmed metastatic disease.
Specification (iii)	**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:	• Patients where TURBT has been carried out for palliation. • Patients who have undergone early cystectomy. • Patients with confirmed metastatic disease.
Target:	80% The tolerance within this target accounts for situations where patients are not fit enough for a further operation, or are frail and a thin bladder wall is suspected, or where there has been intra or extraperitoneal perforation. It also accounts for those cases where imaging suggests re-TURBT is not required, or where PDD (photodynamic diagnosis) TURBT has been carried out.	

Please note: Analysis of the total number of patients in the specifications above who (a) undergo second TURBT or early cystoscopy (± biopsy) and b) undergo second TURBT or early cystoscopy (± biopsy) within the required timescales will also be undertaken across NHS Boards to provide additional information to support reporting of this QPI.

QPI 6: Lymph Node Yield

QPI Title:	For patients undergoing primary radical cystectomy for bladder cancer, the number and extent of lymph nodes examined should be maximised.
Description:	Proportion of patients with bladder cancer who undergo primary radical cystectomy where ≥ 10 lymph nodes are resected and pathologically examined, and at least level 1 pelvic lymph node dissection (i.e. bifurcation of the common iliac arteries) has been undertaken.
Rationale and Evidence:	Adequate lymph node yield is important for accurate staging. Evidence suggests that this should be an integral part of cystectomy[11]. It is important that at least the area of the standard node dissection needs to be removed[7]. It is therefore important that a meticulous lymph node dissection is performed to obtain the maximum number of nodes[12]. Recent evidence demonstrates that extended lymphadenectomy is associated with higher perioperative morbidity and mortality in comparison with standard lymphadenectomy, and does not result in any further improvements in disease free survival or overall survival[13].
Specifications:	**Numerator:** Number of patients with bladder cancer who undergo primary radical cystectomy where ≥ 10 lymph nodes are resected and pathologically examined, and at least level 1 pelvic lymph node dissection (i.e. bifurcation of the common iliac arteries) has been undertaken. **Denominator:** All patients with bladder cancer who undergo primary radical cystectomy. **Exclusions:** • Patients undergoing salvage cystectomy.
Target:	95% The tolerance within this target accounts for situations where patients are not fit enough to undergo lymphadenectomy.

QPI 7: Time to Treatment

QPI Title:	Patients with muscle invasive bladder cancer (MIBC) undergoing treatment with radical intent should commence treatment as soon as possible.
Description:	Proportion of patients with MIBC who commence radical treatment within 6 weeks of their diagnosis of MIBC, or within 8 weeks of completing treatment† where patients are undergoing neoadjuvant chemotherapy. **Please note:** The specification of this QPI will be separated to ensure clear measurement of patients undergoing: (i) Radical treatment (cystectomy or radiotherapy) without neoadjuvant chemotherapy; and (ii) Neoadjuvant chemotherapy prior to radical treatment.
Rationale and Evidence:	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 death[11,12]. Neoadjuvant chemotherapy should be offered to suitable patients prior to definitive radical therapy (this includes radical cystectomy or radical radiation therapy)[11]. This treatment should be commenced as soon as possible following diagnosis. Evidence suggests that patients who undergo radical cystectomy up to 12 weeks after neoadjuvant chemotherapy show no increased risk of complications or nodal metastases[14]. In order for this QPI to remain challenging and drive improvement on the timeline between diagnosis and treatment of MIBC, the QPI Formal Review Group have agreed to reduce the timeframe from 12 weeks to 6 weeks.
Specification (i):	**Numerator:** Number of patients with MIBC who undergo radical cystectomy or radiotherapy without neoadjuvant chemotherapy, within 6 weeks of diagnosis of MIBC. **Denominator:** All patients with MIBC undergoing radical cystectomy or radiotherapy without neoadjuvant chemotherapy. **Exclusions:** • No exclusions.

(Continued overleaf)

† The completion of treatment is measured from the last dose of the final cycle of neoadjuvant chemotherapy.

QPI 7: Time to Treatment.....(continued)

Specification (ii):	**Numerator:**	Number of patients with MIBC who have neoadjuvant chemotherapy who undergo cystectomy or radiotherapy within 8 weeks of completing treatment.
	Denominator:	All patients with MIBC undergoing neo-adjuvant chemotherapy prior to radical treatment.
	Exclusions:	• No exclusions.
Target:	90% The tolerance within this target accounts for situations where patients are not fit enough to undergo treatment within the required timescales due to other medical conditions.	

Please note: Specification (i) will also be analysed by surgery and radiotherapy (separately) in order to provide additional information to support reporting of this QPI. The median and interquartile range for both specifications will be utilised in order to identify any variation in timing of the different treatments.

QPI 8: Volume of Cases per Centre / Surgeon

QPI Title:	Radical cystectomy should be performed by surgeons who perform the procedure routinely in hospitals where there is an appropriate volume of such cases.
Description:	Number of radical cystectomy procedures performed by a specialist centre, and surgeon over a 1 year period.
Rationale and Evidence:	Although evidence has shown varied results, recent studies have shown that there is a positive relationship between volume and re-intervention rates[15,16]. The literature demonstrates that radical cystectomy procedures should be undertaken within high volume centres to improve surgical outcomes and reduce mortality[17,18]. Within each network, bladder cancer should be managed by multidisciplinary teams, with surgical and other radical treatments administered by those with appropriate expertise and caseloads[12].
Specifications:	Number of radical cystectomy procedures performed by each centre / surgeon in a given year. **Exclusions:** • No exclusions.
Target:	Minimum 20 procedures per centre, with a minimum of 10 procedures per surgeon in a 1 year period. This is a minimum target level and is designed to ensure that all surgeons performing radical cystectomy perform **a minimum of** 10 procedures per year. **Please note:** Varying evidence exists regarding the most appropriate target level for surgical case volume. In order to ensure that the target level takes account of level 1 evidence and will drive continuous quality improvement as intended this performance indicator will be kept under regular review. It is recognised that multiple factors affect overall performance and that the end point focus must be clinical outcomes in what is a team delivered goal.

Please note:
SMR01 data will be utilised to support reporting and monitoring of this QPI rather than clinical audit. This will maximise the use of data which are already collected and remove the need for any duplication of data collection. Standard reports will be specified and direct access will be given for each Board to run these reports to ensure nationally consistent analysis and reporting.

QPI 9: Oncological Discussion

QPI Title:	Patients with muscle invasive bladder cancer (MIBC) should have all treatment options discussed with them prior to commencing treatment.	
Description:	Proportion of patients with MIBC deemed suitable for all radical treatment options‡ by the MDT who meet with an oncologist prior to commencing treatment.	
Rationale and Evidence:	Evidence has shown that an informed discussion with patients to outline the aims, benefits and toxicity of treatment is necessary before therapy begins[12]. Clinical judgement is required to assess the risks and benefits of prescribing chemotherapy. In elderly patients or in those with significant co-morbid illness treatment related toxicity may outweigh any advantages to chemotherapy[12].	
Specifications:	**Numerator:**	Number of patients with MIBC who are deemed suitable for all radical treatment options by the MDT who meet with an oncologist prior to commencing treatment.
	Denominator:	All patients with MIBC who are deemed suitable for all radical treatment options by the MDT.
	Exclusions:	• No exclusions.
Target:	90% The tolerance within this target accounts for those patients who may decline to see an oncologist or who undergo emergency cystectomy.	

‡ Radical treatment options include neoadjuvant SACT, radical radiotherapy, trimodality treatment (TURBT followed by chemoradiotherapy) and radical cystectomy.

QPI 10: Radical Radiotherapy Treatment with a Concomitant Radiosensitiser

QPI Title:	Patients undergoing radical radiotherapy for transitional cell carcinoma of bladder should be considered for treatment with a concomitant radiosensitiser.
Description:	Proportion of patients with transitional cell carcinoma of the bladder (T2-T4) undergoing radical radiotherapy receiving a concomitant radiosensitiser.
Rationale and Evidence:	Patients with muscle invasive bladder cancer who are suitable for radical radiotherapy should be given this with a radiosensitiser[19]. Evidence has shown that radical radiotherapy with a radiosensitiser improves outcomes compared with radiotherapy alone. A well conducted randomised trial[20] concluded treating patients with transitional cell carcinoma of the bladder with combined chemotherapy (5-fluorouracil (5-FU) and mitomycin C)) as opposed to radiotherapy alone significantly improves local control with no significant increase in toxicity. A further study compared radical radiotherapy alone with radical radiotherapy given concurrently with carbogen and nicotinamide, demonstrating a significant improvement in 3-year overall survival in the combined approach[21]. There is also evidence that using gemcitabine based chemoradiation shows acceptable toxicity and comparable outcomes with those in the literature (3-year overall survival of 75% and 88%) achieving a complete endoscopic response at first check cystoscopy[22]. The National Cancer Institute states that "systemic chemotherapy has been incorporated with definitive radiation therapy to develop a more effective bladder-sparing approach for patients with locally advanced disease"[23].
Specifications:	**Numerator:** Number of patients with transitional cell carcinoma of the bladder (T2-T4) receiving radical radiotherapy treated with a concomitant radiosensitiser. **Denominator:** All patients with transitional cell carcinoma of the bladder (T2-T4) receiving radical radiotherapy. **Exclusions:** • Patients enrolled in a clinical trial.
Target:	50% The target 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 a radiosensitiser.

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

QPI Title:	30/90 day mortality following treatment with curative intent for bladder cancer.
Description:	Proportion of patients with bladder cancer who die within 30/90 days of treatment with curative intent (radical cystectomy or radiotherapy) for bladder cancer.
Rationale and Evidence:	Treatment related mortality is a marker of the quality and safety of the whole service provided by the Multi-Disciplinary Team (MDT)[24]. 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 situations. This QPI is intended to ensure treatment is given appropriately, and the outcome reported on and reviewed. **Please note**: 30 Day Mortality for Systemic Anti-Cancer Therapy (SACT) is measured separately from the QPI process. National SACT data from CEPAS (Chemotherapy Electronic Prescribing and Administration System) is utilised to support reporting and monitoring of this measure rather than clinical audit. This methodology allows the whole population of bladder cancer patients undergoing SACT to be captured rather than those newly diagnosed within the audit.
Specifications:	**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:** • No exclusions. **Please Note:** This indicator will be reported by treatment modality, i.e. surgery and radiotherapy as opposed to one single figure.
Target:	<3% - 30 day <5% - 90 day

QPI 13: Early Recurrence in Patients with Non-Muscle Invasive Bladder Cancer (NMIBC)

QPI Title:	The risk of early recurrence in patients with non-muscle invasive bladder cancer (NMIBC) should be minimised.
Description:	Proportion of patients who have undergone TURBT with low grade pTa cancer where recurrence is found at first follow up cystoscopy, or with pT1 who have residual cancer or pathological MIBC (pT2) at re-TURBT. **Please Note:** the specifications of this QPI are separated to ensure clear measurement of the following: (i) Recurrence at first follow-up cystoscopy (RRFFC) in patients with low grade pTa cancer; (ii) Residual cancer at re-TURBT in patients with pT1; and (iii) Pathological MIBC (pT2) at re-TURBT in patients with pT1.
Rationale and Evidence:	Effective clearance of cancer and obtaining information to accurately stage NMIBC is critical to determining future treatment and prognosis. The most reliable measure of TURBT quality in patients with NMIBC is the risk of early recurrence, because the cancer found at this stage (in a patient who's had a complete TURBT), represents cancer that has been left behind at the initial TURBT. Early recurrence is the strongest predictor of subsequent recurrence and progression both in low and high grade NMIBC[3, 25- 29]. Evidence suggests that tumour status at 3 months is the strongest prognostic factor for future progression and recurrence[3,26]. Further prognostic factors have been found in selected patient populations e.g. In patients with T1 tumours, the findings of residual T1 disease at second TURBT is an unfavourable prognostic factor[3,28].
Specification (i):	**Numerator:** Number of patients with low grade pTa NMIBC who have undergone initial TURBT where recurrence is found at first follow up cystoscopy. **Denominator:** All patients with low grade pTa NMIBC who have undergone initial TURBT. **Exclusions:** • Patients with incomplete resection at initial TURBT.
Target:	<10%

(Continued overleaf)

QPI 13: Early Recurrence in Patients with Non-Muscle Invasive Bladder Cancer (NMIBC)…….(continued)

Specification (ii):	**Numerator:**	Number of patients with pT1 NMIBC who have undergone a second TURBT or early cystoscopy (± biopsy) and have residual cancer at re-TURBT.
	Denominator:	All patients with pT1 NMIBC who have undergone a second TURBT or early cystoscopy (± biopsy).
	Exclusions:	• Patients in whom concomitant cis is present in the tumour specimen. • Patients with incomplete resection at initial TURBT.
Target:	<20%	
Specification (iii)	**Numerator:**	Number of patients with pT1 NMIBC who have undergone a second TURBT or early cystoscopy (± biopsy) and have Pathological MIBC (pT2) at re-TURBT.
	Denominator:	All patients with pT1 NMIBC who have undergone a second TURBT or early cystoscopy (± biopsy).
	Exclusions:	• Patients with incomplete resection at initial TURBT.
Target:	<1%	

7. Survival

Improving survival forms an integral part of the national cancer quality improvement programme. Bladder Cancer survival analysis will be reported and analysed on a 3 yearly basis by Public Health Scotland (PHS). The specific issues which will be identified by an expert group ahead of any analysis being undertaken, as per the agreed national cancer quality governance and improvement framework.

The Bladder Cancer QPI Group has identified; during the QPI development process, the following issues for survival analysis.

- 2 and 5 year overall survival

To ensure consistent application of survival analysis, it has been agreed that a single PHS analyst on behalf of all three regional cancer networks undertakes this work. Survival analysis will be scheduled as per the national survival analysis and reporting timetable, agreed with the National Cancer Quality Improvement Board and Scottish Cancer Strategic Board. This reflects the requirement for record linkage and the more technical requirements of survival analyses which would make it difficult for individual Boards to undertake routinely and in a nationally consistent manner.

8. Areas for Future Consideration

The Bladder Cancer QPI Groups have not able to identify sufficient evidence, or determine appropriate measurability specifications to address all areas felt to be of key importance in the treatment of Bladder Cancer, and therefore in improving the quality of care for patients affected by Bladder Cancer.

The following area for future consideration has been raised across the lifetime of the Bladder Cancer QPIs.

- Neobladder/ urinary reconstruction for patients undergoing cystectomy.
- Enhanced Recovery after Surgery (ERAS) programme utilisation for cystectomy cases.
- Bacillus Calmette-Guerin (BCG) and/or cystectomy for patients with high risk non muscle invasive bladder cancer.
- Maintenance intravesical chemotherapy.
- Photodynamic Diagnosis (PDD)
- Risk Stratification in Patients with NMIBC.
- Quality of life following definitive treatment for MIBC.

9. Governance and Scrutiny

A national and regional governance framework to assure the quality of cancer services in NHSScotland has been developed; key roles and responsibilities within this are set out below. Appendices 4 and 5 provide an overview of these governance arrangements diagrammatically. The importance of ensuring robust local governance processes are in place is recognised and it is essential that NHS Boards ensure that cancer clinical audit is fully embedded within established processes.

9.1 National

- Scottish Cancer Strategic Board
    - Accountable for overall national cancer quality programme and overseeing the quality of cancer care across NHSScotland.

- Healthcare Improvement Scotland
    - Proportionate scrutiny of performance.
    - Support performance improvement.
    - Quality assurance: ensure robust action plans are in place and being progressed via regions/Boards to address any issues identified.

- Public Health Scotland (previously Information Services Division (ISD))
    - Publish national comparative report on tumour specific QPIs and survival for 3 tumour types per annum and specified generic QPIs as part of the rolling programme of reporting.

9.2 Regional – Regional Cancer Networks

- Annual regional comparative analysis and reporting against tumour specific QPIs.
- Support national comparative reporting of specified generic QPIs.
- Identification of regional and local actions required and development of an action plan to address regional issues identified.
- Performance review and monitoring of progress against agreed actions.
- Provide assurance to NHS Board Chief Executive Officers and Scottish Cancer Strategic Board that any issues identified have been adequately and timeously progressed.

9.3 Local – NHS Boards

- Collect and submit data for regional comparative analysis and reporting in line with agreed measurability and reporting schedule (generic and tumour specific QPIs).
- Utilise local governance structures to review performance, develop local action plans and monitor delivery.
- Demonstrate continual improvements in quality of care through on-going review, analysis and feedback of clinical audit data at an individual multidisciplinary team (MDT) or unit level.

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11. Appendices

Appendix 1: QPI Development Process

Preparatory Work and Scoping
The preparatory work involved the development of a structured briefing paper by Healthcare Improvement Scotland. This paper took account of existing, high quality, clinical guidance and provided a basis for the development of QPIs.

The scope for development of Bladder Cancer QPIs and a search narrative were defined and agreed by the Bladder Cancer QPI Development Group. The table below shows the final search criteria used in the literature search.

Inclusion	Exclusion

• Primary bladder cancer
• Primary urethral cancer
• Diagnosis
• Staging
• Surgical management of disease
• Intravesical therapy (includes intravesical chemotherapy and immunotherapy, BCG and/or interferon).
• Non-surgical management of disease (neo adjuvant/adjuvant chemotherapy, radiotherapy)
• Surveillance of superficial (non-invasive) bladder cancer.
• Adults only
• 2005 to present day
• English only
	• Related cancers, including:
	  • Renal Pelvis/Upper Urinary Tract Urothelial Cancers
	  • Secondary bladder cancer
	  • Prostate cancer (extension into the bladder)
	• Prevention
	• Pre-cancerous conditions
	• Screening
	• Primary care/referral
	• Communication, information sharing and support
	• Follow up
	• Recurrence/relapsed disease management
	• Palliative/end of life care (pain management, end of life counselling, hospice management)
	• Clinical trials recruitment and protocol

Table 1: Bladder Cancer Search Criteria

A systematic search was carried out by Healthcare Improvement Scotland using selected websites and two primary medical databases to identify national and international guidelines.

Thirteen identified guidelines were appraised for quality using the AGREE II[30] instrument. This instrument assesses the methodological rigour used when developing a guideline. Four of the guidelines were not recommended for use. Nine were recommended for use with consideration of their applicability or currency.

The Bladder Cancer Development group defined evidence based, measurable indicators with a clear focus on improving the quality and outcome of care provided.

The Group developed QPIs using the clinical recommendations set out in the briefing paper as a base, ensuring all indicators met the following criteria:

- **Overall importance** – does the indicator address an area of clinical importance that would significantly impact on the quality and outcome of care delivered?
- **Evidence based** – is the indicator based on high quality clinical evidence?
- **Measurability** – is the indicator measurable i.e. are there explicit requirements for data measurement and are the required data items accessible and available for collection?

Engagement Process

A wide clinical and public engagement exercise was undertaken as part of development in June 2013 where the Bladder Cancer QPIs, along with accompanying draft minimum core dataset and measurability specifications, were made available on the Scottish Government website. During the engagement period clinical and management colleagues from across NHSScotland, patients affected by Bladder Cancer and the wider public were given the opportunity to influence the development of Bladder Cancer QPIs.

Draft documentation was circulated widely to professional groups, health service staff, voluntary organisations and individuals for comment and feedback.

Following the engagement period all comments and responses received were reviewed by the Bladder Cancer QPI Development Group and used to produce and refine the final indicators.

QPI Development Group Membership (2012)

Name	Designation	Cancer Network / NHS Board
Sophie Barrett (Chair)	Consultant Medical Oncologist	
Lauren Aitken	Urology Cancer Audit Facilitator	SCAN / NHS Lothian
Prasad Bolina	Consultant Urologist	SCAN / NHS Lothian
Bob Cromb	Patient Representative	
John De Souza	Consultant Urologist	WoSCAN / NHS Lanarkshire
David Douglas	Consultant Urologist	NOSCAN / NHS Highland
Maria Fyfe	Patient Representative	
Maureen Hamill	Clinical Nurse Specialist	WoSCAN / NHS Forth Valley
Michele Hilton Boon	Programme Manager	Health Improvement Scotland
Graham Hollins	Consultant Urologist	WoSCAN / NHS Ayrshire and Arran
Julian Keanie	Consultant Radiologist	SCAN / NHS Lothian
Martin Keith	Senior Cancer Information Officer	NOSCAN / NHS Dumfries and Galloway
Stephen Lang	Consultant Pathologist	NOSCAN / NHS Tayside
Alistair Law	Consultant Oncologist	SCAN / NHS Lothian
Scott Little	Clinical Nurse Specialist	SCAN / NHS Lothian
Kelly Macdonald	Project Manager	National Cancer QPI Development Programme
Param Mariappan	Consultant Urologist	SCAN / NHS Lothian
Julie McNab	Clinical Quality Service Coordinator	WoSCAN / NHS Lanarkshire

Name	Designation	Cancer Network / NHS Board
Brian Murray	Principle Information Development Manager	Information Services Division
Marie O'Donnell	Consultant Pathologist	SCAN / NHS Lothian
Allison Robertson	Clinical Nurse Specialist	NOSCAN / NHS Tayside
Iona Scott	Project Manager	National Cancer QPI Development Programme
Saatchi Swami	Consultant Urologist	NOSCAN / NHS Grampian
Evelyn Thomson	Regional Manager (Cancer)	WoSCAN
Jan Wallace	Consultant Oncologist	WoSCAN / NHS Greater Glasgow and Clyde
Phyllis Windsor	Consultant Oncologist	NOSCAN / NHS Tayside

NOSCAN - North of Scotland Cancer Network
SCAN - South East Scotland Cancer Network
WoSCAN - West of Scotland Cancer Network

Appendix 2: Bladder Cancer QPI Formal Reviews

Formal review of the Bladder Cancer QPIs was undertaken for the first time in March 2018 following reporting of 3 years of national QPI data. A Formal review Group was convened, chaired by Mr Stuart Robertson, Consultant Head and Neck Surgeon, WoSCAN. Membership of this group is outlined below.

Bladder Cancer QPI formal Review Group Membership (2018)

Name	Designation	Cancer Network / NHS Board
Stuart Robertson (Chair)	Consultant Head and Neck Surgeon	WoSCAN / NHS Greater Glasgow & Clyde
Imran Ahmad	Consultant Urological Surgeon	WoSCAN / / NHS Greater Glasgow & Clyde
Jaimin Bhatt	Consultant Urological Surgeon	WoSCAN / / NHS Greater Glasgow & Clyde
Lorna Bruce	Audit Manager	SCAN
Jen Doherty	Project Co-ordinator	National Cancer Quality Programme
Rehan Khan	Consultant Urological Surgeon	WoSCAN / NHS Lanarkshire
Param Mariappan	Consultant Urological Surgeon	SCAN / NHS Lothian
G Mustafa Nandwani	Consultant Urological Surgeon	NOSCAN / NHS Tayside
Lorraine Stirling	Project Officer	National Cancer Quality Programme

Formal review of the Bladder Cancer QPIs have been undertaken in consultation with various other clinical specialties.

NOSCAN - North of Scotland Cancer Network
SCAN - South East Scotland Cancer Network
WoSCAN - West of Scotland Cancer Network

2nd Cycle of Formal Review

A 2nd cycle of formal review commenced in June 2021 following reporting of 6 years of QPI data. This cycle of review is more selective and focussed on ensuring the ongoing clinical relevance of the QPIs. A Formal Review Group was convened, with Dr Noelle O'Rourke, Consultant Clinical Oncologist and National Lead for the Scottish Cancer Network appointed as Clinical Advisor/Chair to the group. Membership of this group can be found below:

Bladder Cancer QPI formal Review Group Membership (2021)

Name	Designation	Cancer Network / NHS Board
Noelle O'Rourke (Chair)	Consultant Clinical Oncologist and National Lead	Scottish Cancer Network
Imran Ahmad	Consultant Urological Surgeon	WoSCAN

Name	Designation	Cancer Network / NHS Board
Jaimin Bhatt	Consultant Urological Surgeon	WoSCAN
Lorna Bruce	Audit Manager	SCAN
John De Souza	Consultant Urological Surgeon	WoSCAN
Jen Doherty	Project Co-ordinator	National Cancer Quality Programme
Hilary Glen	Consultant Medical Oncologist	WoSCAN
Rob Jones	Consultant Medical Oncologist	WoSCAN
Rehan Khan	Consultant Urological Surgeon	WoSCAN
Param Mariappan	Clinical Lead	SCAN
Andrew Martindale	Clinical Lead	NCA
Bryan McKellar	Deputy Regional Manager (Cancer)	NCA
Mustafa Nandwani	Consultant Urological Surgeon	NCA
Lorraine Stirling	Project Officer	National Cancer Quality Programme
Kate Robertson	Programme Co-ordinator	NCA
Nkem Umez-Eronini	Clinical Lead	WoSCAN
Abdullah Zreik	Consultant Urologist	WoSCAN

Formal review of the Bladder Cancer QPIs have been undertaken in consultation with various other clinical specialties.

NCA - North Cancer Alliance
SCAN - South East Scotland Cancer Network
WoSCAN - West of Scotland Cancer Network

3rd Cycle Formal Review

The 3rd cycle of Formal Review commenced in March 2024. Dr Cameron Martin, Consultant Gynaecological Oncologist and Clinical Lead, SCAN was appointed as Clinical Advisor/Chair to the group. Membership of this group is outlined below:

Bladder Cancer QPI formal Review Group Membership (2024)

Name	Designation	Cancer Network/Base
Cameron Martin (Chair)	Consultant Gynaecological Oncologist	SCAN
Imran Ahmad	Consultant Urological Surgeon	WoSCAN

Name	Designation	Cancer Network/Base
Jen Doherty	Programme Co-ordinator	National Cancer Quality Programme
Martin Doak	Consultant Clinical Oncologist	SCAN
Stanka Easton	Senior Cancer Information Analyst	SCAN
Hilary Glen	MCN Clinical Lead	WoSCAN
Rehan Khan	Consultant Urological Surgeon	WoSCAN
Param Mariappan	MCN Clinical Lead	SCAN
Andrew Martindale	MCN Clinical Lead	NCA
Mustafa Nandwani	Consultant Urological Surgeon	NCA
Lorraine Stirling	Project Officer	National Cancer Quality Programme

Formal review of the Bladder Cancer QPIs has been undertaken in consultation with various other clinical specialties.

NCA - North Cancer Alliance
SCAN – South East Scotland Cancer Network
WoSCAN – West of Scotland Cancer Network

Appendix 3: Transurethral Resection of Bladder Tumour (TURBT) Proforma

The following proforma is included as a template to assist with reporting of TURBT procedures. ***Note - tumour location, size, number, appearance and whether resection is complete are mandatory items required for QPI measurement.***

Name:

DOB:

Hospital Number:

Date:

Consultant:

Anaesthesia:

Anaesthetist: Dr.

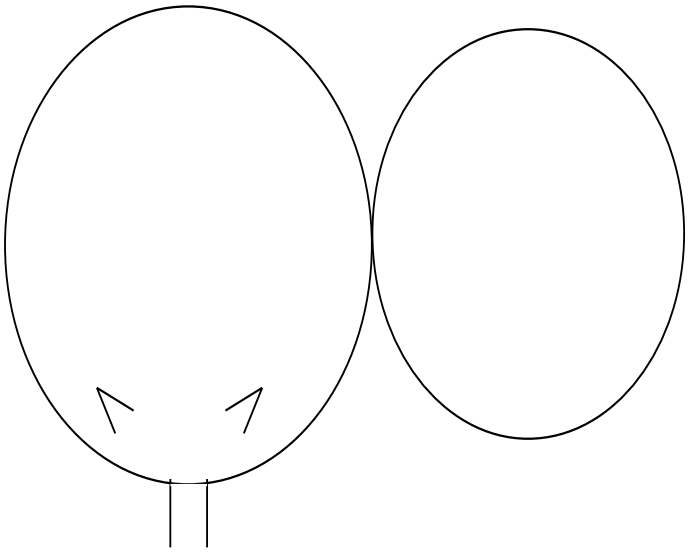
Operation:

Surgeon:

Supervisor: (scrubbed/ un-scrubbed) **Supervisor completed op: Yes/ No**

Indication: First cystoscopy/ new tumour / recurrence / check

Findings (delete or circle accordingly):



Tumour number: 1 2 3 >3

Appearance: papillary/ solid/ mixed/Red patch

Size of largest tumour (mm):

<5 5-10 10-30 >30

Site(s):
R UO L UO Trigone Bl. neck

Posterior wall Anterior wall

R lateral wall L lateral wall

Urethra Dome Diverticulum

Complete resection: yes / no / not sure / Biopsy and diathermy only

Extra-peritoneal perforation: yes / no / thin wall/ cystoscopy only

EUA: cTa cT1 cT2 cT3 cT4 (2) Bladder mobile: yes / no / not sure

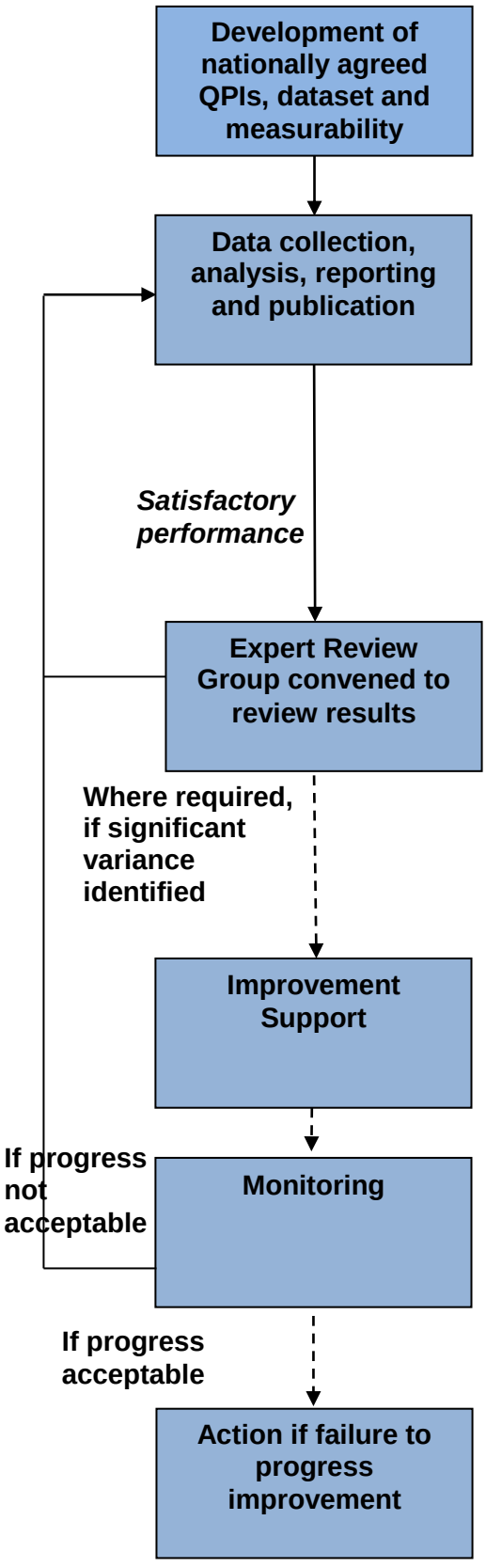
Postoperative Instructions: (1) Irrigation: yes / no
(2) Intravesical 40mg Mitomycin C within 24 hours: yes / no
(3) TWOC after 24H: yes / no If **no** keep catheter for ___ days
(4) MDT discussion: yes / no If **yes**, please complete yellow form
(5) Needs imaging: yes / no If **yes**, please specify:
(6) Other:

Follow up (Please tick):
(1) ☐ GA cystoscopy urgent/ in 6 weeks/ in 3 months
(2) ☐ GA cystoscopy + Biopsy/ diathermy (urgent)
(3) ☐ TURBT (urgent)/ TURBT + PDD
(4) ☐ Flexible cystoscopy in 3 months
(5) ☐ Pending histology and MDT decision

Signature + initials:

Appendix 4: 3 Yearly National Governance Process & Improvement Framework for Cancer Care

This process is underpinned by the annual regional reporting and governance framework (see appendix 5).



1. National QPI Development Stage

- QPIs developed by QPI development groups, which include representation from Regional Cancer Networks, Healthcare Improvement Scotland, PHS, patient representatives and the Cancer Coalition.

2. Data Analysis Stage:

- NHS Boards and Regional Cancer Advisory Groups (RCAGs)* collect data and analyse on yearly basis using nationally agreed measurability criteria and produce action plans to address areas of variance, see appendix 5.
- Submit yearly reports to ISD for collation and publication every 3 years.
- National comparative report approved by NHS Boards and RCAGs.
- ISD produce comparative, publicly available, national report consisting of trend analysis of 3 years data and survival analysis.

3. Expert Review Group Stage (for 3 tumour types per year):

- Expert group, hosted by Healthcare Improvement Scotland, review comparative national results.
- Write to RCAGs highlighting areas of good practice and variances.
- Where required NHS Boards requested to submit improvement plans for any outstanding unresolved issues with timescales for improvement to expert group.
- Improvement plans ratified by expert group and Scottish Cancer Strategic Board.

4. Improvement Support Stage:

- Where required Healthcare Improvement Scotland provide expertise on improvement methodologies and support.

5. Monitoring Stage:

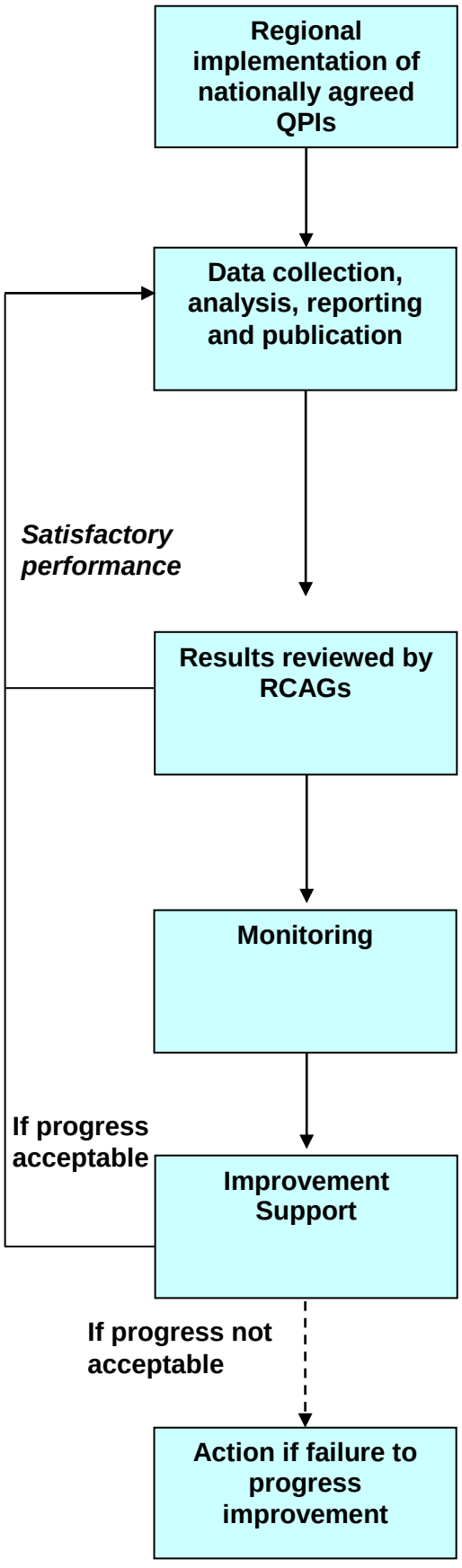
- RCAGs work with Boards to progress outstanding actions, monitor improvement plans and submit progress report to Healthcare Improvement Scotland.
- Healthcare Improvement Scotland report to Scottish Cancer Strategic Board as to whether progress is acceptable**.**

6. Escalation Stage:

- If progress not acceptable, Healthcare Improvement Scotland will visit the service concerned and work with the RCAG and Board to address issues.
- Report submitted to Scottish Cancer Strategic Board and escalation with a proposal to take forward to Scottish Government Health Department.

*The Regional Cancer Planning Group (South and East of Scotland) and the North Cancer Clinical Leadership Group (North Cancer Alliance) are equivalent to the Regional Cancer Advisory Group (RCAG) in the West of Scotland.

Appendix 5: Regional Annual Governance Process and Improvement Framework for Cancer Care



1. Regional QPI Implementation Stage:

- National cancer QPIs and associated national minimum core dataset and measurability specifications, developed by QPI development groups.
- Regional implementation of nationally agreed dataset to enable reporting of QPIs.

2. Data Analysis Stage:

- NHS Boards collect data and data is analysed on a yearly basis using nationally agreed measurability criteria at local/ regional level.
- Data/results validated by Boards and annual regional comparative report produced by Regional Networks.
- Areas of best practice and variance across the region highlighted.
- Yearly regional reports submitted to PHS for collation and presentation in national report every 3 years.

3. Regional Performance Review Stage:

- RCAGs* review regional comparative report.
- Regional or local NHS Board action plans to address areas of variance developed.
- Appropriate leads identified to progress each action.
- Action plans ratified by RCAGs.

4. Monitoring Stage:

- Where required, NHS Boards monitor progress with action plans and submit progress reports to RCAGs.
- RCAGs review and monitor regional improvement.

5. Improvement Support Stage:

- Where required Healthcare Improvement Scotland maybe requested to provide expertise to NHS Boards/RCAGs on improvement methodologies and support.

6. Escalation Stage:

- If progress not acceptable, RCAGs will escalate any issues to relevant Board Chief Executives. If progress remains unacceptable RCAGs will escalate any relevant issues to Healthcare Improvement Scotland.

*The Regional Cancer Planning Group (South and East of Scotland) and the North Cancer Clinical Leadership Group (North Cancer Alliance) are equivalent to the Regional Cancer Advisory Group (RCAG) in the West of Scotland.

Appendix 6: Glossary of Terms

5-Flourouracil (5FU)	Chemotherapy drug used to treat several types of cancers. Flourouracil belongs to the class of chemotherapy drugs know as anti-metabolites, which interfere with the cells making DNA and RNA, which stop the growth of cancer cells.
Anterior exenteration	Surgery to remove the organs in the pelvis; this includes the urethra, lower part of the ureters, uterus, cervix, vagina, and bladder.
AUA	American Urological Association
Bacillus Calmette-Guerin (BCG)	May be used to treat early-stage cancer, but is used most commonly to prevent the recurrence of non muscle invasive bladder cancer.
BAUS	British Association of Urological Surgeons
Bladder mucosa	The innermost portion of the urinary bladder is the mucosa
Chemotherapy	The use of drugs used to kill cancer cells, to prevent or slow their growth.
Cisplatin/ Cisplatinum	Chemotherapy drug. Cisplatin is a clear fluid given as a drip (infusion).
Concomitant Chemotherapy	Chemotherapy which is given at the same time as another treatment.
Continuous Irrigation	A continuous infusion of a sterile solution into the bladder. Continuous bladder irrigation is primarily used following genitourinary surgery to keep the bladder clear and free of blood clots or sediment.
Contraindicated	A symptom or medical condition that makes a particular treatment or procedure inadvisable because a person is likely to have a bad reaction.
Curative Intent	Treatment which is given with the aim of curing the patient or the cancer.
Cystectomy	Surgical removal of the bladder, usually for invasive cancer.
Cystoscopy	Endoscopy of the urinary bladder via the urethra, carried out with a cystoscope.
Detrusor Muscle	The muscle fibres of the bladder wall.
Disease specific survival	A method of estimating net survival. Only deaths attributable to the cancer of diagnosis are counted as deaths, giving the probability of survival in the absence of other causes of death.
EAU	European Association of Urology
Enhanced Recovery After Surgery (ERAS)	ERAS is a programme to optimise patients for surgery to ensure quickest possible recovery following procedure and reduce the length of time spent in hospital. This includes various techniques including early feeding/drinking and mobilisation following the procedure and making sure patient is as fit as possible before surgery, which includes liaising with the patients GP to ensure any long term conditions are well-controlled, e.g. diabetes, high blood pressure.
Extraperitoneal perforation	Perforation of the bladder outwith the peritoneum.
Grade	The grade of a cancer gives an idea of how quickly it may develop.
Intraperitoneal perforation	Perforation of the bladder within the peritoneal cavity.
Intravesical chemotherapy	Chemotherapy drugs are put directly into the bladder through a catheter. Chemotherapy drugs actively kill cancer cells.

Lamina propria	A type of connective tissue found under the thin layer of tissues covering a mucous membrane.
Lamina propria invasion	The cancer has grown into the layer of connective tissue beneath the bladder lining (see lamina propria).
Lymph Nodes	Small bean shaped organs located along the lymphatic system. Nodes filter bacteria or cancer cells that might travel through the lymphatic system.
Lymphadenectomy	A surgical procedure in which the lymph nodes are removed and a sample of tissue is checked under a microscope for signs of cancer.
Macroscopic	Visible to the naked eye.
Mitomycin C	Chemotherapy drug that is used to treat bladder cancer.
Morbidity	How much ill health a particular condition causes.
Mortality	Either (1) the condition of being subject to death; or (2) the death rate, which reflects the number of deaths per unit of population in and specific region, age group disease or other classification, usually expressed as deaths per 1,000, 10,000 or 100,000.
Multidisciplinary Team Meeting (MDT)	A meeting which is held on a regular basis, which is made up of participants from various disciplines appropriate to the disease area, where diagnosis, management and appropriate treatment of patients is discussed and agreed.
Muscle Invasive Bladder Cancer (MIBC)	Bladder cancer where the tumour has spread to the muscle layer of the bladder, or right through the wall of the bladder.
Muscularis propria	The muscular layer of the wall of a hollow organ such as the bladder.
Muscularis propria invasion	The cancer has grown into the muscle of the bladder wall under the connective tissue layer (see muscularis propria).
Neoadjuvant chemotherapy	Chemotherapy treatment which is given before cystectomy with the aim of improving the results of surgery and preventing the development of metastases.
Non Muscle Invasive Bladder Cancer (NMIBC)	Bladder cancer where the tumour is confined to the inner lining, or just below the inner lining, of the bladder.
Oncologist	A doctor who specialises in treating people with cancer.
Palliative	Anything which serves to alleviate symptoms due to the underlying cancer but is not expected to cure it.
Pathological	The study of disease processes with the aim of understanding their nature and causes. This is achieved by observing samples of fluid and tissues obtained from the living patient by various methods, or at a post mortem.
Peritoneum	The serous membrane of the abdominal cavity.
Photodynamic diagnosis (PDD)	PDD, also known as fluorescence cystoscopy, uses a fluorescent substance and a special microscope to show tumour margins (edges) so that more of the tumour can be removed.
Prognostic Indicator	Factors, such as staging, tumour type, and laboratory studies that may indicate treatment effectiveness and outcomes.
Progression	The process of cancer spreading or becoming more severe.
Radical Radiotherapy	The use of radiation to treat disease with the intent of curing.
Radical treatment	Vigorous treatment that aims at the complete cure of a disease rather than merely the relief of symptoms.
Radiotherapy	The use of radiation to treat disease.
Recurrence	The return of cancer after a period of time in which no cancer could be detected.
Resection	See surgery/surgical resection
Residual Disease	Disease which remains after any form treatment, e.g. surgery, chemotherapy or radiotherapy.

Ribonucleic acid (RNA)	A ubiquitous family of large biological molecules that perform multiple vital roles in the coding, decoding, regulation, and expression of genes
Salvage Cystectomy	Removal of the bladder after failed chemotherapy and radiation for malignancy.
Severe Haematuria	High levels of blood in the urine.
Stage	Stage is used to describe the size of the tumour and how far it may have spread within the body. Various staging systems are used to describe the cancer i.e. TNM.
Surgery / Surgical resection	Surgical removal of the tumour/lesion
Survival	The percentage of people in a study or treatment group who are alive for a certain period of time after they were diagnosed with or treated for a disease, such as cancer.
TNM	'TNM' stands for Tumour, Node, Metastasis. This system can describe the size of a primary tumour, whether the cancer has spread to the lymph nodes and whether the cancer has spread to a different part of the body (metastasised). The system uses numbers to describe the cancer. 'T' refers to the size of the cancer. 'N' refers to whether the cancer has spread to the lymph nodes. 'M' refers to whether the cancer has spread to another part of the body.
Toxicity	The extent to which something is poisonous or harmful.
Transitional cell carcinoma	Transitional cell carcinoma (TCC) is a type of cancer that typically occurs in the urinary system: the kidney, urinary bladder, and accessory organs
Transuretheral resection (TURBT)	A surgical procedure used to remove tumours on the bladder wall. TURBT may be used to diagnose bladder cancer or to treat non muscle invasive bladder cancer.
Urinary Reconstruction (neobladder)	When the urinary bladder is removed (due to cancer, other medical condition, or because the organ no longer works), another method must be devised for urine to exit the body. Urinary reconstruction and diversion is a surgical method to create a new way for you to pass urine.
Urothelial	Relating to the urothelium (as below). Urothelial bladder cancer is cancer which started in the urothelium.
Urothelium	The lining of the urinary tract, including the renal pelvis, ureters, bladder, and urethra.
White Light TURBT	A TURBT performed using a white light which shows up any areas of the bladder which may be abnormal.