Scottish Cancer Taskforce

Upper GI Cancer
Clinical Quality Performance
Indicators Engagement Document

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Scottish Government
Riaghaltas na h-Alba
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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 18 different tumour types. These are underpinned by patient experience QPIs that are applicable to all, irrespective of tumour type. 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 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 Multi Disciplinary Team (MDT)/Unit level and findings actioned to deliver continual improvements in the quality of cancer care. This will be underpinned and supported by a programme of regional and national comparative reporting and review.

NHS Boards will be 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 reports published annually. National reports include comparative reporting of performance against QPIs at MDT/Unit level across NHSScotland, trend analysis and survival. This approach will help overcome existing issues relating to the reporting of small volumes in any one year.

In the intervening years tumour specific QPIs will be monitored on an annual basis through established Regional Cancer Network and local governance processes, with analysed data submitted to Information Services Division (ISD) for inclusion in subsequent national reports. This approach will ensure 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 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, ISD and patient/carer representatives. Membership of the development group can be found in appendix 2.

3. QPI Formal Review Process

As part of the National Cancer Quality Programme a systematic national review process has been developed, whereby all tumour specific QPIs published are subject to formal review following 3 years analysis of comparative QPI data.

Formal review of the Upper GI Cancer QPIs was undertaken in September 2016.

A Formal Review Group was convened, chaired by Professor Alan McNeill, Consultant Urologist. Membership of this group can be found in appendix 3.

The formal review process is clinically driven with comments sought from specialty specific representatives in each of the Regional Cancer Networks for discussion at the initial meeting. This review builds on existing evidence using expert clinical opinion to identify where new evidence is available.

During formal review QPIs may be removed 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.

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?

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 document have been developed in parallel with the indicators to support the monitoring and reporting of Upper GI cancer QPIs. The updated document will be implemented for patients diagnosed with Upper GI cancer on, or after, 1st January 2017.

6. Quality Performance Indicators for Upper GI Cancer

QPI 1 - Endoscopy

QPI Title:	Patients with oesophageal or gastric cancer should undergo endoscopy and biopsy to reach a diagnosis of cancer.	
Description:	Proportion of patients with oesophageal or gastric cancer who have a histological diagnosis made within 6 weeks of initial endoscopy and biopsy.	
Rationale and Evidence:	For diagnosis of oesophageal or gastric cancer the use of endoscopy is recommended[2]. 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. Repeat endoscopy and biopsy to obtain a diagnosis should be minimised[2]. This QPI utilises a 6 week timeframe from initial endoscopy and biopsy to histological diagnosis. This has been deemed most appropriate by the QPI Review Group to account for clinical situations where the suspicion of malignancy is high however biopsy is not possible at the initial endoscopy procedure due to reasons such as anticoagulant use or gastric outlet obstruction.	
Specifications:	**Numerator:**	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[a].
	Denominator:	All patients with oesophageal or gastric cancer who undergo endoscopy.
	Exclusions:	• No exclusions
Target:	95% The tolerance within this target is designed to account for factors of patient choice.	

[a] 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

QPI Title:	Patients should be discussed by a multidisciplinary team prior to definitive treatment.	
Description:	Proportion of patients with oesophageal or gastric cancer who are discussed at MDT meeting before definitive treatment.	
Rationale and Evidence:	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[3]. Discussion prior to definitive treatment decisions being made provides reassurance that patients are being managed appropriately.	
Specifications:	**Numerator:**	Number of patients with oesophageal or gastric cancer discussed at the MDT before definitive treatment.
	Denominator:	All patients with oesophageal or gastric cancer.
	Exclusions:	• Patients who died before first treatment.
Target:	95% The tolerance within this target accounts for situations where patients require treatment urgently.	

QPI 4 - Staging and Treatment Intent

QPI Title:	Patients with oesophageal or gastric cancer should be staged using the TNM[b] staging system and have statement of treatment intent recorded prior to treatment commencing.
Description:	Proportion of patients with oesophageal or gastric cancer who have TNM stage and treatment intent recorded at MDT meeting prior to treatment. **Please note:** The specifications of this QPI are separated to ensure clear measurement of patients who have the following recorded at MDT meeting prior to treatment: (i) TNM stage; and (ii) Treatment Intent
Rationale and Evidence:	It is important to discuss and consider treatment intent as patients with incurable disease treated as radical will be poorly served. Patients with gastric or oesophageal cancer should undergo careful staging to assess the extent of disease and inform treatment decision making[2]. This may involve multiple investigations. Clinical staging should follow the principles of TNM classification[4]; 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 $T_xN_xM_1$[c] is therefore accepted as complete staging in this situation.
Specification(i):	**Numerator:** Number of patients with oesophageal or gastric cancer who have TNM stage recorded at MDT meeting prior to treatment. **Denominator:** All patients with oesophageal or gastric cancer. **Exclusions:** • No exclusions
Target:	90% 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.

(continued overleaf…)

[b] 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.

[c] Patients presenting with stage $TxNxM_1$ disease have metastatic cancer where the extent of primary tumour or lymph node involvement cannot be assessed.

QPI 4 - Staging and Treatment Intent (cont…)

Specification(ii):	**Numerator:**	Number of patients with oesophageal or gastric cancer who have treatment intent recorded at MDT meeting prior to treatment.
	Denominator:	All patients with oesophageal or gastric cancer.
	Exclusions:	• No exclusions
Target:	95% The tolerance within this target accounts for those patients who die before MDT meeting.	

QPI 5 - Nutritional Assessment

QPI Title:	Patients with oesophageal or gastric cancer should be appropriately assessed by a dietitian to optimise nutritional status.
Description:	Proportion of patients with oesophageal or gastric cancer who undergo nutritional screening and are seen by a dietitian where appropriate before first treatment. **Please note:** The specifications of this QPI have been separated to ensure clear measurement of patients who: (i) Undergo nutritional screening with the Malnutrition Universal Screening Tool (MUST) before first treatment; and (ii) Are high risk of malnutrition (MUST Score of 2 or more) and are seen by a dietitian before first treatment.
Rationale and Evidence:	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 state registered dietitian to provide appropriate advice[2]. Poor nutritional status is a risk factor for poor tolerance of treatment whether curative or palliative and can impact greatly on quality of life[5,6]. Patients who are suitable for radical treatment, e.g. surgery, and who are malnourished benefit from nutrition support prior to treatment and all patients who have surgery benefit from early post-operative enteral feeding. Both can reduce complications such as sepsis, poor wound healing and reduce length of stay[7].
Specification(i):	**Numerator:** Number of patients with oesophageal or gastric cancer who undergo nutritional screening with the MUST before first treatment. **Denominator:** All patients with oesophageal or gastric cancer. **Exclusions:** • No exclusions.
Target:	95% 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.
Specification(ii):	**Numerator:** Number of patients with oesophageal or gastric cancer at high risk of malnutrition (MUST score of 2 or more) who are seen by a dietitian before first treatment. **Denominator:** All patients with oesophageal or gastric cancer at high risk of malnutrition (MUST score of 2 or more). **Exclusions:** • No exclusions.
Target:	85% The tolerance within this target accounts for situations where patients require treatment urgently as well as factors of patient choice.

QPI 6 - Appropriate Selection of Surgical Patients

QPI Title:	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.	
Description:	Proportion of patients with oesophageal or gastric cancer who receive neo-adjuvant chemotherapy or chemoradiotherapy who then go on to have surgical resection.	
Rationale and Evidence:	Patients with oesophageal or gastric cancer who are suitable for surgical resection should be offered neoadjuvant chemotherapy treatment[2,8,9]. Neoadjuvant chemotherapy or chemoradiotherapy prior to surgery provides a survival benefit for patients with oesophageal or gastric cancer[10,11]. 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.	
Specifications:	**Numerator:**	Number of patients with oesophageal or gastric cancer who receive neo-adjuvant chemotherapy or chemoradiotherapy who then undergo surgical resection.
	Denominator:	All patients with oesophageal or gastric cancer who receive neo-adjuvant chemotherapy or chemoradiotherapy.
	Exclusions:	• No exclusions
Target:	80% 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.	

QPI 7 - 30/90 Day Mortality Following Surgery

QPI Title:	30 and 90 day mortality following surgical resection for oesophageal or gastric cancer.	
Description:	Proportion of patients with oesophageal or gastric cancer who die within 30 or 90 days of surgical resection for oesophageal or gastric 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)[12]. 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.	
Specifications:	**Numerator:**	Number of patients with oesophageal or gastric cancer who undergo surgical resection who die within 30/90 days of treatment.
	Denominator:	All patients with oesophageal or gastric cancer who undergo surgical resection.
	Exclusions:	• No exclusions
Target:	30 day - <5% 90 day - <7.5%	

QPI 8 - Lymph Node Yield

QPI Title:	For patients with oesophageal or gastric cancer undergoing curative resection the number of lymph nodes examined should be maximised.
Description:	Proportion of patients with oesophageal or gastric cancer who undergo surgical resection where ≥15 lymph nodes are resected and pathologically examined.
Rationale and Evidence:	Maximising the number of lymph nodes resected and analysed enables reliable staging which influences treatment decision making. Evidence recommends that at least 15 lymph nodes are resected and examined by a pathologist[9,13].
Specifications:	**Numerator:** Number of patients with oesophageal or gastric cancer who undergo surgical resection where ≥15 lymph nodes are resected and pathologically examined. **Denominator:** All patients with oesophageal or gastric cancer who undergo surgical resection. **Exclusions:** • No exclusions
Target:	Gastric cancer - 80% Oesophageal cancer – 90% 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.

QPI 9 - Length of Hospital Stay Following Surgery

QPI Title:	Length of hospital stay following surgery for oesophageal or gastric cancer should be as short as possible.	
Description:	Proportion of patients undergoing surgical resection for oesophageal or gastric cancer who are discharged within 21 days of surgical procedure.	
Rationale and Evidence:	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. 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.	
Specifications:	**Numerator:**	Number of patients undergoing surgical resection for oesophageal or gastric cancer who are discharged within 21 days of surgical procedure.
	Denominator:	All patients undergoing surgical resection for oesophageal or gastric cancer.
	Exclusions	• No exclusions
Target:	80% The tolerance within this target is designed to account for situations where it is not safe or practical for patients to go home within 21 days of surgery.	

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 are in place with direct access for each Board to run these reports to ensure nationally consistent analysis and reporting.

QPI 10 - Resection Margins

QPI Title:	Oesophageal and gastric cancers which are surgically resected should be adequately excised.	
Description:	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. **Please note**: The specifications of this QPI have been separated to ensure clear measurement of both: (i) Oesophageal cancer patients who have a clear circumferential margin; and (ii) Oesophageal and gastric cancer patients who have a clear longitudinal margin.	
Rationale and Evidence:	Tumour involvement of surgical resection margins is a negative prognostic factor; therefore surgery should aim to ensure resection margins are clear of tumour. 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[2,9].	
Specification(i):	**Numerator:**	Number of patients with oesophageal cancer who undergo surgical resection in which circumferential surgical margin is clear of tumour.
	Denominator:	All patients with oesophageal cancer who undergo surgical resection.
	Exclusions:	• No exclusions.
Target:	70%	
Specification(ii):	**Numerator:**	Number of patients with oesophageal or gastric cancer who undergo surgical resection in which longitudinal surgical margin is clear of tumour.
	Denominator:	All patients with oesophageal or gastric cancer who undergo surgical resection.
	Exclusions:	• No exclusions.
Target:	90%	

QPI 11 - Curative Treatment Rates

QPI Title:	Patients with oesophageal or gastric cancer should undergo curative treatment whenever possible.
Description:	Proportion of patients with oesophageal or gastric cancer who undergo curative treatment, this includes: • Neoadjuvant chemoradiotherapy or chemotherapy followed by surgery; • Primary surgery; • Radical chemoradiotherapy; and • Endoscopic Mucosal Resection.
Rationale and Evidence:	Curative treatment should be offered to as many patients as possible, as this is proven to have a survival benefit. The UK National Oseophago-Gastric Cancer Audit Report (2012) 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[14]. Surgical resection of the tumour remains the mainstay of curative treatment for patients with oesophageal or gastric cancer[14]. Chemoradiotherapy should be considered in patients with oesophageal cancer who have locally advanced disease, those unfit for surgery or those who decline surgery[2]. Radiotherapy alone is an option in patients considered unsuitable for combination therapy but is rarely curative for oesophageal cancer[15].
Specifications:	**Numerator:** Number of patients with oesophageal or gastric cancer who undergo curative treatment. **Denominator:** All patients with oesophageal or gastric cancer. **Exclusions:** • No exclusions
Target:	35% The tolerance within this target takes into consideration patient choice, fitness and co-morbidities which preclude curative treatment. 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.

QPI 12 - 30 / 90 Day Mortality Following Oncological Treatment

QPI Title:	30 and 90 day mortality following oncological treatment for oesophageal or gastric cancer.	
Description:	Proportion of patients with oesophageal or gastric cancer who die within 30 or 90 days of oncological treatment[d] for oesophageal or gastric 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)[12]. 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.	
Specifications (i):	**Numerator:**	Number of patients with oesophageal or gastric cancer who receive curative oncological treatment who die within 30 / 90 days of treatment.
	Denominator:	All patients with oesophageal or gastric cancer who receive curative oncological treatment.
	Exclusions:	• No exclusions
	Please Note:	This indicator will be reported by treatment modality/intent as opposed to one single figure.
Target:	30 day - <5% 90 day - <7.5%	
Specifications (ii):	**Numerator:**	Number of patients with oesophageal or gastric cancer who receive palliative oncological treatment who die within 30 days of treatment.
	Denominator:	All patients with oesophageal or gastric cancer who receive palliative oncological treatment.
	Exclusions:	• No exclusions
	Please Note:	This indicator will be reported by treatment modality/intent as opposed to one single figure.
Target:	<5%	

[d] Oncological treatments included are as follows:

Curative:
- Chemoradiotherapy
- Peri-operative chemotherapy (this includes neo-adjuvant and adjuvant chemotherapy / chemoradiotherapy)

Palliative:
- Chemotherapy

QPI 13 - Clinical Trial Access

QPI Title:	All patients should be considered for participation in available clinical trials, wherever eligible.
Description:	Proportion of patients with Upper GI cancer who are enrolled in an interventional clinical trial or translational research.
Rationale and Evidence:	Clinical trials are necessary to demonstrate the efficacy of new therapies and other interventions. Furthermore evidence suggests improved patient outcomes from participation in clinical trials[3]. Clinicians are therefore encouraged to enter patients into well-designed trials and to collect longer-term follow-up data. High accrual activity into clinical trials is used as a goal of an exemplary clinical research site.
Specifications:	**Numerator:** Number of patients with Upper GI cancer enrolled in an interventional clinical trial or translational research. **Denominator:** All patients with Upper GI cancer. **Exclusions:** • No exclusions
Target:	Interventional clinical trials – 7.5% Translational research – 15%

The clinical trials QPI will be measured utilising SCRN data and ISD incidence data, as is the methodology currently utilised by the Chief Scientist Office (CSO) and NCRI. The principal benefit of this approach is that this data is already collected utilising a robust mechanism. At present a 'clinical trial' data item is contained within all tumour specific datasets, however in order to avoid any duplication of effort, and focus resources appropriately, SCRN data is the preferred option.

Utilising SCRN data allows for comparison with CSO published data and ensures capture of all clinical trials recruitment, not solely first line treatment trials, as contained in the clinical audit data. Given that a significant proportion of clinical trials are for relapsed disease this is felt to be particularly important in driving quality improvement. This methodology utilises incidence as a proxy for all patients with cancer. This may slightly over, or underestimate, performance levels, however this is an established approach currently utilised by NHSScotland. For clinical trials definitions please see appendix 4.

The full Clinical Trials QPI document can be found at:

Healthcare Improvement Scotland - Cancer Quality Performance Indicators

7. Survival

Improving survival forms an integral part of the national cancer quality improvement programme. Upper GI cancer survival analysis will be reported and analysed on a three yearly basis by ISD. 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 Upper GI 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 Scottish Cancer Taskforce. 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 Upper GI 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 Upper GI cancer, and therefore in improving the quality of care for patients affected by Upper GI cancer.

The following areas for future consideration have been raised across the lifetime of the Upper GI Cancer QPIs.

- Palliative treatment rates.
- Levels of early stage disease.

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 5 and 6 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 Taskforce
  - Accountable for overall national cancer quality programme and overseeing the quality of cancer care across NHSScotland.
  - Advising 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.

- 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.
- 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 monitoring of progress against agreed actions.
- Provide assurance to NHS Board Chief Executive Officers and Scottish Cancer Taskforce 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.

10. How to participate in the engagement process

In order to ensure wide inclusiveness of clinical and management colleagues from across NHS Scotland, patients affected by prostate cancer and the wider public, several different methods of engagement are being pursued:

Professional groups, health service staff, voluntary organisations and individuals:

- Wide circulation of the draft documentation for comment and feedback.

Patient representative groups:

- Organised patient focus group sessions to be held.

10.1 Submitting your comments

You can submit your comments on the Revised Upper GI cancer QPIs via the Scottish Government Consultation Hub (website link below):

https://consult.scotland.gov.uk/nhs/upper-gi-cancer-qpi/

All responses should be submitted by **Friday 20th January 2017**.

If you require any further information regarding the engagement process please use the email address below.

Email: UpperGIQPIPublicEngagement@gov.scot

10.2 Engagement feedback

At the end of the engagement period, all comments and responses will be collated for review by the Upper GI Cancer QPI Formal Review Group. Those who have participated in the engagement process will receive an overview of the changes made and a copy of the final Upper GI Cancer QPI document.

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12. 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
Topics (population/patient): Oesophageal (esophageal), gastric *Topics* (intervention): Diagnosis, staging, surgery, non-surgical management, treatment, palliative chemotherapy, radiotherapy and surgery. Adults only *Date:* 2005 to present day	*Topics:* 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. The list of websites and the Medline and Embase search strategies are set out in appendix 1. 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 II instrument. The instrument assesses the methodological rigour and precision used when developing a guideline. Sixteen of the guidelines were recommended for use (see below).

Literature Search Strategies

Guideline web sites:

- Agency for Health Care Research and Quality (AHRQ) http://www.ahrq.gov (0 results)
- American Cancer Society http://www.cancer.org/ (0 results)
- ASERNIP-S http://www.surgeons.org (0 results)
- Australian Government National Health and Research Council (NHMRC) https://www.nhmrc.gov.au/guidelines-publications (0 results)
- Canadian Medical Association Infobase http://www.cma.ca/index.php/ci_id/54316/la_id/1.htm (6 results)
- Centre for Clinical Effectiveness (Australia)
- e-Guidelines.co.uk http://www.eguidelines.co.uk/ (0 results)
- Guidelines International Network: http://www.g-i-n.net/ (3 results)
- Healthcare Improvement Scotland http://www.healthcareimprovementscotland.org/home.aspx (0 results)
- Mayo Clinic http://www.mayoclinic.com/ (0 results)
- National Institute for Clinical Excellence (NICE) http://www.nice.org.uk/ (13 results)
- National Quality Measures Clearinghouse http://www.qualitymeasures.ahrq.gov (2 results)
- NHS Evidence http://www.evidence.nhs.uk/ (28 results)
- New Zealand Guidelines Group http://www.nzgg.org.nz/ (0 results)
- Oncoline http://www.oncoline.nl/ (1 result)
- Royal College of Nursing Clinical Guidelines http://www.rcn.org.uk/development/practice/clinicalguidelines (0 results)
- Scottish Intercollegiate Guidelines Network (SIGN) http://www.healthcareimprovementscotland.org/home.aspx (1 result)

Guideline web sites:

- The Royal Society of Medicine http://www.rsm.ac.uk/ (0 results)
- TRIP database http://www.tripdatabase.com/ 6 results)

Medline search strategy: (139 results)

1. esophageal neoplasms/ or intestinal neoplasms/ or stomach neoplasms/
2. ((esophag$ or oesophag$ or gullet) adj3 (cancer$ or tumo?r$ or neoplasm$ or carcinoma$)).ti,ab.
3. ((stomach or gastric) adj3 (cancer$ or neoplasm$ or tumo?r$ or carcinoma$)).ti,ab.
4. or/1-3
5. guideline.pt.
6. (guideline$ or guidance).ti,ab.
7. Clinical Audit/
8. Guideline/ or Practice Guideline/
9. Quality Indicators, Health Care/
10. or/5-9
11. 4 and 10
12. limit 11 to (english language and yr="2005 -Current")
13. limit 12 to (comment or editorial or letter)
14. 12 not 13

Embase search strategy: (53 results)

1. stomach cancer/
2. esophagus tumor/ or esophagus carcinoma/
3. esophagus cancer/
4. ((gastric or stomach) adj3 (cancer$ or carcinoma$ or tumo?r$ or neoplasm$)).ti,ab.
5. ((oesophag$ or esophag$ or gullet) adj3 (cancer$ or carcinoma$ or tumo?r$ or neoplasm$)).ti,ab.
6. or/1-5
7. (guideline$ or guidance).ti.
8. practice guideline/
9. or/7-8
10. 6 and 9
11. limit 10 to (english language and yr="2005 -Current")
12. limit 11 to (editorial or letter)
13. 11 not 12

Note:
Terms ending in "/" are terms from the database subject index (controlled vocabulary).
$ =truncation (e.g. cancer$ will find cancer or cancers or cancerous)
?=wildcard (e.g. tumo?r will find tumor or tumour)
ADJ3 will find combinations of terms in any order separated by up to 3 other terms (e.g. kidney ADJ3 cancer will find cancer of the kidney)
.ti will find term in title field
.ab will find term in abstract field
.pt = publication type
* = major descriptor
exp= explode (will find this term and all related narrower terms in index tree)

Recommended Guidelines included in Briefing Paper

Guidelines recommended for use Guideline	Summary of appraisal	Grading System
1. Association of Comprehensive Cancer Centres (ACCC). Gastric Carcinoma. (2009)	An excellent and robust guideline intended for all professionals involved in diagnostics, treatment and guidance of patients with a gastric carcinoma.	No grading system in place
2. Cancer Care Ontario. Neoadjuvant or Adjuvant Therapy for Resectable Gastric Cancer. (2011)	A very clear guideline which used high quality methods to present evidence and recommendations in a clear way to inform decision making. However, the guideline does not meet many criteria under the domain applicability.	No grading system in place
3. Cancer Care Ontario. Systemic Therapy for Advanced Gastric Cancer. (2010)	This guideline used high quality methods to develop and present the evidence and recommendations. Applicability to Scotland would be in terms of technologies, patient ethnicities and age profiles, and although there is not enough information on the applicability domain, this guideline is recommended for use.	No grading system in place
4. Cancer Care Ontario. Preoperative and Postoperative Therapy for Resectable Esophogeal Cancer. (2008)	Scoring well on majority of the domains (scope, purpose, stakeholder involvement, rigour of development and clarity of presentation) this guideline provides clear evidence and recommendations, which appear adaptable to a UK setting. **Note:** updated in 2008.	No grading system in place
5. NICE. Capecitabine for the treatment of advanced gastric cancer. (2010)	Clearly reports all the domains and has a transparent methodology.	No grading system in place
6. NICE. Palliative photodynamic therapy for advanced oesophageal cancer. (2007)	These guidelines clearly report all the domains and have a transparent methodology.	No grading system in place
7. NICE. Photodynamic therapy for early-stage oesophageal cancer. (2006)		
8. NICE. Trastuzumab for the treatment of HER2-positive metastatic gastric cancer. (2010)	A good quality guideline which clearly reports all the domains and has a transparent methodology.	No grading system in place
9. Royal College of Pathologists. Dataset for the histopathological reporting of oesophageal carcinoma. (2nd edition) (2007)	Insufficient information on the majority of the AGREE domains. Suggestion to use this guideline where there is no other dataset for histopathological reporting of cancers. Relevant to Scotland as it is produced by the Royal College of Pathologists.	No grading system in place
10. Royal College of Pathologists. Dataset for the histopathological reporting of gastric carcinoma. (2nd edition) (2007)		
11. SIGN. Management of oesophageal and gastric cancer. (2006)	This guideline scores well on all the domains and has a transparent methodology.	SIGN grades of recommendation

Guidelines recommended for use		
12. Society of American Gastrointestinal and Endospcopic Surgeons (SAGES). Staging laparoscopy for gastric cancer. (2007)	An updated guideline with a transparent methodology.	SAGES recommendation grading scale
13. Cancer Care Ontario. PET Imaging in Esophageal Cancer. (2009)	A report which scores well on majority of the domains (scope, purpose, stakeholder involvement, rigor of development and clarity of presentation) except for domain 5 (applicability and implementation issues). This is not covered in the guideline remit.	No grading system in place
14. Cancer Care Ontario. Combined Modality Radiotherapy and Chemotherapy in the Non-surgical Management of Localized Carcinoma of the Esophagus. (2005)	A useful guideline which scores well on majority of the domains (scope, purpose, stakeholder involvement, rigor of development and clarity of presentation). Evidence and recommendations are clear and have been updated and endorsed recently.	No grading system in place
15. Cancer Care Ontario. The Role of IMRT in Gastrointestinal Cancers. (2010)	Guideline used explicit methodology and standardised processes to develop and present evidence and summary statements, although it should be noted there is little information on domain 5 (applicability and implementation issues). Recommended in terms of technology. **Note:** Full systematic review is not yet published.	No grading system in place
16. American College of Gastroenterology. Role of Esophageal Stents in Benign and Malignant Diseases. (2010)	Although this recent guideline does not score well on a number domains, nor are its recommendations easily identifiable, its use is suggested specifically on the role of oesophageal stents.	Grading of Recommendations Assessment, Development and Evaluation system (GRADE)

Appendix 2: Upper GI Cancer QPI Development Group Membership (2012)

Name	Designation	Cancer Network/Base
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)
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)

Name	Designation	Cancer Network/Base
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 3: Upper GI Cancer QPI Formal Review Group Membership (2016)

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

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

Appendix 4: Clinical Trials Definitions

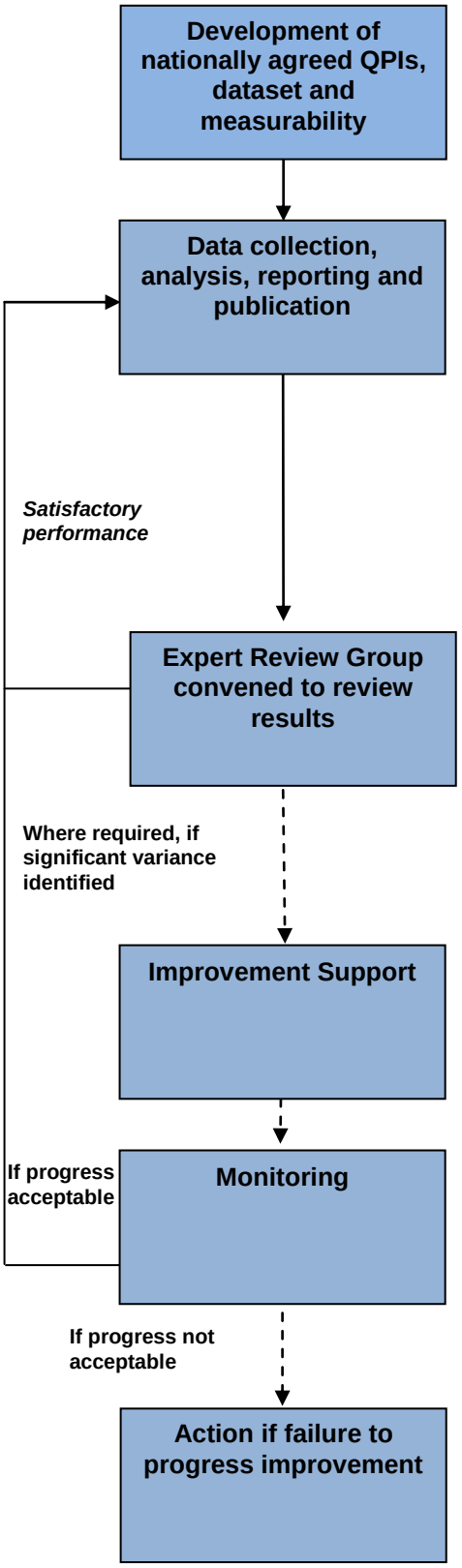
In order to ensure appropriate and nationally comparative measurement against QPIs developed it is of utmost importance to agree consistent definitions of the various terminologies utilised.

The Clinical Trial QPI SLWG has therefore agreed the following definitions:

Research	Research can be defined as the attempt to derive generalisable (i.e. of value to others in a similar situation) new knowledge by addressing clearly defined questions with systematic and rigorous methods. This excludes: audit; needs assessments; quality improvement and other local service evaluations. It also excludes routine banking of biological samples or data except where this activity is integral to a self-contained research project designed to test a clear hypothesis[16].
Interventional Clinical Trial	A clinical study in which participants are assigned to receive one or more interventions (or no intervention) so that researchers can evaluate the effects of the interventions on biomedical or health-related outcomes. The assignments are determined by the study protocol. Participants may receive diagnostic, therapeutic, or other types of interventions[17].
Translational Research	Translational research transforms scientific discoveries arising from laboratory, clinical, or population studies into clinical applications to reduce cancer incidence, morbidity, and mortality[18]. The development of the breast cancer drug trastuzumab (Herceptin) is an example for this kind of research. Researchers derived knowledge about the function and presence of a specific gene (HER) from laboratory studies. This information was then used to develop trastuzumab (Herceptin), which inhibits the growth of cancerous cells in patients whose cancers over express the protein coded by this gene.

Appendix 5: 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 6).



1. National QPI Development Stage

- QPIs developed by QPI development groups, which include representation from Regional Cancer Networks, Healthcare Improvement Scotland, ISD, 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 6.
- 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 Taskforce.

4. Improvement Support Stage:

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

5. Monitoring Stage:

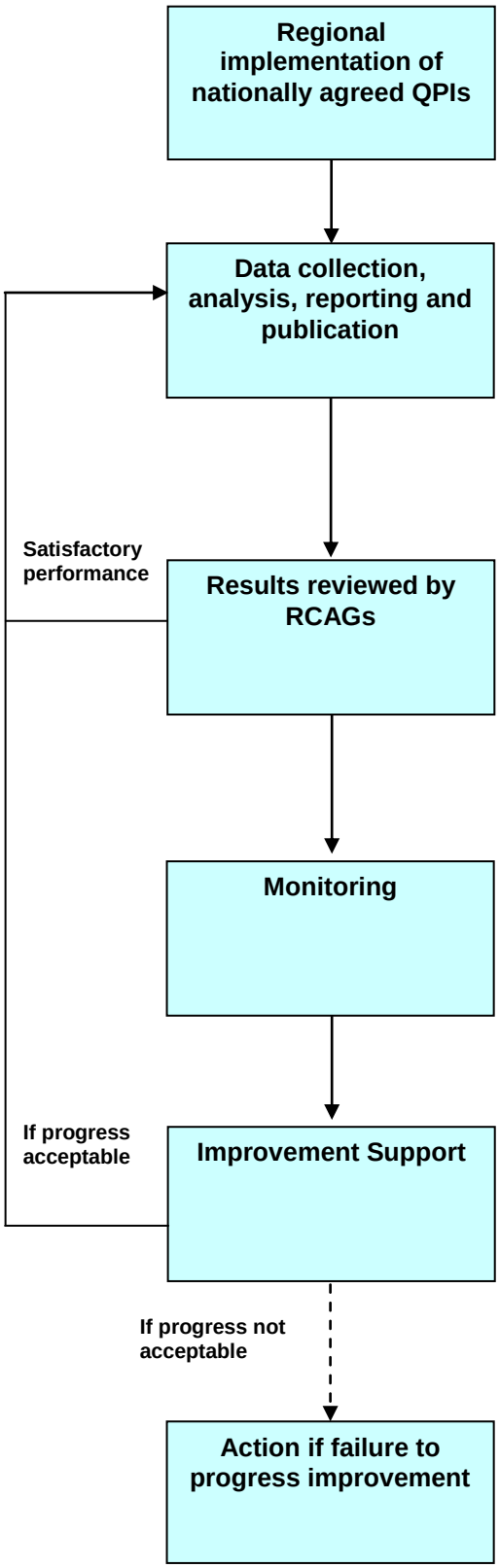
- RCAGs work with Boards to progress outstanding actions, monitor improvement plans and submit progress report to Healthcare Improvement Scotland.
- Healthcare Improvement Scotland report to Scottish Cancer Taskforce as to whether progress is acceptable**.**

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 Taskforce and escalation with a proposal to take forward to Scottish Government Health Department.

*In the South and East of Scotland Cancer Network (SCAN) the Regional Cancer Planning Group is the equivalent group to Regional Cancer Advisory Group (RCAG).

Appendix 6: 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 ISD 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.

*In the South and East of Scotland Cancer Network (SCAN) the Regional Cancer Planning Group is the equivalent group to Regional Cancer Advisory Group (RCAG).

Appendix 7: Glossary of Terms

Ablative therapy	See *Cryotherapy* and *Radiofrequency Ablation*
Active treatment	Treatment which is intended to improve the cancer and/or alleviate symptoms, as opposed to supportive care.
Adjuvant therapy / treatment	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.
Biopsy	Removal of a sample of tissue from the body to assist in diagnosis of a disease.
Chemoradiotherapy	Treatment that combines chemotherapy with radiotherapy.
Chemotherapy	The use of drugs that kill cancer cells, or prevent or slow their growth.
Circumferential resection margins	Margins of tissue surrounding a cancer after it has been removed.
Clinical trials	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.
Co-morbidity	The condition of having two or more diseases at the same time.
Computed Tomography (CT)	An x-ray imaging technique, which allows detailed investigation of the internal organ of the body.
Contra-indications	A symptom or medical condition that makes a particular treatment or procedure inadvisable because a person is likely to have a bad reaction.
Cryotherapy	A treatment which aims to eradicate cancer by freezing.
Curative treatment	Treatment which is given with the aim of curing the cancer.
Diagnosis	The process of identifying a disease, such as cancer, from its signs and symptoms.
Dietetic	The application of the principles of nutrition to the selection of food and feeding.
Dissection	Cutting apart and separation of body tissues and organs in the course of an operation.
Endoscopy	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.
External Beam Radiotherapy (EBRT)	Treatment by radiation emitted from a source located at a distance from the body.
Gastric	Having to do with the stomach.
Gastric distension	A condition in which air fills the stomach.
High grade dysplasia	Represents a more advanced progression towards malignant transformation.
Histological/ Histopathological	The study of the structure, composition and function of tissues under the microscope, and their abnormalities.

Intravenous contrast (IV)	A substance administered directly into bloodstream to enhance the visibility of structures on imaging.
Invasive	Cancer that can or has spread from its histological original site.
Lesion	Tumour, mass, or other abnormality.
Longitudinal	Pertaining to a measurement in the direction of the long axis of an object, body, or organ
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.
Malignant	Cancerous. Malignant cells can invade and destroy nearby tissue and spread to other parts of the body
Malnutrition	A condition that occurs from having an unbalanced diet in which certain nutrients are lacking.
Metastatic disease	Spread of cancer away from the primary site to somewhere else, e.g. via the bloodstream or the lymphatic system.
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 any specific region, age group, disease or other classification, usually expressed as deaths per 1000, 10,000 or 100,000.
Multi-disciplinary 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 decided.
Neo-adjuvant chemotherapy	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.
Oesophagogastric	Pertaining to the oesophagus and the stomach.
Oesophagus/ Oesophageal	The muscular membranous tube for the passage of food from the throat to the stomach; the gullet.
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 post mortem.
Pathologist	A doctor who identifies diseases by studying cells and tissues under a microscope.
Peer review	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.
Positive surgical margin	Margins of tissue that still have cancer cells present following surgery.
Primary tumour	The original tumour.

Prognosis	The likely outcome or course of a disease; the chance of recovery or recurrence.
Progression	In medicine, the course of a disease, such as cancer, as it becomes worse or spreads in the body.
Quality of life	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.
R0 resection	A surgical procedure where the surgical margins are negative for cancer.
Radical treatment	Treatment that aims to get to completely get rid of a cancer.
Resectable	Able to be removed (resected) by surgery
Resection Margin	The rim of normal tissue surrounding a cancer after removal. These can be distal, proximal, or radial.
Risk factor	Something that is known to increase your chances of getting a disease.
Screening	Tests carried out in people without symptoms to detect cancer.
Staging	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.
Stent insertion	A slender/thin rod that is inserted into a tubular structure within the body to provide support to that structure.
Surgical resection	Surgical removal of the tumour/lesion.
TNM staging system	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.
Treatment intent	The reason for which treatment is given, that is, whether the treatment is intended to cure the disease or to alleviate symptoms.

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