



**National Cancer Recovery Group  
National Cancer Quality Steering Group**

**Oesophago-Gastric Cancer  
Clinical Quality Performance Indicators**

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## Revision History

Version	Date	Summary of Changes
V1.0	November 2012	Initial publication
V2.0	November 2013	Addition of QPI 3 – Multidisciplinary Team (MDT) Meeting
V2.1	January 2015	Baseline review changes
V3.0	March 2017	Formal review changes (1st Cycle)
V4.0	September 2020	Formal review changes (2nd Cycle)
V5.0	April 2023	Formal review changes (3rd Cycle)

## Contents Update Record

### April 2023 (v5.0)

This document was updated following formal review (3rd cycle) of the Oesophago-Gastric Cancer Quality Performance Indicators (QPIs) which took place following analysis of year 9 of the Oesophago-Gastric cancer QPI data.

***Title of the QPI document has been changed from Upper GI Quality Performance Indicators to Oesophago-Gastric Cancer Quality Performance Indicators.***

### **The following QPIs have been updated:**

- QPI 4: Staging and Treatment Intent
- QPI 10: Resection Margins
- QPI 11: Curative Treatment Rates

### **The following new QPI has been added:**

- QPI 15: PD-L1 Status for Decision Making

### **The following QPIs have been archived\*:**

- QPI 12: 30 Day Mortality following SACT Treatment\*
- QPI 14: Clinical Trial and Research Study Access\*

\* These important indicators 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 – 11 and the appendices have also been updated.

**Please note that this version of the Oesophago-Gastric Cancer QPI Document applies to cases diagnosed from 1st January 2023.**

## **Previous Versions**

### **September 2020 (v4.0)**

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

**The following QPIs have been updated:**

- QPI 5: Nutritional Assessment
- QPI 10: Resection Margins
- QPI 12: 30 Day Mortality Following Systemic Anti-Cancer Therapy (SACT)
- QPI 13: HER2 Status for Decision Making

Please note the revised Clinical Trials and Research Study Access QPI has also been added (see QPI 14: Clinical Trials & Research Study Access).

As a result of the changes above, the contents page and page numbering differ from earlier versions of this document. Sections 1 - 11 and the appendices have also been updated.

**Please note that this version of the Upper GI Cancer QPI Document applies to cases diagnosed from 1st January 2020 onwards.**

**March 2017 (v3.0)**

This document was updated following formal review of the Upper GI Cancer Quality Performance Indicators (QPIs) which took place following analysis of year 3 of the Upper GI cancer QPI data.

**The following QPIs have been updated:**

- QPI 1 – Endoscopy
- QPI 4 – Staging and Treatment Intent
- QPI 5 – Nutritional Assessment
- QPI 6 – Appropriate Selection of Surgical Patients
- QPI 7 – 30/90 Day Mortality Following Surgery
- QPI 8 – Lymph Node Yield
- QPI 9 – Length of Hospital Stay Following Surgery
- QPI 10 – Resection Margins
- QPI 12 – 30/90 Day Mortality Following Oncological Treatment

**The following QPI has been archived:**

- QPI 2: Radiological Staging

**The following new QPI has been added:**

- QPI 13: HER2 Status for Decision Making in Advanced Gastric and Gastro-oesophageal Junction Cancer

Please note the extant Clinical Trials QPI has now been added into each tumour specific QPI document (see QPI 14 – Clinical Trials).

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 Upper GI QPI Document applies to cases diagnosed from January 2016. Where amended or new QPIs require new data items for measurement, this will apply for patients diagnosed from January 2017.**

### **January 2015 (v2.1)**

This document was updated following baseline review of the Upper GI Cancer QPIs which took place following analysis of year 1 of the Upper GI Cancer QPI data. As a result, the following QPIs have been updated:

- QPI 2 – Radiological Staging
- QPI 4 – Staging and Treatment Intent
- QPI 8 – Lymph Node Yield
- QPI 10 – Resection Margins
- QPI 12 – 30 Day Mortality Following Oncological Treatment

**Please note that this version of the Upper GI Cancer QPI Document applies to cases diagnosed from 1st January 2014.**

### **November 2013 (v2.0)**

Please note that this document has been updated to include QPI 3 – Multi-Disciplinary Team (MDT) Meeting.

- The overall QPI numbering, contents page and the page numbering have been amended as a result and therefore differ from earlier versions of this document.

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## **1. National Cancer Quality Programme**

Better Cancer: Ambition and Action (2016)<sup>1</sup> details a commitment to delivering the National Cancer Quality Programme across NHS Scotland, 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 of 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 NHS Scotland, 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 Upper GI Cancer QPI Development Group was convened in June 2011, chaired by Dr Jennifer Armstrong (Senior Medical Officer, Scottish Government). Membership of this group included clinical representatives drawn from the three regional cancer networks, Healthcare Improvement Scotland, Information Services Division (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 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 have been 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 Oesophago-Gastric 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, which dictates the level 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 will be 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 Oesophago-Gastric Cancer QPIs. The latest version of these documents can be found at:

[Public Health Scotland Cancer Audit](#)



## 6. Quality Performance Indicators for Oesophago-Gastric Cancer

### QPI 1 - Endoscopy

<b>QPI Title:</b>	Patients with oesophageal or gastric cancer should undergo endoscopy and biopsy to reach a diagnosis of cancer.
<b>Description:</b>	Proportion of patients with oesophageal or gastric cancer who have a histological diagnosis made within 6 weeks of initial endoscopy and biopsy.
<b>Rationale and Evidence:</b>	<p>For diagnosis of oesophageal or gastric cancer the use of endoscopy is recommended<sup>2</sup>.</p> <p>A tissue diagnosis in cases of suspected oesophageal and gastric cancer requires adequate sampling of the suspicious lesion. Multiple biopsies should be obtained and the number of biopsies examined should always be reported <sup>2</sup>.</p> <p>This QPI utilises a 6 week timeframe from initial endoscopy and biopsy to histological diagnosis. This has been deemed appropriate by the QPI Review Group to account for clinical situations where the suspicion of malignancy is high however the initial biopsy result is negative. It also accounts for those patients where biopsy has not been possible at the initial endoscopy procedure due to reasons such as anticoagulant use or gastric outlet obstruction. This ensures there are no delays in undergoing a repeat investigation if required and thus avoiding the possibility of presenting with a more advanced cancer.</p>
<b>Specifications:</b>	<p><b>Numerator:</b> Number of patients with oesophageal or gastric cancer who undergo endoscopy who have a histological diagnosis made within 6 weeks of initial endoscopy and biopsy<sup>a</sup>.</p> <p><b>Denominator:</b> All patients with oesophageal or gastric cancer who undergo endoscopy.</p> <p><b>Exclusions:</b></p> <ul style="list-style-type: none"> <li>• No exclusions</li> </ul>
<b>Target:</b>	<p>95%</p> <p>The tolerance within this target is designed to account for factors of patient choice.</p>

<sup>a</sup> Patients may undergo endoscopies which are not related to their cancer diagnosis therefore within the measurement of this QPI the 'initial endoscopy and biopsy' will be identified if no endoscopy occurred within the previous year.

### QPI 3 - Multi-Disciplinary Team (MDT) Meeting

<b>QPI Title:</b>	Patients should be discussed by a multidisciplinary team prior to definitive treatment.
<b>Description:</b>	Proportion of patients with oesophageal or gastric cancer who are discussed at MDT meeting before definitive treatment.
<b>Rationale and Evidence:</b>	<p>Evidence suggests that patients with cancer managed by a multi-disciplinary team have a better outcome. There is also evidence that the multidisciplinary management of patients increases their overall satisfaction with their care<sup>3</sup>.</p> <p>Discussion prior to definitive treatment decisions being made provides reassurance that patients are being managed appropriately.</p>
<b>Specifications:</b>	<p><b>Numerator:</b> Number of patients with oesophageal or gastric cancer discussed at the MDT before definitive treatment.</p> <p><b>Denominator:</b> All patients with oesophageal or gastric cancer.</p> <p><b>Exclusions:</b></p> <ul style="list-style-type: none"> <li>• Patients who died before first treatment.</li> </ul>
<b>Target:</b>	<p>95%</p> <p>The tolerance within this target accounts for situations where patients require treatment urgently.</p>

## QPI 4 - Staging and Treatment Intent

<b>QPI Title:</b>	Patients with oesophageal or gastric cancer should be staged using the TNM <sup>b</sup> staging system and have statement of treatment intent recorded prior to treatment commencing.
<b>Description:</b>	<p>Proportion of patients with oesophageal or gastric cancer who have TNM stage and treatment intent recorded at MDT meeting prior to treatment.</p> <p><b>Please note:</b> The specifications of this QPI are separated to ensure clear measurement of patients who have the following recorded at MDT meeting prior to treatment:</p> <ul style="list-style-type: none"> <li>(i) TNM stage; and</li> <li>(ii) Treatment Intent.</li> </ul>
<b>Rationale and Evidence:</b>	<p>It is important to discuss and consider treatment intent as patients with incurable disease treated as radical will be poorly served.</p> <p>Patients with gastric or oesophageal cancer should undergo careful staging to assess the extent of disease and inform treatment decision making<sup>2</sup>. This may involve multiple investigations.</p> <p>Clinical staging should follow the principles of TNM classification<sup>4</sup>; this aids the determination of prognosis and choice of therapy. A statement regarding clinical stage and treatment intent should be recorded at the MDT. For patients presenting with metastatic disease it is not always possible or appropriate to determine T and N stage. Within the QPI T<sub>x</sub>N<sub>x</sub>M<sub>1</sub><sup>c</sup> is therefore accepted as complete staging in this situation.</p>
<b>Specification (i):</b>	<p><b>Numerator:</b> Number of patients with oesophageal or gastric cancer who have TNM stage recorded at MDT meeting prior to treatment.</p> <p><b>Denominator:</b> All patients with oesophageal or gastric cancer who are discussed at MDT prior to treatment.</p> <p><b>Exclusions:</b></p> <ul style="list-style-type: none"> <li>• No exclusions</li> </ul>
<b>Target:</b>	<p>90%</p> <p>The tolerance within this target accounts for situations where patients are not fit enough to undergo investigations and/or treatment; however, in these cases an attempt at TNM staging should be undertaken based on the information available. It also accounts for those patients who die before MDT meeting.</p>

(Continued overleaf...)

<sup>b</sup> TNM classification is a system for staging the extent of cancer. T describes the size of the tumour. N refers to the involvement of the lymph nodes. M refers to the presence of metastatic disease.

<sup>c</sup> Patients presenting with stage T<sub>x</sub>N<sub>x</sub>M<sub>1</sub> disease have metastatic cancer where the extent of primary tumour or lymph node involvement cannot be assessed.

## QPI 4 - Staging and Treatment Intent (continued....)

<b>Specification (ii):</b>	<p><b>Numerator:</b> Number of patients with oesophageal or gastric cancer who have treatment intent recorded at MDT meeting prior to treatment.</p> <p><b>Denominator:</b> All patients with oesophageal or gastric cancer who are discussed at MDT prior to treatment.</p> <p><b>Exclusions:</b></p> <ul style="list-style-type: none"> <li>• No exclusions</li> </ul>
<b>Target:</b>	<p>95%</p> <p>The tolerance within this target accounts for those patients who die before MDT meeting.</p>

## QPI 5 - Nutritional Assessment

<b>QPI Title:</b>	Patients with oesophageal or gastric cancer should be appropriately assessed by a dietitian to optimise nutritional status.
<b>Description:</b>	<p>Proportion of patients with oesophageal or gastric cancer who undergo nutritional screening before first treatment and are assessed by a dietitian where appropriate.</p> <p><b>Please note:</b> The specifications of this QPI have been separated to ensure clear measurement of patients who:</p> <ul style="list-style-type: none"> <li>(i) Undergo nutritional screening with the Malnutrition Universal Screening Tool (MUST) before first treatment; and</li> <li>(ii) Are at high risk of malnutrition (MUST Score of 2 or more) and are assessed by a dietitian.</li> </ul>
<b>Rationale and Evidence:</b>	<p>All patients with oesophageal or gastric cancer should be screened using a validated nutritional screening tool to assess nutritional risk. Those at risk of nutritional problems should have access to a registered dietitian to provide appropriate advice<sup>2</sup>.</p> <p>Poor nutritional status is a risk factor for poor tolerance of treatment whether curative or palliative and can impact greatly on quality of life<sup>5,6</sup>. Patients who are suitable for radical treatment, e.g. surgery, and who are malnourished, benefit from nutrition support prior to treatment. In addition, all patients who undergo surgery benefit from early post-operative nutrition. Both can reduce complications such as sepsis, poor wound healing and reduce length of stay<sup>7</sup>.</p> <p>To ensure focussed measurement, this QPI examines patients with a MUST score of 2 or more. Although this ensures those patients most at risk of malnutrition are being targeted for dietetic assessment, it is important that all patients, regardless of score, are managed appropriately for nutritional care. Although the MUST score should be applied for the purposes of this QPI, it is acknowledged that there are also other tools available which may be used for nutritional assessment.</p>
<b>Specification (i):</b>	<p><b>Numerator:</b> Number of patients with oesophageal or gastric cancer who undergo nutritional screening with the MUST before first treatment.</p> <p><b>Denominator:</b> All patients with oesophageal or gastric cancer.</p> <p><b>Exclusions:</b></p> <ul style="list-style-type: none"> <li>• No exclusions.</li> </ul>
<b>Target:</b>	<p>95%</p> <p>The tolerance within this target accounts for those patients with very advanced disease who may not be fit for treatment, and for factors of patient choice.</p>

(Continued overleaf...)

## QPI 5 - Nutritional Assessment (continued....)

<b>Specification (ii):</b>	<p><b>Numerator:</b> Number of patients with oesophageal or gastric cancer at high risk of malnutrition (MUST score of 2 or more) who are assessed by a dietitian.</p> <p><b>Denominator:</b> All patients with oesophageal or gastric cancer at high risk of malnutrition (MUST score of 2 or more).</p> <p><b>Exclusions:</b></p> <ul style="list-style-type: none"> <li>• No exclusions.</li> </ul>
<b>Target:</b>	<p>90%</p> <p>The tolerance within this target accounts for those patients with very advanced disease in whom dietetics assessment may not be appropriate, as well as factors of patient choice.</p>

## QPI 6 - Appropriate Selection of Surgical Patients

<b>QPI Title:</b>	Patients with oesophageal or gastric cancer whose treatment plan is neoadjuvant chemotherapy or chemoradiotherapy followed by surgery should progress to surgery following completion of this treatment.
<b>Description:</b>	Proportion of patients with oesophageal or gastric cancer who receive neo-adjuvant chemotherapy or chemoradiotherapy who then go on to have surgical resection.
<b>Rationale and Evidence:</b>	<p>Patients with oesophageal or gastric cancer who are suitable for surgical resection should be offered neoadjuvant chemotherapy treatment<sup>2,8,9</sup>. Neoadjuvant chemotherapy or chemoradiotherapy prior to surgery provides a survival benefit for patients with oesophageal or gastric cancer<sup>10,11</sup>.</p> <p>It is optimal management that patients who undergo neoadjuvant chemotherapy or chemoradiotherapy proceed to resectional (curative) surgery; various reasons may affect this including initial under-staging of disease.</p>
<b>Specifications:</b>	<p><b>Numerator:</b> Number of patients with oesophageal or gastric cancer who receive neo-adjuvant chemotherapy or chemoradiotherapy who then undergo surgical resection.</p> <p><b>Denominator:</b> All patients with oesophageal or gastric cancer who receive neo-adjuvant chemotherapy or chemoradiotherapy.</p> <p><b>Exclusions:</b></p> <ul style="list-style-type: none"> <li>• No exclusions</li> </ul>
<b>Target:</b>	<p>80%</p> <p>The tolerance within this target accounts for the fact that some patients' disease may progress despite neo-adjuvant chemotherapy or chemoradiotherapy, and for factors of patient choice.</p>

## QPI 7 - 30/90 Day Mortality Following Surgery

<b>QPI Title:</b>	30 and 90 day mortality following surgical resection for oesophageal or gastric cancer.
<b>Description:</b>	Proportion of patients with oesophageal or gastric cancer who die within 30 or 90 days of surgical resection for oesophageal or gastric cancer.
<b>Rationale and Evidence:</b>	<p>Treatment related mortality is a marker of the quality and safety of the whole service provided by the Multi Disciplinary Team (MDT)<sup>12</sup>.</p> <p>Treatment should only be undertaken in individuals that may benefit from treatment, that is, disease specific treatments should not be undertaken in futile situations. This QPI is intended to ensure treatment is given appropriately.</p>
<b>Specifications:</b>	<p><b>Numerator:</b> Number of patients with oesophageal or gastric cancer who undergo surgical resection who die within 30/90 days of treatment.</p> <p><b>Denominator:</b> All patients with oesophageal or gastric cancer who undergo surgical resection.</p> <p><b>Exclusions:</b></p> <ul style="list-style-type: none"> <li>• No exclusions</li> </ul>
<b>Target:</b>	<p>30 day - &lt;5%</p> <p>90 day - &lt;7.5%</p>



## QPI 8 - Lymph Node Yield

<b>QPI Title:</b>	For patients with oesophageal or gastric cancer undergoing curative resection the number of lymph nodes examined should be maximised.
<b>Description:</b>	Proportion of patients with oesophageal or gastric cancer who undergo surgical resection where $\geq 15$ lymph nodes are resected and pathologically examined.
<b>Rationale and Evidence:</b>	<p>Maximising the number of lymph nodes resected and analysed enables reliable staging which influences treatment decision making.</p> <p>Evidence recommends that at least 15 lymph nodes are resected and examined by a pathologist<sup>9,13</sup>.</p>
<b>Specifications:</b>	<p><b>Numerator:</b> Number of patients with oesophageal or gastric cancer who undergo surgical resection where <math>\geq 15</math> lymph nodes are resected and pathologically examined.</p> <p><b>Denominator:</b> All patients with oesophageal or gastric cancer who undergo surgical resection.</p> <p><b>Exclusions:</b></p> <ul style="list-style-type: none"> <li>• No exclusions</li> </ul>
<b>Target:</b>	<p>Gastric cancer - 80%</p> <p>Oesophageal cancer – 90%</p> <p>The tolerance within this target accounts for situations where patients are not fit enough to undergo extensive lymphadenectomy and for situations where surgical resection is performed for palliation.</p>

## QPI 9 - Length of Hospital Stay Following Surgery

<b>QPI Title:</b>	Length of hospital stay following surgery for oesophageal or gastric cancer should be as short as possible.
<b>Description:</b>	Proportion of patients undergoing surgical resection for oesophageal or gastric cancer who are discharged within 14 days of surgical procedure.
<b>Rationale and Evidence:</b>	<p>Length of hospital stay acts as a surrogate measure for the quality of surgery and post-operative care for patients undergoing surgical resection for oesophagogastric cancer.</p> <p>This QPI is intended as a surrogate marker to address various issues of quality care including surgery, post-operative complications and access to community services.</p>
<b>Specifications:</b>	<p><b>Numerator:</b> Number of patients undergoing surgical resection for oesophageal or gastric cancer who are discharged within 14 days of surgical procedure.</p> <p><b>Denominator:</b> All patients undergoing surgical resection for oesophageal or gastric cancer.</p> <p><b>Exclusions</b></p> <ul style="list-style-type: none"> <li>• No exclusions</li> </ul>
<b>Target:</b>	<p>60%</p> <p>The tolerance within this target is designed to account for situations where it is not safe or practical for patients to go home within 14 days of surgery.</p>

## QPI 10 - Resection Margins

<b>QPI Title:</b>	Oesophageal and gastric cancers which are surgically resected should be adequately excised.
<b>Description:</b>	<p>Proportion of patients with oesophageal or gastric cancer who undergo surgical resection in which surgical margin is clear of tumour, i.e. negative surgical margin.</p> <p><b>Please note:</b> The specifications of this QPI have been separated to ensure clear measurement of both:</p> <ul style="list-style-type: none"> <li>(i) Oesophageal cancer patients who have a clear circumferential margin; and</li> <li>(ii) Oesophageal and gastric cancer patients who have a clear longitudinal margin.</li> </ul>
<b>Rationale and Evidence:</b>	<p>Tumour involvement of surgical resection margins is a negative prognostic factor; therefore surgery should aim to ensure resection margins are clear of tumour.</p> <p>Oesophageal and gastric cancer resectional surgery should aim to ensure complete excision of the tumour, i.e. achieve an R0 resection, as this affects prognosis and long term patient outcome<sup>2,9</sup>.</p>
<b>Specification (i):</b>	<p><b>Numerator:</b> Number of patients with oesophageal cancer who undergo surgical resection in which circumferential surgical margin is clear of tumour.</p> <p><b>Denominator:</b> All patients with oesophageal cancer who undergo surgical resection.</p> <p><b>Exclusions:</b> <ul style="list-style-type: none"> <li>• No exclusions.</li> </ul> </p>
<b>Target:</b>	75%
<b>Specification (ii):</b>	<p><b>Numerator:</b> Number of patients with oesophageal or gastric cancer who undergo surgical resection in which longitudinal surgical margin is clear of tumour.</p> <p><b>Denominator:</b> All patients with oesophageal or gastric cancer who undergo surgical resection.</p> <p><b>Exclusions:</b> <ul style="list-style-type: none"> <li>• No exclusions.</li> </ul> </p>
<b>Target:</b>	95%

## QPI 11 - Curative Treatment Rates

<b>QPI Title:</b>	Patients with oesophageal or gastric cancer should undergo curative treatment whenever possible.
<b>Description:</b>	<p>Proportion of patients with oesophageal or gastric cancer who undergo curative treatment, this includes:</p> <ul style="list-style-type: none"> <li>• Neoadjuvant chemoradiotherapy or chemotherapy followed by surgery;</li> <li>• Primary surgery;</li> <li>• Radical chemoradiotherapy;</li> <li>• Radical radiotherapy; and</li> <li>• Endoscopic Mucosal Resection.</li> </ul>
<b>Rationale and Evidence:</b>	<p>Curative treatment should be offered to as many patients as possible, as this is proven to have a survival benefit. The UK National Oesophago-Gastric Cancer Audit Report (2016) data demonstrate that around three-quarters of patients receiving treatment with curative intent survived at least 1 year from diagnosis. At two years, just over one-half of patients were still alive<sup>14</sup>.</p> <p>Surgical resection of the tumour remains the mainstay of curative treatment for patients with oesophageal or gastric cancer<sup>14</sup>.</p> <p>Chemoradiotherapy should be considered in patients with oesophageal cancer who have locally advanced disease, those unfit for surgery or those who decline surgery<sup>2</sup>.</p> <p>In the older population where patients may be unfit for radical chemoradiotherapy, radiotherapy alone can have comparable survival and should be considered as an acceptable alternative for oesophageal squamous cell carcinoma<sup>15</sup>.</p>
<b>Specifications:</b>	<p><b>Numerator:</b> Number of patients with oesophageal or gastric cancer who undergo curative treatment.</p> <p><b>Denominator:</b> All patients with oesophageal or gastric cancer.</p> <p><b>Exclusions:</b></p> <ul style="list-style-type: none"> <li>• No exclusions</li> </ul>
<b>Target:</b>	<p>35%</p> <p>The tolerance within this target takes into consideration patient choice, fitness and co-morbidities which preclude curative treatment.</p> <p>It is intended as a composite measure of the entire diagnostic and staging pathway, but recognises that the majority of patients will have advanced disease at presentation.</p>

## QPI 13 - HER2 Status for Decision Making

<b>QPI Title:</b>	HER2 status should be available to inform treatment decision making in patients with oesophageal or gastric adenocarcinoma.
<b>Description:</b>	Proportion of patients with oesophageal or gastric adenocarcinoma undergoing first line palliative chemotherapy as their initial treatment for whom the HER2 status is reported prior to commencing treatment.
<b>Rationale and Evidence:</b>	<p>HER2 is a negative prognostic factor, demonstrating an impact on recurrence in HER2-positive tumours and therefore having a significant influence on treatment decisions<sup>16</sup>.</p> <p>Trastuzumab in combination with doublet chemotherapy is recommended for the treatment of patients with HER2 positive metastatic adenocarcinoma of the stomach or gastro-oesophageal junction who have not received prior anti-cancer treatment for their metastatic disease<sup>17,18</sup>.</p> <p>It is important to ensure the availability of HER2 status to inform treatment decision making. Delay in the availability of a HER2 result may lead to a delay in appropriate therapy and make communication of a clear plan to the patient more difficult.</p>
<b>Specifications:</b>	<p><b>Numerator:</b> Number of patients with oesophageal or gastric adenocarcinoma undergoing first line palliative chemotherapy as their initial treatment for whom the HER2 status is reported prior to commencing treatment.</p> <p><b>Denominator:</b> All patients with oesophageal or gastric adenocarcinoma undergoing first line palliative chemotherapy as their initial treatment.</p> <p><b>Exclusions</b></p> <ul style="list-style-type: none"> <li>• No exclusions.</li> </ul>
<b>Target:</b>	<p>90%</p> <p>The tolerance within this target is designed to account for situations where there is insufficient tissue for analysis, and for patients with co-morbidities for whom targeted HER2 therapy would not be appropriate.</p>

## QPI 15 - PD-L1 Status for Decision Making

<b>QPI Title:</b>	PD-L1 status should be available to inform treatment decision making in patients with oesophageal or gastric cancer.
<b>Description:</b>	<p>Proportion of patients with oesophageal or gastric cancer undergoing first line palliative chemotherapy as their initial treatment for whom the PD-L1 status is reported prior to commencing treatment.</p> <p><b>Please note:</b> The specifications of this QPI have been separated to ensure clear measurement of the following:</p> <ul style="list-style-type: none"> <li>(i) Patients with oesophageal or gastric adenocarcinoma undergoing first line palliative chemotherapy as their initial treatment; and</li> <li>(ii) Patients with oesophageal squamous cell carcinoma undergoing first line palliative chemotherapy as their initial treatment.</li> </ul>
<b>Rationale and Evidence:</b>	<p>PD-L1 is an important prognostic indicator for patients with oesophageal cancer<sup>19</sup>. Tumours which demonstrate PD-L1 expression can respond to immunotherapy treatments e.g. Pembrolizumab.</p> <p>Pembrolizumab in combination with chemotherapy was associated with significantly improved progression-free survival and overall survival compared with chemotherapy alone<sup>20</sup>.</p> <p>It is important to ensure the availability of PD-L1 status to inform treatment decision making. Delay in the availability of a PD-L1 result may lead to a delay in appropriate therapy and make communication of a clear plan to the patient more difficult.</p>
<b>Specification (i):</b>	<p><b>Numerator:</b> Number of patients with oesophageal or gastric adenocarcinoma undergoing first line palliative chemotherapy as their initial treatment for whom the PD-L1 status is reported prior to commencing treatment.</p> <p><b>Denominator:</b> All patients with oesophageal or gastric adenocarcinoma undergoing first line palliative chemotherapy as their initial treatment</p> <p><b>Exclusions</b> No exclusions.</p>
<b>Specification (ii):</b>	<p><b>Numerator:</b> Number of patients with oesophageal squamous cell carcinoma undergoing first line palliative chemotherapy as their initial treatment for whom the PD-L1 status is reported prior to commencing treatment.</p> <p><b>Denominator:</b> All patients with oesophageal squamous cell carcinoma undergoing first line palliative chemotherapy as their initial treatment.</p> <p><b>Exclusions</b> No exclusions.</p>
<b>Target:</b>	<p>90%</p> <p>The tolerance level within this target is designed to account for situations where there is insufficient tissue for analysis, or for patients with co-morbidities for whom targeted PD-L1 therapy would not be appropriate.</p>

## 7. Survival

Improving survival forms an integral part of the national cancer quality improvement programme. Oesophago-Gastric Cancer survival analysis will be reported and analysed on a 3 yearly basis by Public Health Scotland (PHS). The specific issues which will be addressed 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 Oesophago-Gastric Cancer QPI Group has identified, during the QPI development process, the following issues for survival analysis:

- Overall 1, 2 and 5 year survival.

To ensure consistent application of survival analysis, it has been agreed that a single 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 Steering Group and National Cancer Recovery Group. This reflects the requirement for record linkage and the more technical requirements of survival analyses which makes it difficult for individual Boards to undertake routinely and in a nationally consistent manner.

## 8. Areas for Future Consideration

The Oesophago-Gastric Cancer QPI Groups have not been able to identify sufficient evidence, or determine appropriate measurability specification, to address all areas felt to be of key importance in the treatment of oesophago-gastric cancer, and therefore in improving the quality of care for patients affected by oesophago-gastric cancer.

The following areas for future consideration have been raised across the lifetime of the Oesophago-Gastric Cancer QPIs.

- Palliative treatment rates.
- Levels of early stage disease.
- Treatment of early stage disease.
- Surgical volumes.
- Quality of post operative care and recovery following surgery.
- Endoscopic Mucosal Resection.
- Timely diagnosis and staging/imaging
- Molecular Biomarkers in Oesophago-gastric cancer

## 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 3 and 4 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*

- National Cancer Recovery Group
  - Accountable for overall national cancer quality programme and overseeing the quality of cancer care across NHSScotland.

- Advise Scottish Government Health and Social Care Directorate (SGHSCD) if escalation required.
- 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
  - 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.
- Identify and share good practice.
- In conjunction with constituent NHS Boards identify regional and local actions required to develop an action plan to address regional issues identified.
- Review and monitor progress against agreed actions.
- Provide assurance to NHS Board Chief Executive Officers and National Cancer Recovery Group 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 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 Upper GI cancer QPIs and a search narrative were defined and agreed by the Upper GI Cancer QPI Development Group. The table below shows the final criteria used in the literature search.

Inclusion	Exclusion
<i>Topics</i> (population/patient): Oesophageal (oesophageal), gastric <i>Topics</i> (intervention): Diagnosis, staging, surgery, non-surgical management, treatment, palliative chemotherapy, radiotherapy and surgery. Adults only <i>Date</i> : 2005 to present day	<i>Topics</i> : Communication/information, end of life care, pain management, prevention, screening and secondary liver cancer.

**Table 1 – Upper GI 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.

Of 39 relevant documents identified, 21 were excluded on the grounds that they were duplicate publications, not guidelines or had inadequate methodological information. The 18 remaining guidelines were appraised for quality using the AGREE<sup>21</sup> II instrument. The instrument assesses the methodological rigour and precision used when developing a guideline. Sixteen of the guidelines were recommended for use.

#### *Indicator Development*

The Upper GI Cancer QPI 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 base** – 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 2012 where the Upper GI Cancer QPIs, along with the accompanying draft minimum core dataset and measurability specifications, were made available of the Scottish Government website.

During the engagement period clinical and management colleagues were across NHSScotland, patients affected by upper GI cancer and the wider public were given the opportunity to influence the development of Upper GI Cancer QPIs.

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

### **Upper GI Cancer QPI Development Group Membership (2012)**

<b>Name</b>	<b>Designation</b>	<b>Cancer Network/Base</b>
Jennifer Armstrong	Senior Medical Officer (CHAIR)	Scottish Government
Dougal Adamson	Consultant Oncologist	NOSCAN (Ninewells Hospital)
Alison Allen	Cancer Audit Manager	SCAN
Stuart Ballantyne	Consultant Radiologist	WoSCAN (Gartnavel General Hospital)
Sivanathan Chandramohan	Consultant Radiologist	WoSCAN (Gartnavel General Hospital)
Ron Coggins	Consultant Surgeon	NOSCAN (Raigmore Hospital)
Graeme Couper	Consultant Surgeon	SCAN (Edinburgh Royal Infirmary)
Jeff Evans	Consultant Oncologist	WoSCAN (Beatson West of Scotland Cancer Centre)
LJ Fon	Consultant Surgeon	WoSCAN (Crosshouse Hospital)
Matthew Forshaw	Consultant Surgeon	WoSCAN (Glasgow Royal Infirmary)
James Going	Consultant Pathologist	WoSCAN (Glasgow Royal Infirmary)
Louise Graham	Cancer Nurse Specialist	SCAN (Edinburgh Royal Infirmary)
Michele Hilton Boon	Programme Manager	Healthcare Improvement Scotland
Natasha Inglis	Consultant Pathologist	NOSCAN (Raigmore Hospital)
Rosie Kitching	Cancer Nurse Specialist	NOSCAN (Aberdeen Royal Infirmary)
Colin K MacKay	Consultant Surgeon	WoSCAN (Glasgow Royal Infirmary)
Mairi Macpherson	Cancer Nurse Specialist	WoSCAN (Forth Valley Royal Hospital)
Carol Marshall	Information Manager	WoSCAN
Dympna McAteer	Consultant Radiologist	NOSCAN (Aberdeen Royal Infirmary)

<b>Name</b>	<b>Designation</b>	<b>Cancer Network/Base</b>
Susan McFadyen	Clinical Service Manager	WoSCAN (Glasgow Royal Infirmary)
Neil McLachlan	MCN Manager	NOSCAN
Brian Murray	Principal Information Development Manager	Information Services Division
David Oxenham	Medical Director	Marie Curie Hospice, Edinburgh
Russell Petty	Consultant Oncologist	NOSCAN (Aberdeen Royal Infirmary)
Perminder Phull	Consultant Gastroenterologist	NOSCAN (Aberdeen Royal Infirmary)
Lindsay Potts	Consultant Gastroenterologist	NOSCAN (Raigmore Hospital)
Caragh Rennie	Cancer Audit Facilitator	WoSCAN (Glasgow Royal Infirmary)
Vicki Save	Consultant Pathologist	SCAN (Edinburgh Royal Infirmary)
Iona Scott	Project Manager	WoSCAN
Sami Shimi	Consultant Surgeon	NOSCAN (Ninewells Hospital)
Evelyn Thomson	Regional Manager (Cancer)	WoSCAN

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

## Appendix 2: Oesophago-Gastric Cancer QPI Formal Reviews

Formal review of the Upper GI Cancer QPIs was undertaken for the first time in September 2016. A Formal Review Group was convened, chaired by Professor Alan McNeill, Consultant Urologist, Western General Hospital, Edinburgh. Membership of this group is outlined below:

### ***Upper GI Cancer QPI Formal Review Group Membership (2016)***

<b>Name</b>	<b>Designation</b>	<b>Cancer Network</b>
Alan McNeill	Consultant Urologist (CHAIR)	SCAN
Stuart Oglesby	Clinical Lead, Upper GI Cancer MCN	NOSCAN
Peter Lamb	Clinical Lead, Upper GI Cancer MCN	SCAN
Matthew Forshaw	Clinical Lead, Upper GI Cancer MCN	WoSCAN
Richard Skipworth	Consultant in General and Upper GI Surgery	SCAN
Evelyn Thomson	Regional Manager (Cancer)	WoSCAN
Christine Urquhart	Audit Manager	NOSCAN
Jennifer Doherty	Project Co-ordinator	National Cancer Quality Programme

**Formal review of the Upper GI Cancer QPIs has been undertaken in consultation with various other clinical specialties e.g. Oncology and Pathology.**

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

### **2nd Cycle Formal Review**

The 2nd Cycle of Formal Review commenced in September 2019. This review was more selective and focussed on ensuring the ongoing relevance of the QPIs. A Formal Review Group was convened, with Professor Rob Jones, Professor of Clinical Cancer Research and Honorary Consultant in Medical Oncology appointed as Clinical Advisor/Chair to the group. Membership of this group is outlined below:

### ***Upper GI Cancer QPI Formal Review Group Membership (2019/20)***

<b>Name</b>	<b>Designation</b>	<b>Cancer Network</b>
Rob Jones	Consultant Medical Oncologist (Chair)	WoSCAN
Lorraine Cowie	Regional Manager (Cancer)	NCA
Jen Doherty	Project Co-ordinator	National Cancer Quality Programme
Peter Lamb	Clinical Lead, Upper GI Cancer MCN	SCAN
Andrew MacDonald	Clinical Lead, Upper GI Cancer MCN	WoSCAN

Name	Designation	Cancer Network
Bryan McKellar	Programme Co-ordinator	NCA
Russell Petty	Clinical Lead, Upper GI Cancer MCN	NCA
Richard Skipworth	Consultant in Upper GI Surgery	SCAN
Lorraine Stirling	Project Officer	National Cancer Quality Programme
Christine Urquhart	Audit Manager	NCA

**Formal review of the Upper GI Cancer QPIs has been undertaken in consultation with various other clinical specialties e.g. Oncology and Pathology**

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 September 2022. Mr Steve Leung, Consultant Urological Surgeon, SCAN was appointed as Clinical Advisor/Chair to the group. Membership of this group is outlined below:

### ***Oesophago-Gastric Cancer QPI Formal Review Group Membership (2022)***

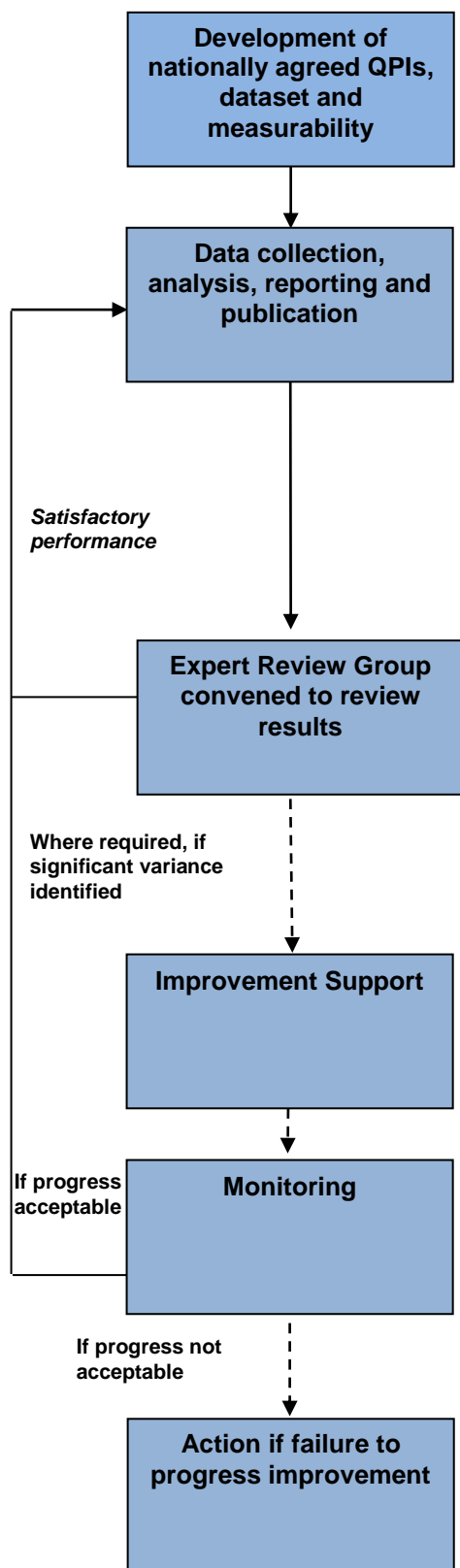
Name	Designation	Cancer Network
Steve Leung (Chair)	Consultant Urological Surgeon	SCAN
Jen Doherty	National Cancer Quality Programme Co-ordinator	National
Peter Lamb	Clinical Lead, Upper GI Cancer MCN	SCAN
Andrew Macdonald	Clinical Lead, Upper GI Cancer MCN	WoSCAN
Bryan McKellar	Regional Manager (Cancer)	NCA
Shayanthan Nanthakumaran	Consultant Upper GI Surgeon	NCA
Stuart Oglesby	Consultant Upper GI Surgeon	NCA
Gillian Petty	MCN Manager	WoSCAN
Richard Skipworth	Consultant Upper GI Surgeon	SCAN
Lorraine Stirling	Project Officer, National Cancer Quality Programme	National
Christine Urquhart	Information Analyst	WoSCAN

**Formal review of the Oesophago-Gastric Cancer QPIs has been undertaken in consultation with various other clinical specialties e.g. Oncology and Pathology**

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

## Appendix 3: 3 Yearly National Governance Process and Improvement Framework for Cancer Care

This process is underpinned by the annual regional reporting and governance framework (see appendix 4).



### 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 4.
- Submit yearly reports to PHS for collation and publication every 3 years.
- National comparative report approved by NHS Boards and RCAGs.
- PHS 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 National Cancer Recovery Group.

### 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 National Cancer Recovery Group.
- Healthcare Improvement Scotland report to National Cancer Recovery Group as to whether progress is acceptable.

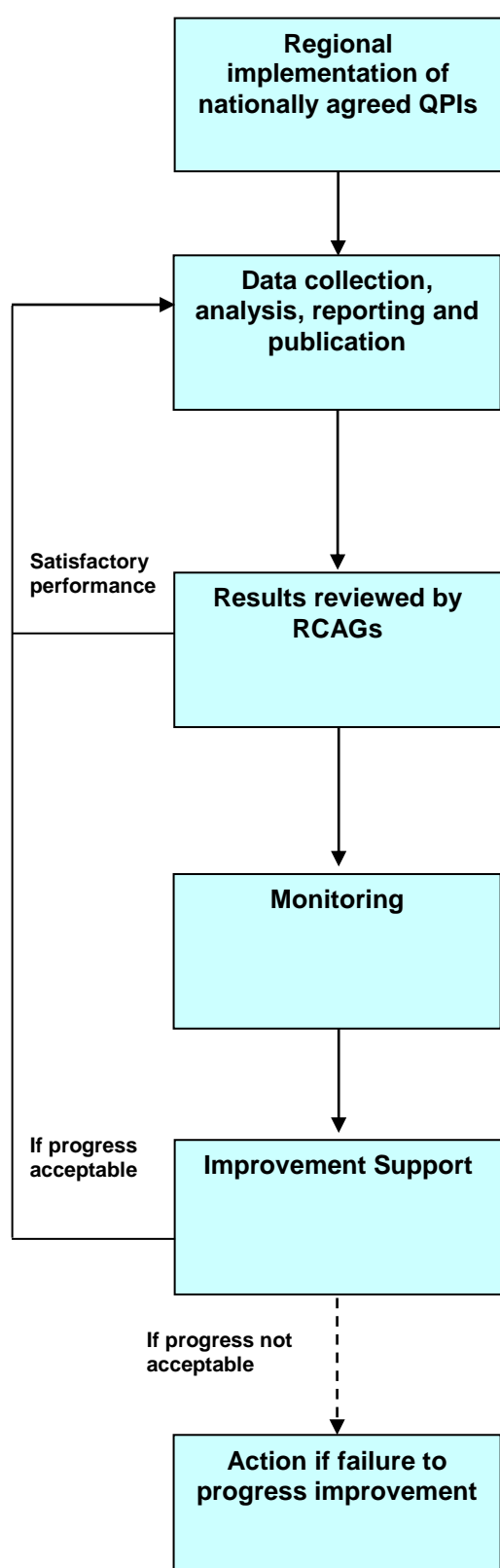
### 6. Escalation Stage:

- 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 National Cancer Recovery Group 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 4: 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 may be 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 5: Glossary of Terms

<b>Ablative therapy</b>	See <i>Cryotherapy</i> and <i>Radiofrequency Ablation</i>
<b>Active treatment</b>	Treatment which is intended to improve the cancer and/or alleviate symptoms, as opposed to supportive care.
<b>Adjuvant therapy / treatment</b>	Additional cancer treatment given after the primary treatment to lower the risk that the cancer will come back. Adjuvant therapy may include chemotherapy, radiation therapy, hormone therapy, targeted therapy, or biological therapy.
<b>Biopsy</b>	Removal of a sample of tissue from the body to assist in diagnosis of a disease.
<b>Chemoradiotherapy</b>	Treatment that combines chemotherapy with radiotherapy.
<b>Chemotherapy</b>	The use of drugs that kill cancer cells, or prevent or slow their growth.
<b>Circumferential resection margins</b>	Margins of tissue surrounding a cancer after it has been removed.
<b>Clinical trials</b>	A type of research study that tests how well new medical approaches or medicines work. These studies test new methods of screening, prevention, diagnosis, or treatment of a disease.
<b>Co-morbidity</b>	The condition of having two or more diseases at the same time.
<b>Computed Tomography (CT)</b>	An x-ray imaging technique, which allows detailed investigation of the internal organ of the body.
<b>Contra-indications</b>	A symptom or medical condition that makes a particular treatment or procedure inadvisable because a person is likely to have a bad reaction.
<b>Cryotherapy</b>	A treatment which aims to eradicate cancer by freezing.
<b>Curative treatment</b>	Treatment which is given with the aim of curing the cancer.
<b>Diagnosis</b>	The process of identifying a disease, such as cancer, from its signs and symptoms.
<b>Dietetic</b>	The application of the principles of nutrition to the selection of food and feeding.
<b>Dissection</b>	Cutting apart and separation of body tissues and organs in the course of an operation.
<b>Endoscopic Mucosal Resection (EMR)</b>	A procedure that can remove early stage cancers from the lining of the oesophagus or stomach using an endoscope (See also Endoscopy).
<b>Endoscopy</b>	A procedure that uses an endoscope to examine the inside of the body. An endoscope is a thin, tube-like instrument with a light and a lens for viewing. It may also have a tool to remove tissue to be checked under a microscope for signs of disease.
<b>External Beam Radiotherapy (EBRT)</b>	Treatment by radiation emitted from a source located at a distance from the body.
<b>Gastric</b>	Having to do with the stomach.
<b>Gastric distension</b>	A condition in which air fills the stomach.
<b>Human Epidermal growth factor Receptor (HER) 2</b>	One of many receptors on the surface of certain cells which can protect the cell from damage or stimulate it to grow. Herceptin (trastuzumab) can be used to treat HER2 positive tumours.
<b>High grade dysplasia</b>	Represents a more advanced progression towards malignant

transformation.

<b>Histological/ Histopathological</b>	The study of the structure, composition and function of tissues under the microscope, and their abnormalities.
<b>Intravenous contrast (IV)</b>	A substance administered directly into bloodstream to enhance the visibility of structures on imaging.
<b>Invasive</b>	Cancer that can or has spread from its histological original site.
<b>Lesion</b>	Tumour, mass, or other abnormality.
<b>Longitudinal</b>	Pertaining to a measurement in the direction of the long axis of an object, body, or organ
<b>Lymph nodes</b>	Small bean shaped organs located along the lymphatic system. Nodes filter bacteria or cancer cells that might travel through the lymphatic system.
<b>Lymphadenectomy</b>	A surgical procedure in which the lymph nodes are removed and a sample of tissue is checked under a microscope for signs of cancer.
<b>Malignant</b>	Cancerous. Malignant cells can invade and destroy nearby tissue and spread to other parts of the body
<b>Malnutrition</b>	A condition that occurs from having an unbalanced diet in which certain nutrients are lacking.
<b>Metastatic disease</b>	Spread of cancer away from the primary site to somewhere else, e.g. via the bloodstream or the lymphatic system.
<b>Mortality</b>	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 any specific region, age group, disease or other classification, usually expressed as deaths per 1000, 10,000 or 100,000.
<b>Multi-disciplinary team meeting (MDT)</b>	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 decided.
<b>Neo-adjuvant chemotherapy</b>	Drug treatment which is given before the treatment of a primary tumour with the aim of improving the results of surgery and preventing the development of metastases.
<b>Oesophagogastric</b>	Pertaining to the oesophagus and the stomach.
<b>Oesophagus/ Oesophageal</b>	The muscular membranous tube for the passage of food from the throat to the stomach; the gullet.
<b>Palliative</b>	Anything which serves to alleviate symptoms due to the underlying cancer but is not expected to cure it.
<b>Pathological</b>	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 post mortem.
<b>Pathologist</b>	A doctor who identifies diseases by studying cells and tissues under a microscope.
<b>Peer review</b>	The process by which original articles and grants written by researchers are evaluated for technical and scientific quality and correctness by other experts in the same field.
<b>Positive surgical margin</b>	Margins of tissue that still have cancer cells present following surgery.

<b>Primary tumour</b>	The original tumour.
<b>Prognosis</b>	The likely outcome or course of a disease; the chance of recovery or recurrence.
<b>Programmed Death Ligand 1 (PDL1)</b>	PDL1 is a protein found on cancer cells which can bind to another protein (PD1) and prevent the body's immune system from attacking the cancer cells. Immunotherapy treatments e.g. Pembrolizumab can be used to treat PDL1 positive tumours.
<b>Progression</b>	In medicine, the course of a disease, such as cancer, as it becomes worse or spreads in the body.
<b>Quality of life</b>	The overall enjoyment of life. Many clinical trials assess the effects of cancer and its treatment on the quality of life. These studies measure aspects of an individual's sense of well-being and ability to carry out various activities.
<b>R0 resection</b>	A surgical procedure where the surgical margins are negative for cancer.
<b>Radical treatment</b>	Treatment that aims to get to completely get rid of a cancer.
<b>Resectable</b>	Able to be removed (resected) by surgery
<b>Resection Margin</b>	The rim of normal tissue surrounding a cancer after removal. These can be distal, proximal, or radial.
<b>Risk factor</b>	Something that is known to increase your chances of getting a disease.
<b>Screening</b>	Tests carried out in people without symptoms to detect cancer.
<b>Staging</b>	Process of describing to what degree cancer has spread from its original site to another part of the body. Staging involves clinical, surgical and pathology assessments.
<b>Stent insertion</b>	A slender/thin rod that is inserted into a tubular structure within the body to provide support to that structure.
<b>Surgical resection</b>	Surgical removal of the tumour/lesion.
<b>TNM staging system</b>	TNM classification is a system for staging the extent of cancer. T describes the size and penetration of the local tissues of the tumour. N refers to the involvement of the lymph nodes. M refers to the presence of metastatic disease.
<b>Treatment intent</b>	The reason for which treatment is given, that is, whether the treatment is intended to cure the disease or to alleviate symptoms.