Scottish Cancer Taskforce
National Cancer Quality Steering Group

Head and Neck Cancer
Clinical Quality Performance Indicators
Engagement Document

March 2018

Contents

1. National Cancer Quality Programme

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

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

2. Quality Performance Indicator Development Process

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

The Head and Neck Cancer QPI Development Group was convened in October 2012, chaired by Ms Philippa Whitford (Consultant Surgeon). Membership of this group included clinical representatives drawn from the three regional cancer networks, Healthcare Improvement Scotland, ISD and patient/carer representatives. Membership of this 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 Head and Neck Cancer QPIs were undertaken in November 2017.

A Formal Review Group was convened, chaired by Mr Andrew McMahon, Consultant Colorectal Cancer Surgeon. Membership of this group included Clinical Leads from the three Regional Cancer Networks. 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, this dictates the level which each unit should be aiming to achieve against each indicator.

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

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

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

5. Supporting Documentation

A national minimum core dataset and a measurability specification document have been developed in parallel with the indicators to support the monitoring and reporting of Head and Neck Cancer QPIs. The updated document will be implemented for patients diagnosed with Head and Neck Cancer on, or after, 1st April 2018.

6. Quality Performance Indicators for Head and Neck Cancer

QPI 1: Pathological Diagnosis of Head and Neck Cancer

QPI Title:	Patients with head and neck cancer should have a cytological or histological diagnosis before treatment.
Description:	Proportion of patients with head and neck cancer who have a cytological or histological diagnosis before treatment.
Rationale and Evidence:	A definitive diagnosis is valuable in helping inform patients and carers about the nature of the disease, the likely prognosis and treatment choice. Cytopathology and histopathology specimens should be reported in accordance with Royal College of Pathologist guidelines[2].
Specifications:	**Numerator:** Number of patients with head and neck cancer who have a cytological or histological diagnosis before treatment. **Denominator:** All patients with head and neck cancer. **Exclusions:** • Patients who died before first treatment. • Patients who refuse treatment.
Target:	95% The tolerance within this target is designed to account for situations where it is not appropriate, safe or possible to obtain a cytological or histological diagnosis due to the performance status of the patient or the advanced nature of the disease. In addition, it is intended to reflect the small group of patients in whom treatment is performed at diagnosis i.e. the diagnostic procedure is also therapeutic. .

Revision(s):	***Added exclusions for the following:*** ***Patients who died before first treatment.*** ***Patients who refuse treatment.***

QPI 2: Imaging

QPI Title:	Patients with head and neck cancer should undergo computerised tomography (CT) and/or magnetic resonance imaging (MRI) of the primary site and draining lymph nodes with CT of the chest to determine the extent of disease and guide treatment decision making.	
Description:	Proportion of patients with head and neck cancer who undergo CT and/or MRI of the primary site and draining lymph nodes with CT of the chest before the initiation of treatment and where the report is available within 2 weeks of the final imaging procedure. **Please note:** The specifications of this QPI are separated to ensure clear measurement of the following: (i) Patients with head and neck cancer who are evaluated with appropriate imaging before the initiation of treatment. (ii) Patients with head and neck cancer who are evaluated with appropriate imaging before the initiation of treatment where the report is available within 2 weeks of the final imaging procedure.	
Rationale and Evidence:	Radiological staging should be carried out before treatment[3]. This will allow for the multi-disciplinary team to determine an accurate stage. Accurate staging is important to ensure appropriate treatment is delivered to patients with head and neck cancer.	
Specification (i):	**Numerator:**	Number of patients with head and neck cancer who undergo CT and/or MRI of the primary site and draining lymph nodes with CT of the chest before the initiation of treatment.
	Denominator:	All patients with head and neck cancer.
	Exclusions:	• Patients who undergo diagnostic excision biopsy as the definitive surgery. • Patients who died before first treatment. • Patients who refuse treatment. .
Specification (ii):	**Numerator:**	Number of patients with head and neck cancer who undergo CT and/or MRI of the primary site and draining lymph nodes with CT of the chest before the initiation of treatment where the report is available within 2 weeks of the final imaging procedure.
	Denominator	All patients with head and neck cancer who undergo CT and/or MRI of the primary site and draining lymph nodes with CT of the chest before the initiation of treatment.
	Exculsions:	• None
Target:	95% The tolerance within this target is designed to account for the fact that some patients may have significant co-morbidities or may not be fit for investigation and/or treatment.	

Revision(s):	***Added exclusions for part (i):*** ***Patients who died before treatment*** ***Patients who refuse treatment*** ***Part (ii) added to the QPI to measure where the imaging report is available within 2 weeks of scan being performed.***

QPI 3: Multi-Disciplinary Team Meeting (MDT)

QPI Title:	Patients with head and neck cancer should be discussed by a multidisciplinary team before definitive treatment.
Description:	Proportion of patients with head and neck cancer who are discussed at a 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[4]. Discussion before definitive treatment decisions being made provides reassurance that patients are being managed appropriately.
Specifications:	**Numerator:** Number of patients with head and neck cancer discussed at the MDT before definitive treatment. **Denominator:** All patients with head and neck cancer. **Exclusions:** • Patients who died before first treatment. • Patients who undergo diagnostic excision biopsy as the definitive surgery.
Target:	95% The tolerance within this target is designed to account for situations where patients require treatment urgently.

Revision(s):	***No proposed changes to the QPI.***

QPI 4: Smoking Cessation

QPI Title:	Patients with head and neck cancer who smoke should be offered advice on smoking cessation before first treatment.
Description:	Proportion of patients with head and neck cancer who smoke who are offered advice on smoking cessation before first treatment.
Rationale and Evidence:	A smoker is a person who is actively smoking at the time of referral to the head and neck services leading to a diagnosis of head and neck cancer. Patients who smoke should be offered interventions and support to help them stop. Evidence shows that patients who are active smokers should be referred to smoking cessation without delay[2]. Smoking while undergoing treatment for head and neck cancer can increase risks for disease recurrence and treatment failure. It can also increase the risk of side effects[5, 6]. Evidence shows that smoking can decrease the effectiveness of treatment[7].
Specifications:	**Numerator:** Number of patients with head and neck cancer who smoke who are offered advice on smoking cessation before first treatment. **Denominator:** All patients with head and neck cancer who smoke. **Exclusions:** • No exclusions.
Target:	95% The tolerance within this target is designed to account for situations where patients require treatment urgently.

Revision(s):	***QPI changed to focus on patients being offered given advice on smoking cessation rather than referred to smoking cessation.***

QPI 5: Restorative Dentistry Plan

QPI Title:	Patients with head and neck cancer should have a pre-treatment restorative dentistry plan as directed by a Consultant in Restorative Dentistry (who is a core member of the MDT).
Description:	Proportion of patients with head and neck cancer who have a restorative dentistry plan as directed by a Consultant in Restorative Dentistry before initiation of treatment.
Rationale and Evidence:	Head and neck cancer treatment impacts on oral and facial function and appearance. A restorative dentist should be included as a core member of the head and neck cancer MDT. [2,8] Patients with head and neck cancer should have a pre-treatment restorative plan to address the following[8, 9] • To avoid unscheduled interruptions to primary treatment as a result of dental problems; • To ensure the patient understands the nature and implications of the short, and long-term oral complications e.g. trismus, xerostomia, osteoradionecrosis, mucositis, caries, peri-implantitis. • To carry out appropriate dental treatment informed by the assessment of individual risk of developing post treatment oral complications taking into account the overall prognosis. • To plan prosthetic oral rehabilitation
Specifications:	**Numerator:** Number of patients with head and neck cancer who have a restorative dentistry plan before initiation of treatment. **Denominator:** All patients with head and neck cancer. **Exclusions:** • Patients who have T1/T2/N0 Larynx Cancer. • Patients undergoing no active treatment[a] as part of their primary therapy.
Target:	95% The tolerance within this target accounts for the fact that some patients may refuse investigations or treatment.

Revision(s):	***QPI changed from Oral assessment to Restorative dentistry plan – same clinical cohort.*** ***Target increased from 90% to 95%.***

[a] No active treatment includes watchful waiting and supportive care but not palliative chemotherapy and / or radiotherapy.

QPI 6: Nutritional Screening

QPI Title:	Patients with head and neck cancer should undergo nutritional screening before first treatment.
Description:	Proportion of patients with head and neck cancer who undergo nutritional screening with the Malnutrition Universal Screening Tool (MUST) before first treatment.
Rationale and Evidence:	Malnutrition is prevalent in patients with head and neck cancer and is recognised that it negatively effects treatment outcomes as those with significant weight loss are more likely to suffer major postoperative complications, less tolerance to radiotherapy with more interruptions to treatment, decreased response to chemotherapy with increased toxicity and shortened survival times[3]. Patients with head and neck cancer should be screened at diagnosis for nutritional status using a validated screening tool appropriate to the patient population[3]. Any patients at risk of malnutrition should be managed by an experienced dietitian[3].
Specifications:	**Numerator:** Number of patients with head and neck cancer who undergo nutritional screening with the Malnutrition Universal Screening Tool (MUST) before first treatment. **Denominator:** All patients with head and neck cancer. **Exclusions:** • No exclusions.
Target:	95% The tolerance within this target is designed to account for those patients with very advanced disease who may not be fit for treatment, those patients who decline to be screened and factors of patient choice.

Revision(s):	***No proposed changes to the QPI.***

QPI 7: Specialist Speech and Language Therapist Access

QPI Title:	Patients with oral, pharyngeal or laryngeal cancer should be seen by a Specialist Speech and Language Therapist (SLT) before treatment to assess voice, speech and swallowing.
Description:	Proportion of patients with oral, pharyngeal or laryngeal cancer undergoing treatment with curative intent who are seen by a Specialist SLT before treatment.
Rationale and Evidence:	An SLT who specialises in head and neck cancer should be available to work with every patient whose primary treatment disrupts the ability to speak, eat or swallow[2]. These patients should receive appropriate assessment of communication and swallowing before treatment[2]. Patients whose treatment is likely to affect their ability to communicate should meet the SLT before treatment should commence[2]. Continued SLT input is important in maintaining voice and safe and effective swallow function following head and neck cancer treatment[2, 10]. Assessment of voice, speech and swallowing of patients is very difficult to measure accurately therefore uptake is utilised within this QPI as a proxy for assessment. Although it will not provide an absolute measure of patient access to this procedure it will give an indication of access across NHS Boards and highlight any areas of variance which can then be further examined. It is also difficult to accurately capture all eligibility criteria for this QPI therefore patients undergoing treatment with curative intent have been selected to ensure focussed measurement. Patients are considered for therapy on an individual basis and should still be referred into the service pre/during/post treatment if there are issues with swallowing and/or communication reported.
Specifications:	**Numerator:** Number of patients with oral, pharyngeal or laryngeal cancer undergoing treatment with curative intent who are seen by a Specialist SLT before treatment. **Denominator:** All patients with oral, pharyngeal or laryngeal cancer undergoing treatment with curative intent. **Exclusions:** • Patients who refuse assessment. • Patients who undergo wide local excision only. • Nasopharynx and parotid patients who do not undergo bilateral neck treatment.
Target:	90% The tolerance within this target is designed to account for situations where patients require treatment urgently.

Revision(s):	***Focus on those patients undergoing treatment curative intent.*** ***Added exclusions for:*** ***Patients who undergo wide local excision only.*** ***Nasopharynx and parotid patients who do not undergo bilateral neck treatment.***

QPI 8: Surgical Margins

QPI Title:	Patients with head and neck cancer undergoing open surgical resection with curative intent should have their tumour adequately excised.
Description:	Proportion of patients with squamous cell carcinoma of the oral cavity, larynx or pharynx with final excision margins of less than 1mm after open surgical resection with curative intent.
Rationale and Evidence:	Achieving clear margins is associated with improved local and regional control and disease specific and overall survival. Where distance from invasive carcinoma to surgical margins is less than 1mm this would be considered involved[11, 12]. Margin status is an important predictor of patient outcome[13, 14]. Evidence has shown that surgical margins that have positive margins have an increased risk of recurrence[15, 16, 17].
Specifications:	**Numerator:** Number of patients with squamous cell carcinoma of the oral cavity, larynx or pharynx who undergo open surgical resection with curative intent with final excision margins of less than 1mm (on pathology report). **Denominator:** All patients with squamous cell carcinoma of the oral cavity, larynx or pharynx who undergo open surgical resection with curative intent. **Exclusions:** • Patients with naso-pharyngeal cancer.
Target:	<5% This QPI is measuring the proportion of patients who undergo surgery where the tumour has not been completely excised, therefore a 'less than' target level has been set.

Revision(s):	***Denominator criteria changed to focus on those patients with squamous cell carcinoma of the oral cavity, larynx or pharynx (excluding naso-pharynx).***

QPI 9: Intensity Modulated Radiotherapy (IMRT)

QPI Title:	Patients with head and neck cancer undergoing radiotherapy should receive intensity modulated radiotherapy (IMRT).
Description:	Proportion of patients with head and neck cancer undergoing radiotherapy who receive IMRT.
Rationale and Evidence:	IMRT allows for the radiation dose to conform more precisely to the three-dimensional (3-D) shape of the tumour. This allows higher radiation doses to be focused to regions within the tumour while minimising the dose to surrounding normal critical structures[6]. IMRT is the recommended treatment for all nasopharyngeal, oropharyngeal, hypopharyngeal, laryngeal, oral cavity, and unknown primary cancers where lymph node regions requiring inclusion in the treatment volume would result in irreparable damage to salivary function if two-dimensional (2-D) external beam radiotherapy (EBRT) or 3-D EBRT were used[6].
Specifications:	**Numerator:** Number of patients with head and neck cancer undergoing radiotherapy who receive IMRT. **Denominator:** All patients with head and neck cancer undergoing radiotherapy. **Exclusions:** • Patients undergoing palliative radiotherapy care. • Patients with T1/T2/N0 larynx cancer.
Target:	95% The tolerance within this target accounts for the fact that due to co-morbidities not all patients will be suitable for IMRT and patients with unilateral disease where IMRT may not be clinically appropriate.

Revision(s):	***Target increased from 80% to 95%.***

QPI 10: Post Operative Chemoradiotherapy

QPI Title:	Patients with squamous cell carcinoma of the oral cavity, larynx or pharynx with nodal extracapsular spread and/or final excision margins of <5mm following surgical resection should receive chemoradiation.
Description:	Proportion of patients with squamous cell carcinoma of the oral cavity, larynx or pharynx with nodal extracapsular spread and/or final excision margins of <5mm following surgical resection, with performance status 0 or 1 who receive chemoradiation.
Rationale and Evidence:	Patients with extracapsular spread should be considered for postoperative concurrent chemoradiotherapy[3]. Postoperative chemoradiotherapy is used to intensify the treatment that a patient with resectable high-risk head and neck cancer receives. Evidence shows chemoradiotherapy improves outcomes in patients with head and neck cancer. This includes improved survival[18, 19, 20].
Specifications:	**Numerator:** Number of patients with squamous cell carcinoma of the oral cavity, larynx or pharynx with nodal extracapsular spread and/or final excision margins of <5mm following surgical resection, with performance status 0 or 1 who receive chemoradiation. **Denominator:** All patients with squamous cell carcinoma of the oral cavity, larynx or pharynx with nodal extracapsular spread and/or final excision margins of <5mm following surgical resection, with performance status 0 or 1. **Exclusions:** • Patients with naso-pharyngeal cancer. • Patients with oral (lip) cancer.
Target:	55%[b] The tolerance *w*ithin this target is designed to account for those patients who may not be fit for chemoradiation or who refuse treatment with chemoradiation.

Revision(s):	***QPI changed to focus on a more specific cohort of patients and with a change to the margin status.*** ***Exclusion added for patients with naso-pharyngeal cancer and oral (lip) cancer.*** ***Target lowered from 85% to 55% on review of cases suitable for this treatment.***

[b] **Please Note:** this target has been redefined following review of data over previous years with regards to patients suitability for this treatment.

QPI 11: 30 and 90 Day Mortality

QPI Title:	30 and 90 day mortality after curative treatment for head and neck cancer .	
Description:	Proportion of patients with head and neck cancer who die within 30 or 90 days of curative treatment.	
Rationale and Evidence:	Treatment related mortality is a marker of the quality and safety of the whole service provided by the MDT[4]. Outcomes of treatment, including treatment related morbidity and mortality should be regularly assessed. Treatment should only be undertaken in individuals that may benefit from that treatment, that is, treatments should not be undertaken in futile situations. This QPI is intended to ensure treatment is given appropriately, and the outcome reported on and reviewed.	
Specifications:	**Numerator:**	Number of patients with head and neck cancer who undergo curative treatment who die within 30 or 90 days of treatment.
	Denominator:	All patients with head and neck cancer who undergo curative treatment.
	Exclusions:	• No exclusions.
	Please Note:	This indicator will be reported separately as 30 day mortality and 90 day mortality by treatment modality, i.e. surgery, radical radiotherapy, chemoradiotherapy etc. as opposed to one single figure.
Target:	<5%	

Revision(s):	***No proposed changes to the QPI.***

QPI 12: Lymph Node Yield

QPI Title:	For patients with head and neck cancer undergoing therapeutic neck dissection the number of lymph nodes examined should be maximised.
Description:	Proportion of patients with squamous cell carcinoma of the head and neck who undergo therapeutic neck dissection where ≥18 lymph nodes are resected and pathologically examined.
Rationale and Evidence:	Maximising the number of lymph nodes is proven to have a survival benefit for patients with head and neck squamous cell carcinoma. Evidence states that a yield of 18 or more lymph nodes in neck dissection is associated with improved overall survival[21].
Specifications:	**Numerator:** Number of patients with squamous cell carcinoma of the head and neck who undergo neck dissection where ≥18 lymph nodes are resected and pathologically examined. **Denominator:** All patients with squamous cell carcinoma of the head and neck who undergo neck dissection. **Exclusions:** • Patients who have undergone prior radiotherapy to the dissected neck. • Patients who undergo sentinel lymph node biopsy for early oral cancer • Patients with N0 disease.
Target:	80% 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. **Please note:** varying evidence exists regarding the most appropriate target level therefore this may need redefined in the future, to take account of new evidence or as further data becomes available.

Revision(s):	***NEW QPI***

QPI 13: Clinical Trial and Research Study Access

Revision(s)	***The revised Clinical Trial Access QPI which is applicable to all tumour sites will be included with the final Head and Neck Cancer QPI document.***

7. Survival

Improving survival forms an integral part of the national cancer quality improvement programme. Head and Neck Cancer survival analysis will be reported and analysed on a 3 yearly basis by Information Services Division (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 Head and Neck Cancer QPI group has identified; during the QPI development process, the following issues for survival analysis.

- 1, 2 and 5 year overall 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 Head and Neck Cancer QPI groups have not been able to identify sufficient evidence, or determine appropriate measurability specifications, to address all areas felt to be of key importance in the treatment of Head and Neck Cancer, and therefore in improving the quality of care for patients affected by Head and Neck Cancer.

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

- Patients undergoing surgery who have an unscheduled return to theatre.

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 three 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 multidisciplinary team (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 NHSScotland, patients affected by Head and Neck 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 Head and Neck Cancer QPIs via the Scottish Government Consultation Hub (website link below):

https://consult.gov.scot/nhs/head-and-neck-cancer-qpi

All responses should be submitted by **Monday 23rd April 2018.**

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

Email: H&NQPIPublicEngagement@gov.scot

10.2 Engagement feedback

At the end of the engagement period, all comments and responses will be collated for review by the Head and Neck Cancer 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 Head and Neck 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 Head and Neck Cancer QPIs and a search narrative were defined and agreed by the Head and Neck Cancer QPI Development Group. The table below shows the final search criteria used in the literature search.

Inclusion	Exclusion

• Primary cancer of the:
  • Larynx
  • Oral cavity (including lip)
  • Oropharynx
  • Hypopharynx
  • Nasopharynx
  • Paranasal sinuses
  • Salivary glands (including mucoepidermoid tumours)
  • Nose and ear.
• Diagnosis
• Staging
• Surgical management
• Non-surgical management
• Adults only
• 2005 to present day
• English only
• Clinical guidelines
	• Secondary cancers, very rare cancers and benign tumours, including:
	  • Medullary thyroid cancer
	  • Odontogenic tumours
	  • Neurological tumours, eg olfactory esthesioneuroblastoma (included in CNS QPIs)
	  • Oesophageal (included in upper GI QPIs)
	  • Facial cancers other than nose and ear (to be included in skin QPIs)
	  • Tracheal cancers (included in lung QPIs)
	  • Pre-cancerous conditions
	  • Secondary head and neck cancer
	• Prevention
	• Screening
	• Primary care/referral
	• Communication, information sharing and support
	• Follow up
	• Management of recurrence/relapsed disease
	• Palliative/end of life care (pain management, end of life counselling, hospice management)
	• Clinical trials recruitment and protocols

Table 1 – Head and Neck 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.

Ten guidelines were appraised for quality using the AGREE II[22] instrument. This instrument assesses the methodological rigour used when developing a guideline. Two of the guidelines were not recommended for use and eight were recommended for use with consideration of their applicability or currency.

Indicator Development

The Head and Neck 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 based** – is the indicator based on high quality clinical evidence?
- **Measurability** – is the indicator measurable i.e. are there explicit requirements for data measurement and are the required data items accessible and available for collection?

Engagement Process

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

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

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

Appendix 2: Head and Neck Cancer QPI Development Group Membership (2012)

Name	Designation	Cancer Network/Base
Philippa Whitford (chair)	Consultant Surgeon	WoSCAN / NHS Greater Glasgow and Clyde
Richard Adamson	Consultant ENT Surgeon	SCAN / NHS Lothian
Kim Ah-See	Consultant ENT Head and Neck Surgeon	NOSCAN / NHS Grampian
John Devine	Consultant Maxillofacial Surgeon/Head and Neck Surgeon	WOSAN / NHS Greater Glasgow and Clyde
Kim Dobie	Lead Cancer Audit Facilitator	WoSCAN / NHS Ayrshire and Arran
Andy Evans	Consultant ENT Surgeon	SCAN / NHS Lothian
Carol-Anne Fleming	Dietetic Clinical Team Lead – Oncology	WoSCAN / NHS Greater Glasgow and Clyde
Jim Foulis	Clinical Services Manager – Specialist Services, Oncology and Renal.	NOSCAN / NHS Tayside
Michele Hilton Boon	Programme Manager	Healthcare Improvement Scotland
Sachin Jauhar	Consultant and Honorary Senior Clinical Lecturer in Restorative Dentistry	WoSCAN / NHS Greater Glasgow and Clyde
Jennifer Jennings	Patient Representative	
Liz Junor	Consultant Oncologist	SCAN/ NHS Lothian
Lesley Kidd	Patient Representative	
Terry Lowe	Consultant Maxillofacial Head and Neck Surgeon	NOSCAN / NHS Grampian
Kelly Macdonald	Project Manager	National Cancer QPI Development Programme
Carol Macgregor	Consultant Clinical Oncologist	NOSCAN / NHS Highland
Hannah Monaghan	Consultant Pathologist	SCAN / NHS Lothian
Stephen Morley	Consultant Plastic Surgeon	WoSCAN / NHS Greater Glasgow and Clyde
James Morrison	Consultant Maxillofacial Surgeon	SCAN / NHS Lothian
Rod Mountain	Lead Consultant ENT Surgeon	NOSCAN / NHS Grampian
Ann Muir	Patient Representative	
Brian Murray	Principle Information Development Manager	Information Services Division
Tim Palmer	Consultant Pathologist	NOSCAN / NHS Grampian
Julip Philp	Head and Neck Clinical Nurse Specialist	SCAN / NHS Fife

Name	Designation	Cancer Network/Base
Mohammed Rizwanullah	Consultant Clinical Oncologist	WoSCAN / NHS Greater Glasgow and Clyde
Shirley-Anne Savage	Cancer Services Manager	SCAN / NHS Fife
Anne Marie Sinclair	Clinical Director, Diagnostic Imaging	WoSCAN / NHS Greater Glasgow and Clyde
Margaret Singer	Lead Speech and Voice Therapist (ENT)	NOSCAN / NHS Grampian
David Summers	Consultant Radiologist	SCAN / NHS Lothian
Amir Tadros	Consultant Plastic Surgeon	NOSCAN / NHS Grampian
Lesley Taylor	Senior Specialist Nurse	NOSCAN / NHS Grampian
Evelyn Thomson	Regional Manager (Cancer)	WoSCAN

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

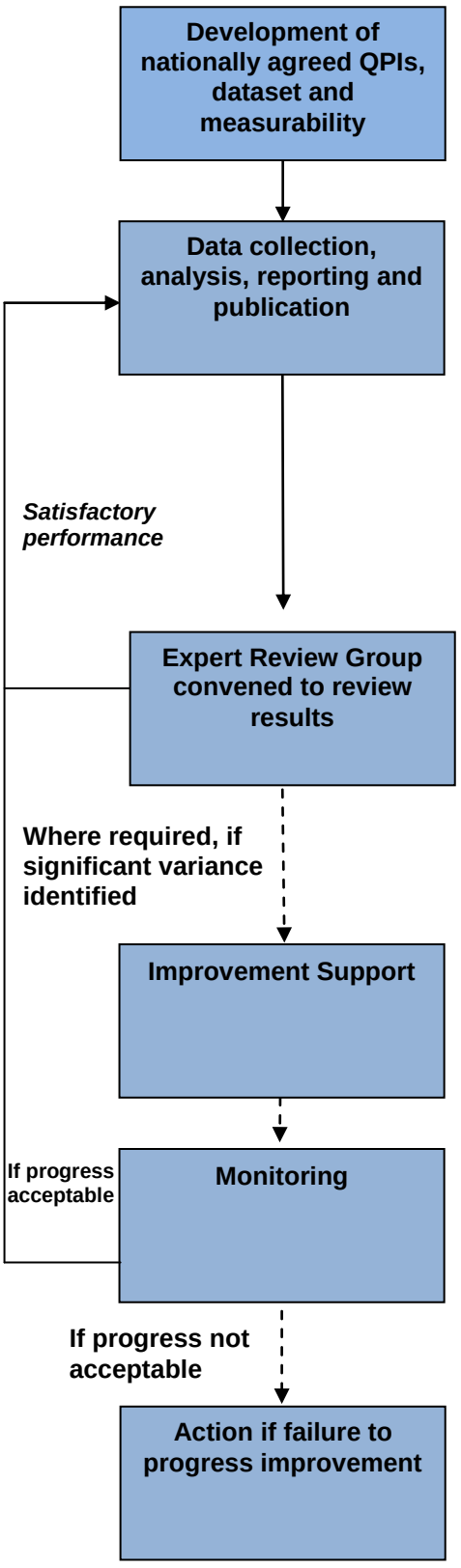
Appendix 3: Head and Neck Cancer QPI Formal Review Group Membership (2017)

Name	Designation	Cancer Network/Base
Andrew McMahon (Chair)	Consultant Colorectal Surgeon	WoSCAN
Jen Doherty	Project Co-ordinator	National Cancer Quality Programme
Fiona Gardiner	Audit Facilitator	SCAN
Terry Lowe	Consultant Maxillo-Facial Surgeon	NOSCAN
Jim McCaul	Head and Neck Lead Clinician	WoSCAN
Rafael Moleron	Consultant Clinical Oncologist	NOSCAN
Iain Nixon	Consultant Head and Neck Surgeon	SCAN
Stuart Robertson	Consultant Head and Neck Surgeon	WoSCAN
Lorraine Stirling	Project Officer	WoSCAN
Christine Urquhart	Audit and Information Manager	NOSCAN
Heather Wotherspoon	MCN Manager	WoSCAN

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

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

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



1. National QPI Development Stage

- QPIs developed by QPI development groups, which include representation from Regional Cancer Networks, Healthcare Improvement Scotland, 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:

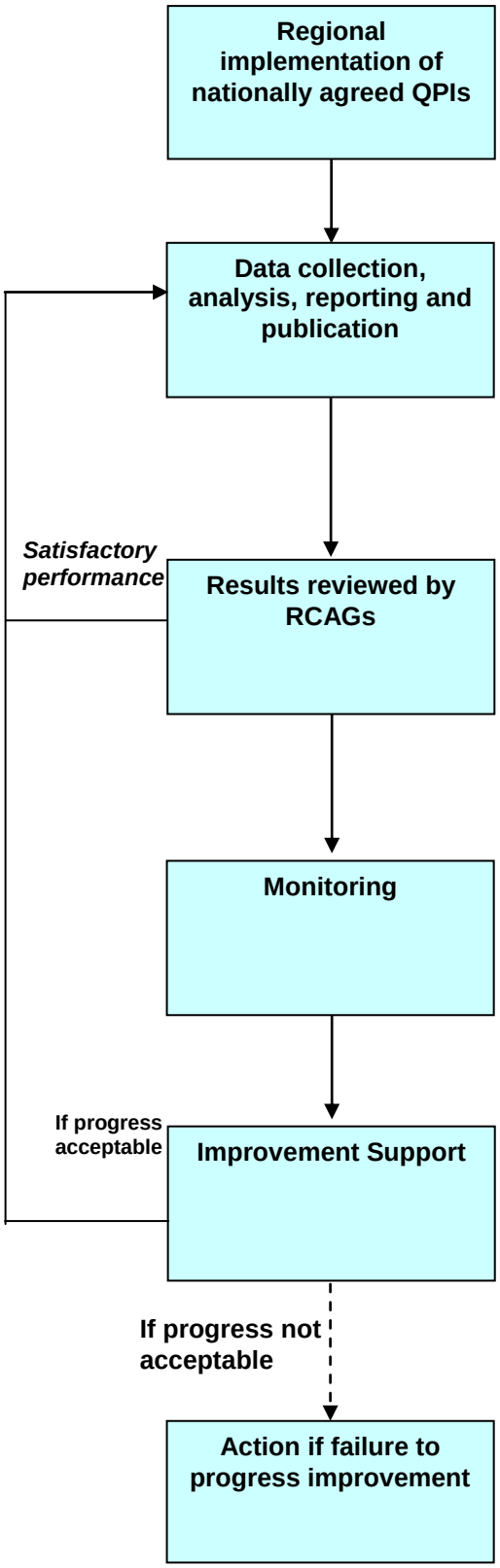
- RCAGs work with Boards to progress outstanding actions, monitor improvement plans and submit progress report to Healthcare Improvement Scotland.
- Healthcare Improvement Scotland report to Scottish Cancer Taskforce as to whether progress is acceptable**.**

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



1. Regional QPI Implementation Stage:

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

2. Data Analysis Stage:

- NHS Boards collect data and data is analysed on a yearly basis using nationally agreed measurability criteria at local/ regional level.
- Data/results validated by Boards and annual regional comparative report produced by Regional Networks.
- Areas of best practice and variance across the region highlighted.
- Yearly regional reports submitted to 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 6: Glossary of Terms

Adjuvant Treatment	Treatment such as chemotherapy, or radiotherapy that is given after a surgical procedure to reduce the risk of the cancer coming back.
Chemotherapy	The use of drugs used to kill cancer cells, to prevent or slow their growth.
Chemoradiation	Treatment that combines chemotherapy with radiation therapy.
Co-morbidity/Comorbidities	Other conditions and symptoms prevelant other than the primary diagnosis.
Computed Tomography (CT)	An x-ray imaging technique, which allows detailed investigation of the internal organ of the body.
Curative Intent/ Curative Treatment	Treatment which is given with the aim of curing the cancer.
Curative Surgical Resection	Surgical removal of the tumour/lesion with the aim of curing the cancer.
Cytological / Cytopathological	The study of the structure and function of cells under the microscope, and of their abnormalities.
Debulking palliative surgery	Surgical removal of as much of a tumour as possible, to relieve symptoms or help the patient live longer.
Decalcifying Bone	The removal of calcium or calcium compounds from the bone.
Definitive Surgery	Treatment designed to potentially cure cancer.
Definitive treatment	Treatment designed to potentially cure cancer using one or a combination of interventions.
Diagnosis	The process of identifying a disease, such as cancer, from its signs and symptoms.
Extracapsular Spread	Spread of cancer cells outwith the tumour.
Histological / Histopathogical	The study of the structure, composition and function of tissues under the microscope, and their abnormalities.
Hypopharyngeal Cancer	Cancer of the hypopharynx.
Hypopharynx	The bottom part of the throat, where the the larynx and esophagus meet.
Intensity Modulated Radiotherapy (IMRT)	IMRT is an advanced mode of high-precision radiotherapy that uses computer-controlled linear accelerators to deliver precise radiation doses to a malignant tumor or specific areas within the tumor.
Larynx	The larynx is a small organ situated in the front part of the neck and attached to the windpipe. It allows the air breathed in through the nose and mouth to reach the lungs, acts as a valve which closes to prevent food and drink entering the windpipe when swallowing and it contains the vocal cords.
Laryngeal Cancer	Cancer of the larynx.
Lymph nodes	Small organs which act as filters in the lymphatic system.
Morbidity	How much ill health a particular condition causes.
Mortality	Either (1) the condition of being subject to death; or (2) the death rate, which reflects the number of deaths per unit of population in and specific region, age group disease or other classification, usually expressed as deaths per 1,000, 10,000 or 100,000.
Magnetic Resonance Imaging (MRI)	A procedure in which radio waves and a powerful magnet linked to a computer are used to create detailed pictures of areas inside the body. These pictures can show the difference between normal and diseased tissue.
Malnutrition	The condition caused by an imbalance by what individuals eat and what is required to maintain health. This can result from eating too little but also may imply an incorrect balance of basic

	foodstuffs such as protein, carbohydrates and fats.
Malnutrition Universal Screening Tool (MUST)	A five step screening tool which is used to identify adults who are malnourished, at risk of malnutrition, or obese. It also includes management guidelines which can be used to develop a care plan.
Multidisciplinary Team	Team which consists of various specialities and may be different depending on disease. For example, pathologist, surgeon, etc.
Multidisciplinary Team Meeting (MDT)	A meeting which is held on a regular basis, which is made up of participants from various disciplines appropriate to the disease area, where diagnosis, management and appropriate treatment of patients is discussed and agreed.
Nasopharynx	The upper part of the pharynx behind the nose.
Nasopharyngeal cancer	Cancer of the nasopharynx.
Neoadjuvant chemotherapy	Chemotherapy treatment which is given before cystectomy with the aim of improving the results of surgery and preventing the development of metastases.
Oncologist	A doctor who specialises in treating people with cancer.
Oral Cavity	The mouth. This includes the front two-thirds of the tongue, the upper and lower gums, the lining of the inside of the cheeks and lips, the bottom of the mouth under the tongue, the bony top of the mouth (hard palate) and the small area behind the wisdom teeth.
Oral Cavity Cancer	Cancer of the oral cavity.
Oropharynx	The part of the pharynx that lies between the junction of the hard and soft palates. It contains the tonsils and connects the oral cavity and nasopharynx to the hypopharynx.
Oropharyngeal Cancer	Cancer of the oropharynx.
Osteoradionecrosis (ORN)	A complication which may be experienced by oral cancer patients as a result of radiotherapy treatment which result in the bone dying during treatment.
Palliative	Anything which serves to alleviate symptoms due to the underlying cancer but is not expected to cure it.
Palliative Surgery	Operation undertaken to alleviate symptoms due to the underlying cancer but not expected to cure it.
Paranasal Sinus	One of many small hollow spaces in the bones around the nose. Paranasal sinuses are named after the bones that contain them: frontal (the lower forehead), maxillary (cheekbones), ethmoid (beside the upper nose), and sphenoid (behind the nose). The paranasal sinuses open into the nasal cavity (space inside the nose) and are lined with cells that make mucus to keep the nose from drying out during breathing.
Paranasal Sinus Cancer	Cancer which occurs in the spaces within the bones behind the nose and cheeks.
Pathological/Pathology	The study of disease processes with the aim of understanding their nature and causes. This is achieved by observing samples of fluid and tissues obtained from the living patient by various methods, or at a post mortem.
Performance Status	A measure to quantify a cancer patients general well-being and activities of daily living. This measure is used to determine whether they are fit to receive treatment such as chemotherapy.
Pharynx	A muscular tube lined with mucous membrane that extends from the beginning of the oesophagus (gullet) up to the base of the skull. It is divided into nasopharyns, oropharynx and hypopharynx.
Pharyngocutaneous Fistula (PCF)	A common non-fatal complication following total laryngectomy.

Positive Surgical Margins	A positive surgical margin is when there are cancer cells at the edge of the tissue that has been removed.
Prognostic Indicator	Factors, such as staging, tumour type, and laboratory studies that may indicate treatment effectiveness and outcomes.
Progression	The process of cancer spreading or becoming more severe.
Radical Chemoradiotherapy	The use of chemotherapy and radiotherapy to treat disease with the intent of curing.
Radical Intent	To treat the disease with the intent of curing.
Radical Radiotherapy	The use of radiation to treat disease with the intent of curing.
Radical treatment	Vigorous treatment that aims at the complete cure of a disease rather than merely the relief of symptoms.
Radiotherapy	The use of radiation (such as x-rays) to diagnose or treat disease.
Smoking Cessation	Otherwise referred to as 'quitting smoking'.
Stage	Stage is used to describe the size of the tumour and how far it may have spread within the body. Various staging systems are used to describe the cancer i.e. TNM.
Surgery/ Surgical resection	Surgical removal of the tumour/lesion
Swallowing Function	Swallowing is a complex mechanism using both skeletal muscle (tongue) and smooth muscles of the pharynx and esophagus. The autonomic nervous system (ANS) coordinates this process in the pharyngeal and esophageal phases.
Survival	The percentage of people in a study or treatment group who are alive for a certain period of time after they were diagnosed with or treated for a disease, such as cancer.
TNM	'TNM' stands for Tumour, Node, Metastasis. This system can describe the size of a primary tumour, whether the cancer has spread to the lymph nodes and whether the cancer has spread to a different part of the body (metastasised). The system uses numbers to describe the cancer. 'T' refers to the size of the cancer - it can be 1, 2, 3 or 4, with 1 being small and 4 large. 'N' refers to whether the cancer has spread to the lymph nodes - it can be between 0 (no positive nodes) and 3 (lots of positive nodes). 'M' refers to whether the cancer has spread to another part of the body - it can either be 0 (the cancer hasn't spread) or 1 (the cancer has spread).
Toxicity	The extent to which something is poisonous or harmful.
Treatment Related Morbidity	The frequency of the appearance of complications following a surgical procedure or other treatment.
Treatment Related Mortality	Treatment related deaths.