NHS SCOTLAND

Scottish Cancer Taskforce
National Cancer Quality Steering Group

Colorectal Cancer Clinical Quality Performance Indicators

Engagement Document

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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 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 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 auctioned 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 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 Networks 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 Colorectal Cancer QPI Development Group was convened in December 2011, chaired by Dr Rob Jones (Senior Lecturer and Honorary Consultant in Medical Oncology, Beatson West of Scotland Cancer Centre). 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 Colorectal Cancer QPIs was undertaken in December 2016.

A Formal Review Group was convened, chaired by Dr Rob Jones (Professor of Clinical Cancer Research and Honorary Consultant in Medical Oncology, Beatson West of Scotland Cancer Centre). 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, 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 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 Colorectal Cancer QPIs. The updated document will be implemented for patients diagnosed with Colorectal Cancer on, or after, 1st April 2017.

6. Colorectal Cancer Definition

Approximately 0.8% of new colorectal cancer cases diagnosed in Scotland between 1st April 2015 and 31st March 2016 (based on National Colorectal Cancer audit data 2015/16) are appendiceal cancers. The presentation and management of these rare cancers is different from other colorectal tumours, therefore a decision was made by the Colorectal Cancer QPI Formal Review Group to exclude appendiceal cancer from all QPIs.

7. Quality Performance Indicators for Colorectal Cancer

QPI 1 – Radiological Diagnosis and Staging

QPI Title:	Patients with colorectal cancer should be evaluated with appropriate imaging to detect extent of disease and guide treatment decision making.	
Description:	Proportion of patients with colorectal cancer who undergo CT chest, abdomen and pelvis (colorectal cancer) plus MRI pelvis (rectal cancer only) before definitive treatment. **Please note:** The specifications of this QPI are separated to ensure clear measurement of both patients with: (i) Colon cancer who undergo CT chest, abdomen and pelvis; (ii) Rectal cancer who undergo CT chest, abdomen and pelvis and MRI.	
Rationale and Evidence:	Accurate staging is necessary to detect metastatic disease, guide treatment and avoid inappropriate surgery[2]. All patients with colorectal cancer should be staged by contrast enhanced CT of the chest, abdomen and pelvis, to estimate the stage of disease, unless the use of intravenous iodinated contrast is contraindicated[3,4]. MRI of the rectum is recommended for local staging of patients with rectal cancer. Patients with rectal cancer who are potential surgical candidates need to be appropriately staged with MRI and discussed by a multi disciplinary team (MDT) preoperatively. The risk of local recurrence based on MRI findings should be ascertained[3,4].	
Specification (i):	**Numerator:**	Number of patients with colon cancer who undergo CT chest, abdomen and pelvis before definitive treatment.
	Denominator:	All patients with colon cancer.
	Exclusions	• Patients who refuse investigation. • Patients who undergo emergency surgery. • Patients undergoing supportive care only. • Patients who undergo palliative treatment (chemotherapy or surgery)
Target:	95%	

(continued overleaf)

QPI 1 – Radiological Diagnosis and Staging (continued)

Specification (ii):	**Numerator:**	All patients with rectal cancer undergoing definitive treatment (chemoradiotherapy or surgical resection) who undergo CT chest, abdomen and pelvis and MRI pelvis before definitive treatment.
	Denominator:	All patients with rectal cancer undergoing definitive treatment (chemoradiotherapy or surgical resection).
	Exclusions:	• Patients who refuse investigation. • Patients who undergo emergency surgery. • Patients with a contraindication to MRI. • Patients who undergo Transanal Endoscopic Microsurgery (TEM). • Patients who undergo palliative treatment (chemotherapy, radiotherapy or surgery).
Target:	95%	

Revision(s):	**Spec (i) Colon Cancer – added exclusion for Patients who undergo palliative treatment (chemotherapy or surgery).** **Spec (ii) Rectal Cancer – added exclusions for Patients who undergo Transanal Endoscopic Microsurgery (TEM) and Patients who undergo palliative treatment (chemotherapy, radiotherapy or surgery). There will also be specific operation codes not included pertaining to Endoscopic Mucosal Resection.**

QPI 2 – Pre-Operative Imaging of the Colon

QPI Title:	Patients with colorectal cancer undergoing surgical resection should have the whole colon visualised pre-operatively.
Description:	Proportion of patients with colorectal cancer who undergo surgical resection who have the whole colon visualised by colonoscopy or CT colonography pre-operatively, unless the non-visualised segment of colon is to be removed.
Rationale and Evidence:	The whole colon is visualised preoperatively to avoid missing synchronous tumours and to remove synchronous adenomas[2]. Where colorectal cancer is suspected clinically, the whole of the large bowel should be examined to confirm a diagnosis of cancer. CT colonography can be used as a sensitive and safe alternative to colonoscopy[3,4].
Specifications:	**Numerator:** Number of patients who undergo elective surgical resection for colorectal cancer who have the whole colon visualised by colonoscopy or CT colonography before surgery, unless the non visualised segment of the colon has been removed. **Denominator:** All patients who undergo elective surgical resection for colorectal cancer. **Exclusions** • Patients who undergo palliative surgery.
Target:	95% The tolerance within this target is designed to account for situations where patients are deemed clinically unsuitable or unfit to undergo colonoscopy or CT colonography.

Revision(s):	**Exclusion added for patients that undergo palliative surgery.**

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 colorectal 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[5]. Discussion prior to definitive treatment decisions being made provides reassurance that patients are being managed appropriately.
Specifications:	**Numerator:** Number of patients with colorectal cancer discussed at the MDT before definitive treatment. **Denominator:** All patients with colorectal cancer. **Exclusions:** • Patients who died before first treatment. • Patients undergoing emergency surgery. • Patients undergoing treatment with endoscopic polypectomy only.
Target:	95% The tolerance within this target level accounts for situations where patients require treatment urgently.

Revision(s):	**No changes to QPI. Data definitions updated to account for supportive care patients discussed at MDT.**

QPI 4 – Stoma Care

QPI Title:	Patients with colorectal cancer who require a stoma are assessed and have their stoma site marked pre-operatively by a nurse with expertise in stoma care.	
Description:	Proportion of patients with colorectal cancer who undergo elective surgical resection which involves stoma creation who are seen and have their stoma site marked pre-operatively by a nurse with expertise in stoma care.	
Rationale and Evidence:	All patients who may require stoma formation (permanent or temporary) should be referred and assessed by a stoma nurse specialist before admission to hospital[3]. Access to a nurse with expertise in stoma care increases patient satisfaction and optimal independent functioning[2]. Furthermore, there is significant evidence to suggest that patients not marked preoperatively can have significant problems with their stoma post operatively and this can affect their recovery and rehabilitation. Before surgery, all patients should be offered information about the likelihood of having a stoma, why it might be necessary, and how long it might be needed for. A trained stoma professional should give specific information on the care and management of stomas to all patients considering surgery that might result in a stoma[4].	
Specifications:	**Numerator:**	Number of patients with colorectal cancer who undergo elective surgical resection which involves stoma creation who are seen by and have their stoma site marked preoperatively by a nurse with expertise in stoma care.
	Denominator:	All patients with colorectal cancer who undergo elective surgical resection which involves stoma creation.
	Exclusions:	• Patients who refuse to be seen by a nurse with expertise in stoma care.
Target:	95% The tolerance within this target is designed to account for situations where unexpected findings or technical difficulties at surgery mean that a stoma was fashioned when not originally planned.	

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

QPI 5 – Lymph Node Yield

QPI Title:	For patients undergoing resection for colorectal cancer the number of lymph nodes examined should be maximised.
Description:	Proportion of patients with colorectal cancer who undergo surgical resection where ≥12 lymph nodes are pathologically examined.
Rationale and Evidence:	Maximising the number of lymph nodes resected and analysed enables reliable staging which influences treatment decision making[2].
Specifications:	**Numerator:** Number of patients with colorectal cancer who undergo curative surgical resection where ≥12 lymph nodes are pathologically examined. **Denominator:** All patients with colorectal cancer who undergo curative surgical resection (with or without neo-adjuvant short course radiotherapy). **Exclusions:** • Patients with rectal cancer who undergo long course neo-adjuvant chemo radiotherapy or radiotherapy. • Patients who undergo transanal endoscopic microsurgery or transanal resection of tumour.
Target:	90% The tolerance within this target accounts for situations where patients are not fit enough to undergo extensive lymphadenectomy. **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):	**Increased target from 80% to 90%.**

QPI 6 – Neo-adjuvant Therapy

QPI Title:	Patients with locally advanced rectal cancer should receive neo-adjuvant therapy designed to facilitate a margin-negative resection.
Description:	Proportion of patients with locally advanced rectal cancer with threatened or involved circumferential resection margin (CRM) on preoperative MRI who receive neo-adjuvant therapy, designed to facilitate a margin-negative resection, defined as: (i) Long course chemoradiotherapy[a]; (ii) Short course radiotherapy with long course intent (delay to surgery[b]); or (iii) Neo-adjuvant chemotherapy
Rationale and Evidence:	Patients with rectal tumours that involve or threaten the mesorectal fascia on preoperative imaging may benefit from preoperative radiotherapy[2]. Patients with rectal cancer who require downstaging of the tumour because of encroachment on the mesorectal fascia should receive neo-adjuvant therapy, followed by surgery at an interval to allow cytoreduction[3]. For patients with rectal cancer MRI is utilised to assess the extent of disease prior to treatment, a statement regarding margin status is required within the MRI report as this will determine the treatment offered to patients, i.e. whether pre-operative radiotherapy is considered.
Specifications:	**Numerator:** Number of patients with rectal cancer with a threatened or involved CRM on preoperative MRI undergoing surgery who receive neo-adjuvant therapy. **Denominator:** All patients with rectal cancer with a threatened or involved CRM on preoperative MRI undergoing surgery. **Exclusions:** • Patients who refused neo-adjuvant therapy. • Patients in whom neo-adjuvant therapy is contraindicated. • Patients who presented as an emergency for surgery.
Target:	90% The tolerance within this target is designed to account for situations where patient's fitness levels preclude neo-adjuvant therapy.

[a] Due to co-morbidities or fitness levels, some patients may only receive radiotherapy without chemotherapy. These patients will be included within the measurement of this QPI.

[b] Delay to surgery is defined as planned surgery performed a minimum of 6 weeks after completion of neo-adjuvant therapy

Revision(s):	**Title changed from Neo-adjuvant Radiotherapy to Neo-adjuvant Therapy.** **QPI now incorporating other methods of Neo-adjuvant therapy – Long course chemoradiotherapy, Short course radiotherapy with long course intent (delay to surgery) and Neo-adjuvant chemotherapy. Delay to surgery defined as planned surgery performed a minimum of 6 weeks after completion of neo-adjuvant therapy.** **Wording of exclusions and tolerance updated accordingly.**

QPI 7 – Surgical Margins

QPI Title:	Rectal cancers undergoing surgical resection should be adequately excised.
Description:	Proportion of patients with rectal cancer who undergo surgical resection in which the circumferential margin is clear of tumour. **Please note:** The specifications of this QPI are separated to ensure clear measurement of both patients who receive: (i) Primary surgery, or immediate / early[c] surgery following neo-adjuvant short course radiotherapy; and (ii) Surgery following neo-adjuvant chemotherapy, long course chemoradiotherapy, or short course radiotherapy with long course intent (delay to surgery[b]).
Rationale and Evidence:	The circumferential margin is an independent risk factor for the development of distant metastases and mortality. It is recognised that local recurrence of rectal cancer can be accurately predicted by pathological assessment of circumferential margin involvement in these tumours[3]. This indicator is a measure of the quality of both pre-operative assessment and resection.
Specification (i):	**Numerator:** Number of patients with rectal cancer who undergo elective primary surgical resection or immediate / early[c] surgical resection following neo-adjuvant short course radiotherapy in which the circumferential margin is clear of tumour. **Denominator:** All patients with rectal cancer who undergo elective primary surgical resection or surgical resection following neo-adjuvant short course radiotherapy. **Exclusions:** • Patients who undergo transanal endoscopic microsurgery or transanal resection of tumour.
Target:	95%

(continued overleaf)

[c] Immediate / early surgery is defined as surgery performed less than 6 weeks after completion of neo-adjuvant therapy.

QPI 7 – Surgical Margins (continued)

Specification (ii):	**Numerator:**	Number of patients with rectal cancer who undergo elective surgical resection following neo-adjuvant chemotherapy, long course chemoradiotherapy, or short course radiotherapy with long course intent (delay to surgery) in which the circumferential margin is clear of tumour.
	Denominator:	All patients with rectal cancer who undergo elective surgical resection following neo-adjuvant chemotherapy, long course chemoradiotherapy, or short course radiotherapy with long course intent (delay to surgery).
	Exclusions:	• Patients who undergo transanal endoscopic microsurgery or transanal resection of tumour.
Target:	85% The tolerance within this target is designed to account for the fact that patients who undergo neo-adjuvant radiotherapy are already acknowledged to have a tumour threatening the circumferential margin therefore are more likely to have positive surgical margins.	

Revision(s):	**Spec (i) updated to define immediate / early surgical resection as surgery performed less than 6 weeks after completion of neo-adjuvant therapy.** **Spec (ii) updated to include other methods of neo-adjuvant therapy as per QPI 6.**

QPI 8 – Re-operation Rates

QPI Title:	For patients undergoing surgery for colorectal cancer re-operation should be minimised.	
Description:	Proportion of patients who undergo surgical resection for colorectal cancer who return to theatre to deal with complications related to the index procedure (within 30 days of surgery).	
Rationale and Evidence:	It is important to minimise morbidity and mortality related to the treatment of colorectal cancer. Re-operation rates may offer a sensitive and relevant marker of surgical quality[6,7,8,9].	
Specifications:	**Numerator:**	Number of patients with colorectal cancer who undergo surgical resection who return to theatre following initial surgical procedure (within 30 days of surgery) to deal with complications related to the index procedure.
	Denominator:	All patients with colorectal cancer who undergo surgical resection.
	Exclusions:	• No exclusions
Target:	<10%	

Revision(s):	**QPI to now be measured via audit data rather than SMR01 data.**

QPI 9 – Anastomotic Dehiscence

QPI Title:	For patients who undergo surgical resection for colorectal cancer anastomotic dehiscence should be minimised.	
Description:	Proportion of patients who undergo surgical resection for colorectal cancer with anastomotic leak as a post operative complication. **Please note:** The specifications of this QPI are separated to ensure clear measurement of patients who undergo: (i) Colonic anastomosis; and (ii) Rectal anastomosis (including: anterior resection with total mesorectal excision (TME)).	
Rationale and Evidence:	Anastomotic dehiscence is a major cause of morbidity and a measure of the quality of surgical care[2]. Anastomotic leakage is an important and potentially fatal complication of colorectal cancer surgery, and measures to minimise it should be taken[4].	
Specification (i):	**Numerator:**	Number of patients with colorectal cancer who undergo a surgical procedure involving anastomosis of the colon having anastomotic leak requiring intervention (radiological or surgical).
	Denominator:	All patients with colorectal cancer who undergo a surgical procedure involving anastomosis of the colon.
	Exclusions:	• No exclusions.
Target:	<5%	
Specification (ii):	**Numerator:**	Number of patients with rectal cancer who undergo a surgical procedure involving anastomosis of the rectum (including: anterior resection with TME) having anastomotic leak requiring intervention (radiological or surgical).
	Denominator:	All patients with rectal cancer who undergo a surgical procedure involving anastomosis of the rectum (including: anterior resection with TME).
	Exclusions:	• No exclusions
Target:	<10 %	

Revisions:	**No changes to QPI.**

QPI 10 – 30 and 90 Day Mortality Following Surgical Resection

QPI Title:	Mortality after surgical resection for colorectal cancer.
Description:	Proportion of patients with colorectal cancer who die within 30 or 90 days of emergency or elective surgical resection.
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)[3]. Outcomes of treatment, including treatment-related morbidity and mortality should be regularly assessed[3]. Patients with poor performance status, who are therefore at a greater risk of treatment-related morbidity and mortality, are increasingly being considered for radical interventions. These interventions may be curative but their impact needs to be balanced against the overall prognosis of the patient[4].
Specifications:	**Numerator:** Number of patients with colorectal cancer who undergo emergency or elective surgical resection who die within 30 or 90 days of surgery. **Denominator:** All patients with colorectal cancer who undergo emergency or elective surgical resection. **Exclusions:** • No exclusions
Target:	Elective surgical resection 30 day mortality <3% 90 day mortality <4% Emergency surgical resection 30 day mortality <15% 90 day mortality <20% These target levels have been agreed based on current Scottish and UK audit data. In the most recent UK National Bowel Cancer Audit Report[10], the 90 day mortality figure following elective surgery was 2.1% and following emergency surgery was 14.5%.

Revision(s):	**Elective surgical resection:** **30 day target changed from <5% to <3%** **90 day target added - <4%** **Emergency surgical resection:** **90 day target added <20%.**

QPI 11 – Adjuvant Chemotherapy

QPI Title:	Patients with Dukes C and high risk Dukes B colorectal cancer should be considered for adjuvant chemotherapy.
Description:	Proportion of patients between 50 and 74 years of age at diagnosis with Dukes C, or high risk Dukes B[d], colorectal cancer who receive adjuvant chemotherapy[e].
Rationale and Evidence:	All patients with Dukes C and high risk Dukes B colorectal cancer should be considered for adjuvant chemotherapy to reduce the risk of local and systemic recurrence[3,4]. Treatment is not restricted by age and is considered on an individual patient basis. Treatment may be restricted by co-morbidities, which are more common in the older patient group. Due to the difficulties associated with accurate measurement of co-morbidities and patient fitness these cannot be utilised as exclusions within this QPI. To ensure focussed measurement and a QPI examining expected outcomes the age range of 50-74 years has been selected. This represents the majority of patients and therefore provides a good proxy for access to adjuvant chemotherapy in the whole patient population. Patients over 74 years of age have been poorly represented in previous clinical trials meaning that the evidence base for benefit in the over 74 age group is extremely limited. Patients are considered for treatment on an individual basis.
Specifications:	**Numerator:** Number of patients between 50 and 74 years of age at diagnosis with Dukes C, or high risk Dukes B, colorectal cancer who undergo surgical resection who receive adjuvant chemotherapy. **Denominator:** All patients between 50 and 74 years of age at diagnosis with Dukes C, or high risk Dukes B, colorectal cancer who undergo surgical resection. **Exclusions:** • Patients who refuse chemotherapy.
Target:	Patients with Dukes C colorectal cancer 70% Patients with high risk Dukes B colorectal cancer 50% The tolerance within this target is designed to account for situations where patients may have post operative complications or fitness levels that preclude adjuvant chemotherapy treatment. Target levels for Dukes C and high risk Dukes B colorectal cancer differ as the risk of recurrence is less with Dukes B disease the absolute benefit of adjuvant chemotherapy is therefore less than for Dukes C disease.

Please note: Although this QPI specifically measures patients between 50 and 74 years of age (bowel screening population), NHS Boards and Regional Cancer Networks will continue to report on adjuvant chemotherapy rates for all patients with Dukes C and high risk Dukes B colorectal cancer regardless of age. No target level will be assigned to this patient group at the present time.

[d] High risk Dukes B colorectal cancer is defined as patients with (pT4a or pT4b disease) with / without extramural venous invasion, or pT3 pN0 M0 with extramural venous invasion [3].

[e] Adjuvant chemotherapy in this instance is defined as chemotherapy treatment which commences within 12 weeks of surgical resection.

Revisions:	**Definition of high risk Dukes B changed to include T3 tumours with extramural venous invasion.**

QPI 12 – 30 and 90 Day Mortality Following Chemotherapy or Radiotherapy

QPI Title:	Mortality after chemotherapy or radiotherapy treatment for colorectal cancer.	
Description:	Proportion of patients with colorectal cancer who die within 30 or 90 days of chemotherapy or radiotherapy treatment.	
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)[3]. Patients with poor performance status, who are therefore at a greater risk of treatment-related morbidity and mortality, are increasingly being considered for radical interventions. These interventions may be curative but their impact needs to be balanced against the overall prognosis of the patient[4].	
Specification(i):	**Numerator:**	Number of patients with colorectal cancer who undergo neo-adjuvant chemoradiotherapy, radiotherapy or adjuvant chemotherapy with curative intent who die within 30 or 90 days of treatment.
	Denominator:	All patients with colorectal cancer who undergo neo-adjuvant chemoradiotherapy, radiotherapy or adjuvant chemotherapy with curative intent.
	Exclusions:	• No exclusions.
	Please note:	This indicator will be reported by treatment modality, i.e. chemoradiotherapy, radiotherapy and adjuvant chemotherapy, as opposed to one single figure.
Target:	<1%	
Specification(ii):	**Numerator:**	Number of patients with colorectal cancer who undergo palliative chemotherapy who die within 30 days of treatment.
	Denominator:	All patients with colorectal cancer who undergo palliative chemotherapy.
	Exclusions:	• No exclusions.
Target:	<10%	

Revisions:	**Spec (i) curative intent – target changed from <2% to <1%.** **Spec (ii) been added – palliative chemotherapy with a target of <10%.**

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 Colorectal 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[5]. 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 Colorectal cancer enrolled in an interventional clinical trial or translational research. **Denominator:** All patients with Colorectal 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

8. Survival

Improving survival forms an integral part of the national cancer quality improvement programme. Colorectal 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 Colorectal Cancer QPI Development 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.

9. Areas for Future Consideration

The Colorectal 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 colorectal cancer, and therefore in improving the quality of care for patients affected by colorectal cancer.

The following areas for future consideration have been raised across the lifetime of the Colorectal Cancer QPIs:

- Multi-disciplinary team management of patients with oligometastatic disease.
- Biomarker testing (RAS, BRAF & MSI) to direct decisions on chemotherapy.
- Side effects and toxicities of systemic anti cancer therapy.
- Post treatment management.
- Management of advanced/metastatic disease.
- Early rectal cancer treatment and recurrence

10. 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.

10.1 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.

10.2 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.

10.3 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.

11. How to participate in the engagement process

In order to ensure wide inclusiveness of clinical and management colleagues from across NHSScotland, patients affected by colorectal 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.

11.1 Submitting your comments

You can submit your comments on the Revised Colorectal Cancer QPIs via the Scottish Government Consultation Hub (website link below):
https://consult.scotland.gov.uk/nhs/revised-colorectal-cancer-qpis

All responses should be submitted by Friday 7th April 2017.

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

Email: ColorectalQPIPublicEngagement@gov.scot

11.2 Engagement feedback

At the end of the engagement period, all comments and responses will be collated for review by the Colorectal 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 Colorectal Cancer QPI document.

12. References

1. Scottish Government (2016). Beating Cancer: Ambition and Action Available from: http://www.scotland.gov.uk/Resource/Doc/242498/0067458.pdf. (accessed December 2016).
2. NHS Quality Improvement Scotland (2008). Management of Bowel Cancer Services Standards [online]. Available from: http://www.healthcareimprovementscotland.org/programmes/cancer_care_improvement/cancer_resources/standards_for_cancer_services.aspx (accessed October 2012).
3. SIGN (2011). Diagnosis and management of colorectal cancer [online]. Available from: http://www.sign.ac.uk/pdf/sign126.pdf (access October 2012).
4. NICE (2011). Colorectal cancer: The diagnosis and management of colorectal cancer [online]. (accessed October 2012).
5. NHS Quality Improvement Scotland (2008). Management of Core Cancer Services Standards [online]. http://www.healthcareimprovementscotland.org/our_work/cancer_care_improvement/cancer_resources/standards_for_cancer_services.aspx (accessed August 2013).
6. Morris AM, Baldwin LM, Matthews B, Dominitz JA, Barlow WE, Dobie SA, et al. (2007). Reoperation as a quality indicator in colorectal surgery: a population-based analysis. Ann Surg.245,73-9.
7. Merkow RP, Bilimoria KY, Cohen ME, Richards K, Ko CY, Hall BL. (2009). Variability in reoperation rates at 182 hospitals: a potential target for quality improvement. J Am Coll Surg 2009. 209, 557-64.
8. Mirnezami A, Mirnezami R, Chandrakumaran K, Sasapu K, Sagar P, Finan P. (2011). Increased local recurrence and reduced survival from colorectal cancer following anastomotic leak: systematic review and meta-analysis. Ann Surg. 253, 890-9.
9. Burns EM, Bottle A, Aylin P, Darzi A, Nicholls RJ, Faiz, O (2011). Variation in reoperation after colorectal surgery in England as an indicator of surgical performance: retrospective analysis of Hospital Episode Statistics. BMJ. 343: d4836 [online]. Available from: http://www.bmj.com/content/343/bmj.d4836 (accessed August 2013).
10. National Bowel Cancer Audit (2011). National Bowel Cancer Audit Annual Report [online]. (accessed October 2012).
11. NHS National Institute for Health Research (2011). Eligibility Criteria for NIHR Clinical Research Network Support. Available from: http://www.nihr.ac.uk/funding-and-support/documents/Study-Support-Service/Eligibility/Eligibility%20Criteria%20for%20NIHRCRN%20support.pdf (accessed December 2016)
12. NHS National Institute for Health Research. Clinical Trials Toolkit: Glossary [online]. 2013 [cited 2013 December 19]; Available from: http://www.ct-toolkit.ac.uk/glossary

13. National Cancer Institute. Translational Research Working Group Definition of
Translational Research. [online]. 2013. [cited 2013 December 19]; Available from:
https://www.cancer.gov/images/trwg/trwg-oct06rt-exsum-11-21-06.pdf.

13. Appendices

Appendix 1: QPI Development Process

Preparatory Work and Scoping

NHS Quality Improvement Scotland (QIS) Clinical Standards for Colorectal Cancer already existed, and were utilised nationally. It was therefore agreed that rather than undertake a lengthy QPI development process the extensive literature search and clinical discussion undertaken in the recent review of NHS QIS Colorectal Cancer standards (in 2008) was used as the basis for QPI development.

The preparatory work involved the development group members independently reviewing and assessing the existing NHS QIS Colorectal Cancer Standards against agreed criteria and identifying any potential gaps where they considered a need to develop new outcome focussed quality indicators. Responses were then collated and the output of this exercise used to inform development group discussions.

Bowel screening and primary care referral were not included within the scope of the QPI development process as significant work is already being undertaken across NHSScotland to measure and improve the quality of these important areas. Specifically this work includes the Scottish Bowel Screening Programme and the Scottish Governments Detect Cancer Early Initiative.

Indicator Development

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

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

- **Overall importance** – does the indicator address an area of clinical importance that would significantly impact on the quality and outcome of care delivered?
- **Evidence 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 April 2013 where the Colorectal 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 colorectal cancer and the wider public were given the opportunity to influence the development of Colorectal 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 Colorectal Cancer QPI Development Group and used to produce and refine the final indicators.

Appendix 2: Colorectal Cancer QPI Development Group Membership (2013)

Name	Designation	Cancer Network
Rob Jones (Chair)	Consultant Oncologist	
Des Alcorn	Consultant Radiologist	WoSCAN (Gartnavel General Hospital, Glasgow)
Lesley Dawson	Consultant Oncologist	SCAN (Western General Hospital, Edinburgh)
Jim Docherty	Consultant Surgeon	NOSCAN (Raigmore Hospital, Inverness)
Grainne Dunn	Consultant Oncologist	WoSCAN (Beatson West of Scotland Cancer Centre)
Gail Dunsmore	Audit Facilitator	WoSCAN (Crosshouse Hospital, Kilmarnock)
Ann Haston	Clinical Nurse Specialist Stoma Care	SCAN (St Johns Hospital, Livingston)
Michele Hilton Boon	Programme Manager	Healthcare Improvement Scotland
John Jamieson	Patient Representative	
Andy MacLeod	Consultant Radiologist	NOSCAN (Raigmore Hospital, Inverness)
James Mander	Consultant Surgeon	SCAN (Western General Hospital, Edinburgh)
John Morris	Consultant Gastroenterologist	WoSCAN (Glasgow Royal Infirmary)
Richard Molloy	Consultant Surgeon	WoSCAN (Gartnavel General Hospital, Glasgow)
Craig Mowat	Consultant Gastroenterologist	NOSCAN (Ninewells Hospital, Dundee)
Peigi Muir	Clinical Audit Facilitator	SCAN (Western General Hospital, Edinburgh)
Brian Murray	Principle Information Development Manager	Information Services Division
Graeme Murray	Consultant Pathologist	NOSCAN (Aberdeen Royal Infirmary)
Neil McLachlan	MCN Manager	NOSCAN
Jackie Rodger	Macmillan CRC Clinical Nurse Specialist	NOSCAN (Ninewells Hospital, Dundee)
Iona Scott	Project Manager	WoSCAN
Bob Steele	Consultant Surgeon	NOSCAN (Ninewells Hospital, Dundee)
Gillian Sweetman	Patient Representative	
Evelyn Thomson	Regional Manager (Cancer)	WoSCAN
Ruth Tipling	Colorectal Clinical Nurse Specialist	WoSCAN (Inverclyde Royal Hospital, Greenock)
Fiona White	Audit Facilitator	NOSCAN (Raigmore Hospital, Inverness)
John Wilson	Consultant Gastroenterologist	SCAN (Victoria Hospital, Fife)
Satheesh Yalamarthi	Consultant Surgeon	SCAN (Queen Margaret Hospital, Fife)

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

Appendix 3: Colorectal Cancer QPI Formal Review Group Membership (2016)

Name	Designation	Cancer Network
Rob Jones (Chair)	Honorary Consultant Medical Oncology	WoSCAN
Evelyn Thomson	Regional Manager (Cancer)	WoSCAN
James Mander	Clinical Lead – Colorectal Cancer MCN	SCAN
Andrew McMahon	Consultant Colorectal Cancer Surgeon	WoSCAN
Mike Walker	Clinical Lead – Colorectal Cancer MCN	NOSCAN
Leslie Samuel	Consultant Clinical Oncologist	NOSCAN
Christine Urquhart	Cancer Audit Manager	NOSCAN
Lorna Bruce	Audit & Information Manager	SCAN
Jen Doherty	Project Co-ordinator	National Cancer Quality Programme
Lorraine Stirling	Project Officer	WoSCAN
Sandie Ker	Information Officer	WoSCAN

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

Appendix 4: Clinical Trials Definitions

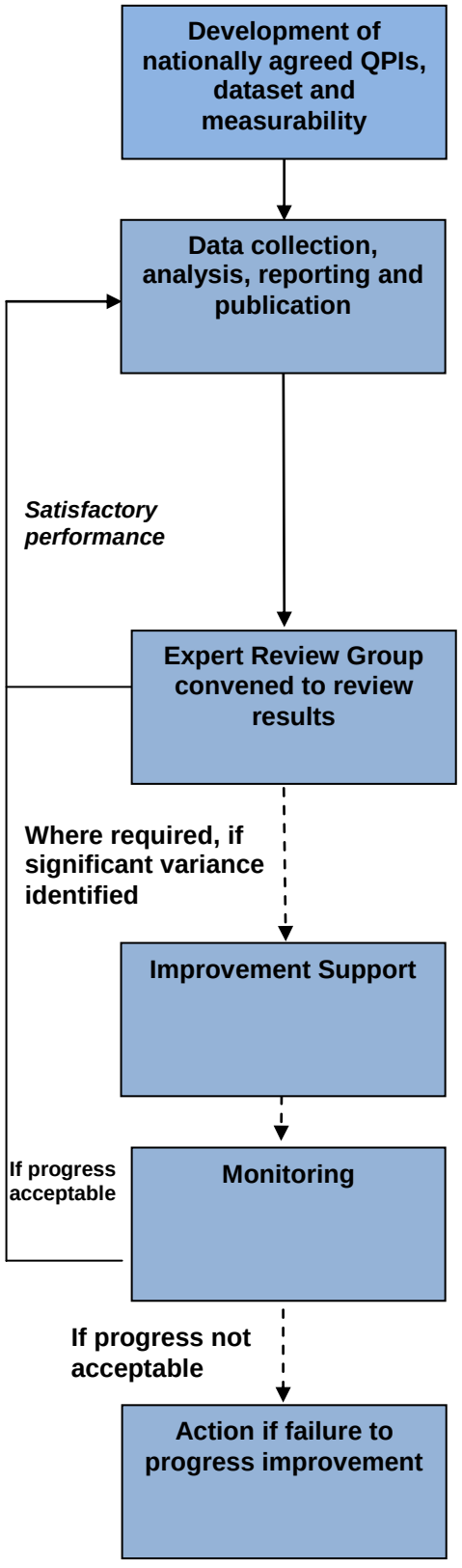
In order to ensure appropriate and nationally comparative measurement against QPIs developed it is of utmost importance to agree consistent definitions of the various terminologies utilised.

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[11].
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[12].
Translational Research	Translational research transforms scientific discoveries arising from laboratory, clinical, or population studies into clinical applications to reduce cancer incidence, morbidity, and mortality[13]. 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 & 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:

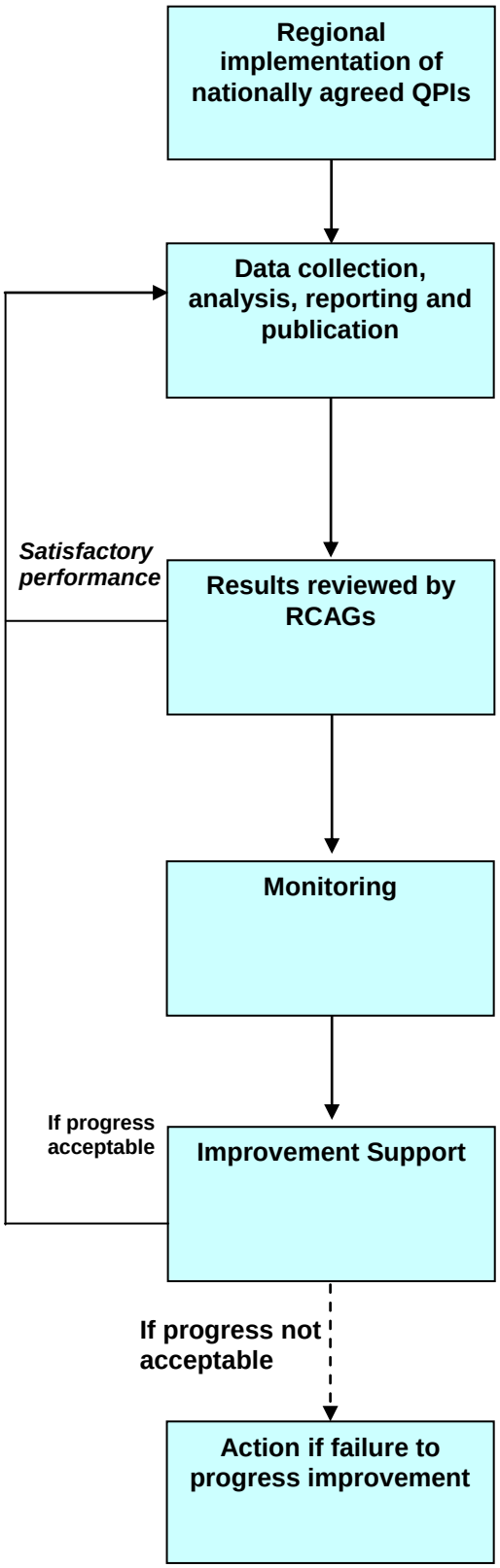
- RCAGs work with Boards to progress outstanding actions, monitor improvement plans and submit progress report to Healthcare Improvement Scotland.
- Healthcare Improvement Scotland report to Scottish Cancer Taskforce as to whether progress is acceptable**.**

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

Active treatment	Treatment which is intended to improve the cancer and/or alleviate symptoms, as opposed to supportive care.
Adenoma	A benign (non malignant) tumour that develops from epithelial tissue.
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.
Anastomosis	An artificial connection, created by surgery, between two tubular organs or parts, especially between two parts of the intestine. For example, a junction created by a surgeon between two pieces of bowel which have been cut to remove the intervening section.
Anastomotic dehiscence/ leak	Bursting open or splitting of the surgical connection between two sections of intestine
Anterior resection	The procedure to remove a diseased section of rectum, and re-joining of the healthy tissue at either end of the diseased area.
Anti-cancer therapy	Any treatment which is designed to kill cancer cells.
Asymptomatic	Having no symptoms. You are considered asymptomatic if you: • Have recovered from an illness or condition and no longer have symptoms • Have an illness or condition (such as early stage high blood pressure or glaucoma) but do not have symptoms
Biopsy	Removal of a sample of tissue from the body to assist in diagnosis of a disease.
Bowel	The long, tube-shaped organ in the abdomen that completes the process of digestion. The bowel has two parts, the small bowel and the large bowel.
Cause-specific survival	A method of estimating net survival. Only deaths attributable to the cancer of diagnosis are counted as deaths, giving the probability of survival in the absence of other causes of death.
Chemoradiotherapy	Treatment that combines chemotherapy with radiotherapy.
Chemotherapy	The use of drugs that kill cancer cells, or prevent or slow their growth.
Circumferential margins (CRM)	Margins of tissue surrounding a rectal cancer after it has been removed.
Clinical effectiveness	Measure of the extent to which a particular intervention works.
Clinical Nurse Specialist (CNS)	A nurse with specialist training in a particular type of cancer.
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.
Colon	Part of the bowel. Also called the large intestine or large bowel. This structure has five major divisions: caecum, ascending colon, transverse colon, descending colon and sigmoid colon. The colon is responsible for forming, storing and expelling waste matter into the rectum.
Colonoscopy	Examination of the interior of the large bowel using a long, flexible, instrument (a colonoscope) inserted through the anus. A colonoscope is capable of reaching to the upper end of the large bowel (colon) and can be used to diagnose diseases of the large bowel.

Colorectal Cancer	Cancer that develops in the colon (the longest part of the large intestine) and/or the rectum (the last several inches of the large intestine before the anus).
Co-morbidity	The condition of having two or more diseases at the same time.
Computed Tomography (CT)	An X-ray imaging technique used in diagnosis that can reveal many soft tissue structures not shown by conventional radiography. A computer is used to assimilate multiple X-ray images into a two-dimensional and/or three-dimensional cross-sectional image.
CT Colonography	Computed tomography of the abdomen and pelvis that focuses on the colon. Computed tomography is an x-ray
Contraindicated	A symptom or medical condition that makes a particular treatment or procedure inadvisable because a person is likely to have a bad reaction.
Curative	Having properties which cure. Something which overcomes disease and promotes recovery.
Elective	Subject to the choice or decision of the patient or physician, applied to procedures that are advantageous to the patient, but not urgent.
Emergency Surgery	Unscheduled surgery performed promptly and often for lifesaving purposes.
Extramural vascular invasion	Involvement of a vascular structure which has a smooth muscle in the wall.
Fatal	Results in death.
High risk	High risk colorectal cancer is defined as patients with pT4 (see TNM) disease and extramural vascular invasion.
Independent risk factor	A substance or condition that increases an individual's chances of getting a particular type of cancer.
Index procedure	Initial or first surgical procedure performed.
Interventional radiology	A minimally invasive procedure where images are used to guide instruments through the body to the specific area where treatment should be targeted.
Intravenous iodinated contrast	A substance administered intra venously (directly into bloodstream) to enhance the visibility of structures on imaging.
KRAS	A gene which is found in the human body. If this gene mutates cancer can form.
KRAS testing	A test to establish the type of KRAS gene mutation present in a colorectal cancer.
Large bowel	Another name for the large intestine.
Long course radiotherapy	A course of radiotherapy lasting up to 6 weeks.
Lymph nodes	Small bean shaped organs located along the lymphatic system. Nodes filter bacteria or cancer cells that might travel through the lymphatic system.
Metastatic disease	Spread of cancer away from the primary site to somewhere else via the bloodstream or the lymphatic system. Metastatic disease can be local (close to the area where the cancer is) or distant (in another area of the body).
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 any specific region, age group, disease or other classification, usually expressed as deaths per 1000, 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.

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	Chemotherapy 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.
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.
Performance status	A measure of how well a patient is able to perform ordinary tasks and carry out daily activities. (PS WHO score of 0=asymptomatic, 4=bedridden).
Post operative complication	A complication or problem experienced following a surgical procedure.
Prognosis	An assessment of the expected future course and outcome of a person's disease.
Radical treatment	Treatment that aims to get to completely get rid of a cancer.
Radiotherapy	The use of radiation, usually X-rays or gamma rays, to kill tumour cells.
Rectal anastomosis	A surgical procedure where part of the rectum is removed and the remaining ends joined together.
Rectal Cancer	Cancer that forms in the tissues of the rectum (the last several inches of the large intestine closest to the anus).
Rectum	The distal or lowest portion of the large intestine.
Recurrence	When new cancer cells are detected, at the site of original tumour or elsewhere in the body, following treatment.
Short course radiotherapy	5 courses of radiotherapy given over 1 week prior to surgery being performed.
Staging	Process of describing to what degree cancer has spread from its original site to another part of the body. Staging involves clinical, radiological, surgical and pathological assessments.
Stoma	An artificial opening of the bowel that has been brought to the abdominal surface.
Surgery/Surgical Resection	Surgical removal of the tumour/lesion.
Synchronous tumours	Two or more different tumours presenting at the same time.
Total mesorectal excision (TME)	A procedure in which any tissue surrounding the rectum which may contain tumour cells is removed at the same time as the rectum.
Transanal endoscopic microsurgery (TEM)	A minimally invasive surgical approach for local excision of rectal lesions that cannot be directly visualized, and is also an alternative to open or laparoscopic excision.
Transanal resection of tumour (TART)	Surgical procedure performed to remove a tumour in the rectum through the anus.

Appendix 8:

Colorectal QPI Consultation
RESPONDENT INFORMATION FORM

Please Note this form **must** be completed and returned with your response.

Are you responding as an individual or an organisation?

☐ Individual

☐ Organisation

Full name or organisation's name

Phone number

Address

Postcode

Email

The Scottish Government would like your permission to publish your consultation response. Please indicate your publishing preference:

☐ Publish response with name

☐ Publish response only (without name)

☐ Do not publish response

Information for organisations:

The option 'Publish response only (without name) is available for individual respondents only If this option is selected, the organisation name will still be published.

If you choose the option 'Do not publish response', your organisation name may still be listed as having responded to the consultation in, for example, the analysis report.

We will share your response internally with other Scottish Government policy teams who may be addressing the issues you discuss. They may wish to contact you again in the future, but we require your permission to do so. Are you content for Scottish Government to contact you again in relation to this consultation exercise?

☐ Yes

☐ No

Please return via e-mail to: ColorectalQPIPublicengagement@gov.scot by 7th April 2017

Appendix 9: Colorectal Cancer Quality Performance Indicator (QPI) Engagement Document – Revised QPIs

Comments Form

We welcome your views on the **Draft Revised Colorectal Cancer QPI Engagement Document**, in particular comments on:

- The appropriateness of the QPIs that have been developed.
- The target levels that have been set.
- Key points or areas that are not covered within the engagement document or QPIs.
- Feasibility of measuring the QPIs identified in a meaningful and comparative way (i.e. 'like for like' comparison)

All comments are welcome, whether they are on all or part of the QPIs and are positive or negative. Comments can be submitted anonymously however we would be grateful if you could provide contact details, should any further clarification on comments be required.

Name/Group:	
Title/Designation:	
Organisation:	
Telephone No:	
E-mail:	

Feedback and Comments on Revised Colorectal Cancer QPIs:

QPI		**Comments (please provide supporting evidence where appropriate)**
1	Radiological Diagnosis and Staging	
2	Pre-Operative Imaging of the Colon	
3	Multi-Disciplinary Team (MDT) Meeting	
4	Stoma Care	
5	Lymph Node Yield	
6	Neo-adjuvant Therapy	

Please return via e-mail to: ColorectalQPIPublicengagement@gov.scot by 7th April 2017

QPI		Comments (please provide supporting evidence where appropriate)
7	Surgical Margins	
8	Re-operation Rates	
9	Anastomotic Dehiscence	
10	30 and 90 Day Mortality Following Surgical Resection	
11	Adjuvant Chemotherapy	
12	30 and 90 Day Mortality Following Chemotherapy or Radiotherapy	
13	Clinical Trial Access	

Any further comments:

Please return via e-mail to: ColorectalQPIPublicengagement@gov.scot by 7th April 2017

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