SCAN
South East Scotland Cancer Network

NHS SCOTLAND

Working regionally to improve cancer services

SOUTH EAST SCOTLAND CANCER NETWORK
PROSPECTIVE CANCER AUDIT

COLORECTAL CANCER 2022 – 2023
Quality Performance Indicators (QPI)
Comparative Report

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Document History

Version	Circulation	Date	Comments
Version 1	Draft report circulated to SCAN Colorectal Chair and Lead Clinicians in advance of Regional Sign off Meeting on 03/11/2023	18/10/2023	Clinical comments added. Action plans carried forward from 2021/22 report for NHS Lothian.
Version 2	Draft report circulated to SCAN Regional Leads for approval and SCAN Colorectal Chair commentary	07/11/2023	Clinical commentary added to the report.
Version 3	Final draft report circulated to SCAN Colorectal Group for final comments	21/11/2023	No changes to commentary. Chairs comment updated.
Final Version	Final report circulated to SCAN Colorectal Group, SCAN Governance Framework and SCAN Action Plan Board Leads	04/12/2023	No comments received. Disclosure undertaken and report ready for publication.
Final Web Version	Published to SCAN Website	11/01/2024	

Comment by Chair of the SCAN Colorectal Group

This report provides information on the management of colorectal cancers in the South-East of Scotland from 1st April 2022 – 31st March 2023. Following the pandemic period, the services have been gradually regularising, albeit with a few ongoing pressures. The individual colorectal units have been responsive to the challenges in maintaining cancer services. The clinical teams have continued to maintain high standards of care.

The SCAN Audit Team and Sarah Buchan in particular, have again worked well to compile the data that generated this report. Data collection, as in previous years, has been of a high standard and we are grateful to the local cancer audit facilitators for this continued effort.

A total of 1030 colorectal cancers were recorded on the Audit for the year, with 763 (74%) being colonic cancers and 267 (26%) rectal cancers. Overall, 75% (772) of cancer patients had a surgical intervention with 65% having definitive surgery. Amongst those who had definitive surgery- the intent for curative resection rate was 93% for colonic cancers and 98% for rectal cancers. 200 of the 1030 patients were detected by the screening programme.

Emergency presentations continued to be around 16%, outlining that approximately 1 in 6 cancers underwent emergency surgery. Approximately 44% of all cancers belonged to stage 1or 2, and only 19% of cancers presented with metastatic disease, which is lower than previous years.

Compliance was achieved in 8/12 QPIs across the region. Non-compliance was noted in pre-operative imaging of the colon (94%- target 95%); lymph node yield (87%- target 90%) and the newer QPIs (Referral of patients with synchronous (77%) and metachronous (90%) liver metastases to Hepato-biliary MDM (target-95%) and assessment of MMR/ MSI Status (92%)- target 95%. It was however reassuring to see a big improvement compared to the previous year, which was just the 1st year of the new QPIs.

Despite all the challenges with the demand on radiology from all the cancer services, timely radiological staging for cancers were achieved in nearly 99% of cases. Surgical outcomes were good with anastomotic leaks (2.7% for colonic and 5.6% for rectal resections); re-operation rates (4.4%) and 30-day elective (1.4%) and emergency (6.2%) mortality rates. Overall, these figures are reflective of the good patient outcomes noticed within SCAN.

Delivery of oncological services was maintained to a high standard by our team of clinical and medical oncologists. Adjuvant chemotherapy was delivered to 79% of Stage 3 cancer patients. In terms of 30- and 90-day mortality rates after chemotherapy and radiotherapy, it was 0%. This year, we started recruitment to the Foxtrot neoadjuvant trial in some of the units in SCAN.

In terms of surgical approach for the cancers, 62% of cancers were operated through minimally invasive means (laparoscopic 47.4% and robotic 15.8%). The use of robotics across SCAN is progressing well and we have doubled the numbers during this year. A total of 122 robotic procedures were done during the year.

Overall, it has been a good year with high standards of care being delivered across the region. With the introduction of the new QPIs 2 years back, it was satisfying to see the progression towards achieving these targets. Robotic surgery will feature more in the coming years and initial indications on the patient outcomes are encouraging.

As Chairs of the group, we would like to thank all members of the network for their continued support in delivering to the standards of care expected for our cancer patients. The group will continue their aspirations to maintain high quality work, whilst engaging with the newer technologies and the oncological trials for advanced tumours.

Dr Stephen Glancy
Deputy Chair SCAN Colorectal Group

Mr S Yalamarthi
Chair SCAN Colorectal Group
November 2023

Action Plans 2022-2023

QPI	Action required	Person Responsible	Progress	Date for update
QPI 15 (i) & QPI 15 (ii)	Patients with synchronous and metachronous colorectal liver–limited metastases, who are fit for a surgical resection, should be referred to the HPB MDM. However, if a patient is not referred, the reason why no referral has been made is to be recorded in the patient's Colorectal MDM outcome.	Mr Doug Speake	A new Lothian MDM Chair was appointed Sept 2023. He was briefed on the action required to meet this QPI. Improvement has been noted already. However, it will continue to be monitored.	SCAN Group 08/03/2024
QPI 16 (ii)	Patients with MMR/MSI results suggestive of Lynch Syndrome should have their results actioned by a single contact in each Board to ensure a referral is made to Clinical Genetics, either with or without further MDM input. A single contact should be identified within each Board to take this forward.	Mr Doug Speake	Sarah Buchan to ensure Mr Speake has details of appropriate patients to be referred on, as well as the patients Consultant, ensuring referral will be actioned.	SCAN Group 08/03/2024

Action Points 2021-2022

QPI	Action required	Progress
QPI 15 (i) & QPI 15 (ii)	Patients with synchronous and metachronous colorectal liver–limited metastases, who are fit for a surgical resection, should be referred to the HPB MDM. However, if a patient is not referred, the reason why no referral has been made is to be recorded in the patient's Colorectal MDM outcome.	**NHS Borders:** Referral to HPB Team is now standard practice, as is MDM outcome recording if no referral made **NHS D&G:** This action is now standard practice. **NHS Fife:** Fife Colorectal MDT Proforma has been adapted to record this field at MDM. **NHS Lothian:** Repeated requests made to MDM Chair and co-ordinators to ensure outcomes were better recorded but no action was taken. Progress is ongoing.
QPI 16 (ii)	Patients with MMR/MSI results suggestive of Lynch Syndrome should have their results actioned by a single contact in each Board to ensure a referral is made to Clinical Genetics, either with or without further MDM input. A single contact should be identified within each Board to take this forward.	**NHS Borders:** Mr Pal ensures appropriate patients are referred. **NHS D&G:** Colorectal Pathology Team will manage appropriate referral to Clinical Genetics. **NHS Fife:** Discussion undertaken at the Colorectal Business Meeting to ensure a single contact was identified to take this action forward. **NHS Lothian:** Results should be sent to the Consultant operating or who performed the biopsy to action referred in appropriate patients.

CRC QPI Attainment Summary 2022-2023			Target%	Borders		D&G		Fife		Lothian		SCAN	
1. Radiological Staging & Diagnosis		Colon	95	N 42 D 43	97.7%	N 52 D 53	98.1%	N 121 D 122	99.2%	N 217 D 219	99.1%	N 432 D 437	98.9%
		Rectum	95	N 13 D 13	100%	N 13 D 14	92.9%	N 41 D 41	100%	N 79 D 82	96.3%	N 146 D 150	97.3%
2. Pre-operative imaging of the Colon			95	N 46 D 50	92.0%	N 61 D 62	98.4%	N 127 D 134	94.8%	N 253 D 275	92.0%	N 487 D 521	93.5%
5. Lymph Node Yield: surgical resection where ≥12 lymph nodes			90	N 44 D 55	80.0%	N 71 D 72	98.6%	N 118 D 150	78.7%	N 286 D 321	89.1%	N 519 D 598	86.8%
7. Surgical Margins	Primary surgery or surgery after short course XRT		95	N 9 D 10	90.0%	N 13 D 13	100%	N 25 D 28	89.3%	N 66 D 68	97.1%	N 113 D 119	95.0%
	After NACT, or long course XRT ± chemo, or short course XRT with long course intent		85	N 3 D 3	100%	N - D -	-	N 13 D 15	86.7%	N 13 D 15	86.7%	N 29 D 33	87.9%
8. Re-operation Rates			<10	N 3 D 56	5.4%	N 3 D 77	3.9%	N 8 D 171	4.7%	N 16 D 373	4.3%	N 30 D 677	4.4%
9. Anastomotic Dehiscence	Colon		<5	N 2 D 21	9.5%	N 0 D 40	0.0%	N 1 D 76	1.3%	N 5 D 158	3.2%	N 8 D 295	2.7%
	Rectum incl. TME		<10	N 0 D 21	0.0%	N 0 D 11	0.0%	N 4 D 70	5.7%	N 10 D 148	6.8%	N 14 D 250	5.6%
10 (i). 30 day mortality following surgical resection		Elective	<3	N 2 D 49	4.1%	N 0 D 65	0.0%	N 1 D 154	0.6%	N 5 D 295	1.7%	N 8 D 563	1.4%
		Emergency	<15	N 1 D 7	14.3%	N 0 D 12	0.0%	N 1 D 18	5.6%	N 5 D 76	6.6%	N 7 D 113	6.2%
10 (ii). 90 day mortality following surgical resection		Elective	<4	N 2 D 46	4.3%	N 0 D 65	0.0%	N 3 D 145	2.1%	N 8 D 291	2.7%	N 13 D 547	2.4%
		Emergency	<20	N 1 D 7	14.3%	N 1 D 12	8.3%	N 1 D 18	5.6%	N 10 D 76	13.2%	N 13 D 113	11.5%
11. Adjuvant Chemotherapy			70	N 6 D 9	66.7%	N 8 D 11	72.7%	N 29 D 35	82.9%	N 53 D 66	80.3%	N 96 D 121	79.3%

CRC QPI Attainment Summary 2022-2023		Target%	Borders		D&G		Fife		Lothian		SCAN	
12 (i). 30 day Mortality following Radical Radiotherapy	Neo-adjuvant CXRT	<1	N 0 D 3	0.0%	N - D -	-	N 0 D 8	0.0%	N 0 D 11	0.0%	N 0 D 22	0.0%
	Radiotherapy	<1	N 0 D 5	0.0%	N 0 D 2	0.0%	N 0 D 14	0.0%	N 0 D 20	0.0%	N 0 D 41	0.0%
12 (ii). 90 day Mortality following Radical Radiotherapy	Neo-adjuvant CXRT	<1	N 0 D 3	0.0%	N - D -	-	N 0 D 8	0.0%	N 0 D 10	0.0%	N 0 D 21	0.0%
	Radiotherapy	<1	N 0 D 5	0.0%	N 0 D 2	0.0%	N 0 D 13	0.0%	N 0 D 20	0.0%	N 0 D 40	0.0%
14. 30 day Mortality following SACT	Curable	<1	N - D -	-	N - D -	-	N - D -	-	N - D -	-	N - D -	-
	Non-Curable	<5	N - D -	-	N - D -	-	N - D -	-	N - D -	-	N - D -	-
15. Colorectal Liver Metastases	Synchronous	95	N 2 D 2	100%	N 6 D 6	100%	N 12 D 13	92.3%	N 24 D 35	68.6%	N 44 D 56	78.6%
	Metachronous	95	N - D -	-	N 1 D 1	100%	N 4 D 4	100%	N 13 D 15	86.7%	N 18 D 20	90.0%
16. Assessment of Mismatch Repair (MMR)/Microsatellite (MSI) Status	Assessed	95	N 73 D 73	100%	N 68 D 107	63.6%	N 196 D 220	89.1%	N 458 D 468	97.9%	N 795 D 868	91.6%
	Referred to Genetics	90	N 1 D 1	100%	N - D -	-	N 4 D 4	100%	N 2 D 3	66.7%	N 7 D 8	87.5%

KEY	*Numerator (N)*	*% Performance*
	Denominator (D)	

Introduction and Methods

Cohort and Personnel

This report is the sixteenth to present comparative data on patients newly diagnosed with colorectal cancer in South East Scotland Cancer Network (SCAN) at the following hospitals: Borders General Hospital (NHS Borders), Dumfries and Galloway Royal Infirmary (NHS Dumfries & Galloway), Victoria Hospital, Kirkcaldy (NHS Fife), and Western General Hospital, Edinburgh (NHS Lothian). The report covers data on patients newly-diagnosed in the twelve months from 1 April 2022 to 31 March 2023.

Lead Clinicians and staff involved in audit were as follows

SCAN Region	Hospital	Lead Clinician	Audit Support
NHS Borders	Borders General Hospital	Mr Karol Pal	Leanne Robinson
NHS Dumfries & Galloway	Dumfries & Galloway Royal Infirmary	Mr Stuart Whitelaw	Teresa Quintela/ Jennifer Bruce
NHS Fife	Victoria Hospital	Mr John Robertson	Maureen Lamb
SCAN & NHS Lothian	Western General Hospital	Mr Doug Speake	Sarah Buchan

Audit Processes and data recording

All Data was collected using eCase (electronic Cancer audit support environment) throughout SCAN. Data was analysed by the audit facilitators in each NHS Board according to the measurability document provided by PHS. SCAN data was collated by Sarah Buchan, SCAN Audit Facilitator for Colorectal cancer.

Data capture is focused round the process for the weekly multidisciplinary meetings i.e. ensuring that data covering patient referral, investigation, and diagnosis is being picked up through the routine process.

Surgical and Oncology data is obtained either from the clinical records (electronic systems and case notes) or by download from the Department of Clinical Oncology database within the Edinburgh Cancer Centre (ECC).

Each of the 4 hospitals provides surgery and chemotherapy but radiotherapy is provided centrally in Edinburgh Cancer Centre. Patients living closer to either Carlisle or Dundee may opt to have treatment outwith the SCAN region. All QPIs will be analysed and presented by Hospital of Diagnosis for data verification/sign off purposes with additional reports by Hospital of Surgery as appropriate.

The process remains dependent on audit staff for capture and entry of data, and for data quality checking.

Most patients are identified through weekly multidisciplinary meetings. The following sources are used to check for additional patients:

1. Pathology records
2. GRO Death lists
3. Dept of Clinical Oncology retrospective database
4. Clinical Nurse Specialist database
5. ACaDMe (Acute, Cancer, Deaths and Mental Health); a data mart part of Public Health Scotland.

Dataset and Definitions

The QPIs have been developed collaboratively with the three Regional Cancer Networks, Public Health Scotland (PHS), and Healthcare Improvement Scotland. QPIs will be kept under regular review and be responsive to changes in clinical practice and emerging evidence.

The overarching aim of the cancer quality work programme is to ensure that activity at NHS board level is focussed on areas most important in terms of improving survival and patient experience whilst reducing variance and ensuring safe, effective and person-centred cancer care.

Following a period of development, public engagement and finalisation, each set of QPIs is published by Healthcare Improvement Scotland[1]

Accompanying datasets and measurability criteria for QPIs are published on the PHS website[2]. NHS boards are required to report against QPIs as part of a mandatory, publicly reported, programme at a national level.

The standard QPI format is shown below:

QPI Title:	Short title of Quality Performance Indicator (for use in reports etc.)	
Description:	Full and clear description of the Quality Performance Indicator.	
Rationale and Evidence:	Description of the evidence base and rationale which underpins this indicator.	
Specifications:	Numerator:	Of all the patients included in the denominator those who meet the criteria set out in the indicator.
	Denominator:	All patients to be included in the measurement of this indicator.
	Exclusions:	Patients who should be excluded from measurement of this indicator.
	Not recorded for numerator:	Include in the denominator for measurement against the target. Present as not recorded only if the patient cannot otherwise be identified as having met/not met the target.
	Not recorded for exclusion:	Include in the denominator for measurement against the target unless there is other definitive evidence that the record should be excluded. Present as not recorded only where the record cannot otherwise be definitively identified as an inclusion/exclusion for this standard.
	Not recorded for denominator:	Exclude from the denominator for measurement against the target. Present as not recorded only where the patient cannot otherwise be definitively identified as an inclusion/exclusion for this standard.
Target:	Statement of the level of performance to be achieved.	

[1] QPI documents : Cancer Quality Performance Indicators (QPIs) (healthcareimprovementscotland.org)
[2] Datasets and measurability documents : Cancer | Cancer Audit | Health Topics | ISD Scotland

The QPI dataset for Colorectal was implemented from 01/04/2013. The dataset has now undergone 2 formal reviews, the latest completed in August 2021. This review was due to be completed in 2020; however it was delayed because of pressures nationally due to the Covid-19 pandemic. All changes are now in place in this report (listed in the table below):

Update following 2nd Formal Review

QPI	Change	Year for Reporting
1 (i)	Palliative endoscopic treatment (stenting) has been added as an exclusion.	2021/22
1 (ii)	Palliative endoscopic treatment (stenting) and TAMIS have both been added as an exclusion.	2021/22
2	Pre-operative imaging now has to take place <180 days from final surgery.	2020/21
5	Palliative endoscopic treatment (stenting) has been added as an exclusion. New data fields -Two episodes of neo-adjuvant treatment can now recorded where applicable.	2021/22
7 (i)	Description of QPI amended: "short course radiotherapy with delay to surgery". "TAMIS" has been added as an exclusion. Denominator wording updated to reflect changes in dataset fields with two episodes of neo-adjuvant treatment now able to be recorded where applicable.	2021/22
7 (ii)	Description of QPI amended removing **"**long course intent". "TAMIS" added to exclusions. Denominator wording updated to reflect changes in dataset fields with two episodes of neo-adjuvant treatment now able to be recorded where applicable.	2021/22
8	No change following formal review.	2020/21
9 (i) & 9 (ii)	Numerator amended. Addition of anastomotic leak having any intervention including medical, endoscopic, radiological and surgical.	2021/22
10	No change following formal review.	2020/21
11	QPI Title amended: "Dukes C and high risk Dukes B" to: "Stage III". Now presented as one result rather than two, as previous. The lower age limit of 50 has been removed from this QPI.	2021/22
12	QPI Title amended "Radical Radiotherapy". Adjuvant chemotherapy has been removed from this QPI.	2021/22
13	Moved to Key Category section of the Report	2021/22
14	Addition of New QPI - 30 day Mortality following Systemtic Anti-Cancer Therapy SACT	tbc
15	Addition of New QPI - Colorectal Liver Metastases	2021/22
16	Addition of New QPI - Assessment of Mismatch Repair (MMR)/Microsatellite Instability (MSI Status)	2021/22

The following QPIs have been archived: 3, 4 and 6

The next formal review of the Colorectal QPI dataset will commence in November 2024.

Data Quality

Estimate of case ascertainment

An estimate of case ascertainment (the percentage of the population with colorectal cancer recorded in the audit) is made by comparison with the Scottish Cancer Registry five year average. High levels of case ascertainment provide confidence in the completeness of the audit recording and contribute to the reliability of results presented. Levels greater than 100% may be attributable to an increase in incidence. Allowance should be made when reviewing results where numbers are small and variation may be due to chance.

Number of cases recorded in audit: patients diagnosed 01/04/2022 to 31/03/2023

	Borders	D&G	Fife	Lothian	SCAN
Colon cancer	67	94	186	416	**763**
Rectal cancer	27	27	70	143	**267**
Total	94	121	256	559	**1030**

Estimate of case ascertainment: calculated using the average of the most recent available five years of Cancer Registry Data (2016-2020)

	Borders	D&G	Fife	Lothian	SCAN
Cases from Audit	94	121	256	559	**1030**
Cancer Registry 5 Year Average	104	126	242	541	**1012**
Case Ascertainment %	**90.6%**	**96.3%**	**105.7%**	**103.4%**	**101.8%**

Source: Scottish Cancer Registry, ISD. Data extracted from ACaDMe on 19/09/2023. Note: Death certificate only cases have been excluded. Cases that have been diagnosed in the private sector but received any treatment in NHS hospitals have been included

Quality Assurance

External QA: SCAN Audit participates in external quality assurance (QA) of data by PHS, (i.e. when a sample of data is compared with the data definitions). A QA of the QPI colorectal dataset took place in February 2015 and overall accuracy percentage results are shown below. The next QA of the QPI colorectal dataset was due in to be undertaken in February 2021, however due to the Covid-19 pandemic, other cancer sites are taking priority at the moment, as there is no immediate concern regarding the Colorectal data recording accuracy.

	Borders	D&G	Fife	Lothian	Scotland
Accuracy of data recording (%)	99.4%	99.4%	98.3%	97.0%	99.0%

Clinical Sign-Off

This report compares data from reports prepared for individual Health Boards and signed off as accurate following review by the lead clinicians from each Board. The collated SCAN results are reviewed jointly by the lead clinicians, to assess variances and provide comments on results:

- Individual health board results were reviewed and signed-off locally.
- Collated results were presented and discussed at the SCAN Regional Leads Sign off Meeting on 03/11/2022.
- Final report circulated to SCAN Colorectal Group and Clinical Governance Framework on 04/12/2023.

Actions for Improvement

After final sign off, the process is for the report to be sent to the Clinical Governance groups within the four health boards and to the Regional Cancer Planning Group. Action plans and progress with plans will be highlighted to the groups. The report will be placed on the SCAN website once it has been fully signed-off and checked for any disclosive material.

Sarah Buchan
SCAN Colorectal Information Analyst

DIAGNOSIS AND STAGING

QPI 1 (i): Radiological Diagnosis and Staging – Colon Cancer

Target = 95%

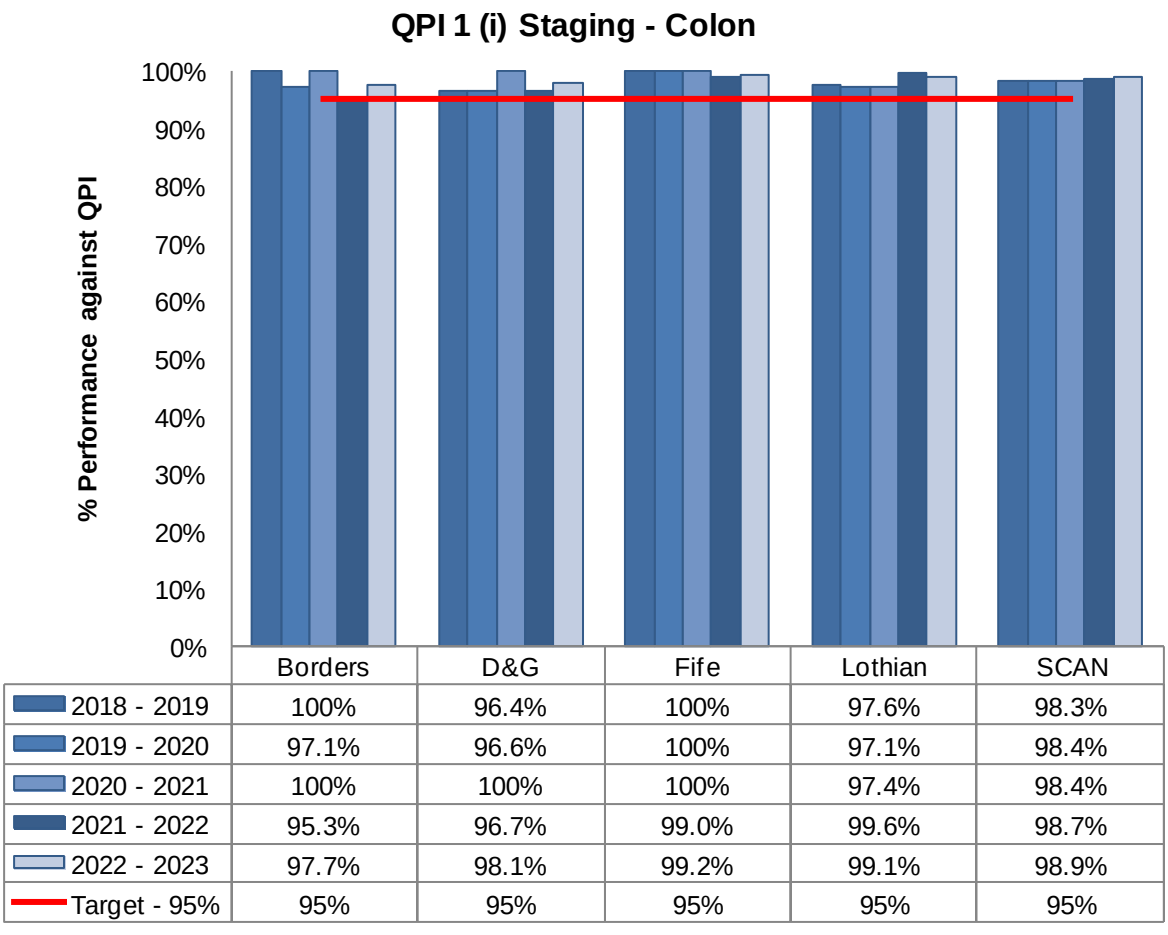
Numerator = Number of patients with **colon cancer** who undergo CT chest, abdomen and pelvis before definitive treatment.

Denominator = All patients with **colon cancer.**

Exclusions = Patients who decline investigation. Patients who undergo emergency surgery. Patients undergoing supportive care only. Patients who undergo palliative treatment (chemotherapy, radiotherapy, surgery or stenting). Patients who die before first treatment.

Target 95%	Borders	D&G	Fife	Lothian	SCAN
2022-2023 Cohort	94	121	256	559	**1030**
Ineligible for this QPI	51	68	134	340	**593**
Numerator	42	52	121	217	432
Not Recorded for the Numerator	0	0	0	0	0
Denominator	43	53	122	219	437
Not Recorded for Exclusion	0	0	0	2	**2**
Not Recorded for Denominator	0	0	0	0	**0**
% Performance	97.7%	98.1%	99.2%	99.1%	**98.9%**

All Boards met this QPI



	Borders	D&G	Fife	Lothian	SCAN
2018 - 2019	100%	96.4%	100%	97.6%	98.3%
2019 - 2020	97.1%	96.6%	100%	97.1%	98.4%
2020 - 2021	100%	100%	100%	97.4%	98.4%
2021 - 2022	95.3%	96.7%	99.0%	99.6%	98.7%
2022 - 2023	97.7%	98.1%	99.2%	99.1%	98.9%
Target - 95%	95%	95%	95%	95%	95%

QPI 1 (ii): Radiological Diagnosis and Staging – Rectal Cancer

Target = 95%

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 decline investigation. Patients who undergo emergency surgery[3] Patients with a contraindication to MRI. Patients who undergo Transanal Endoscopic Microsurgery (TEM)/Transanal Minimally Invasive Surgery (TAMIS). Patients who undergo Transanal Resection of Tumour (TART). Patients who undergo palliative treatment (chemotherapy, radiotherapy, surgery or stenting). Patients who died before first treatment.

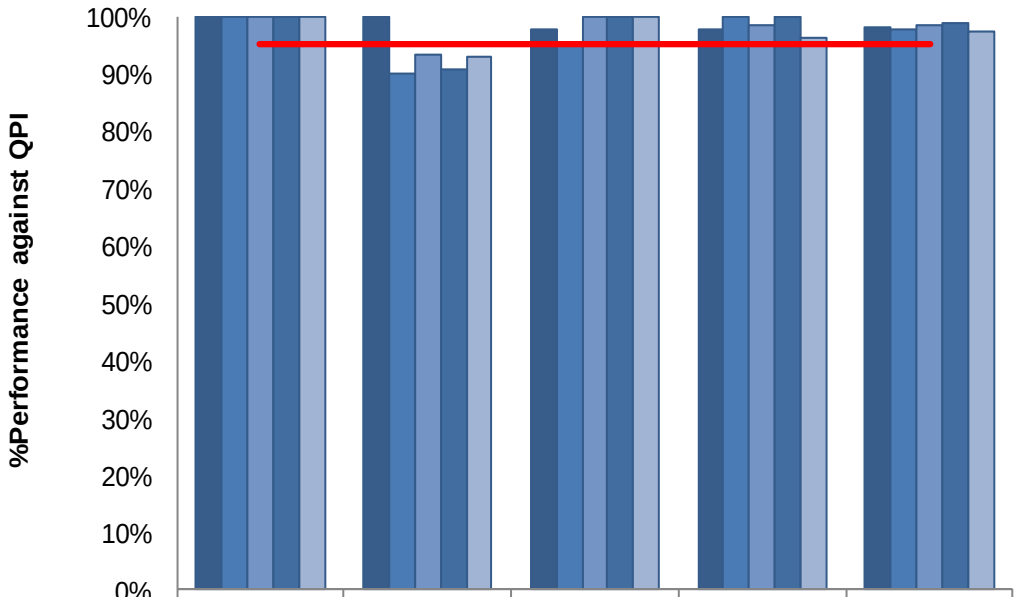
Target 95%	**Borders**	**D&G**	**Fife**	**Lothian**	**SCAN**
2022-23 Cohort	94	121	256	559	**1030**
Ineligible for this QPI	81	107	215	477	**880**
Numerator	13	13	41	79	**146**
Not Recorded for Numerator	0	0	0	0	**0**
Denominator	13	14	41	82	**150**
Not Recorded for Exclusions	0	0	0	0	**0**
Not Recorded for Denominator	0	0	0	0	**0**
% Recorded	100%	92.9%	100%	96.3%	**97.3%**

Comments where this QPI was not met:

D&G: The QPI target was not met showing a shortfall of 2.1% (1 case) Patient was thought to have a benign polyp with high grade dysplasia before operation so staging by CT or MRI was not indicated. Pathological examination of resected specimen revealed a focus of carcinoma and patient then staged by CT. MRI not indicated at that stage.

[3] Emergency surgical resection is defined by the Consultant in Charge of the patient's care

QPI 1 (ii) Staging - Rectal



	Borders	D&G	Fife	Lothian	SCAN
2018 - 2019	100%	100%	97.8%	97.5%	98.1%
2019 - 2020	100%	90.0%	95.0%	100%	97.5%
2020 - 2021	100%	93.3%	100%	98.3%	98.3%
2021 - 2022	100%	90.5%	100%	100%	98.6%
2022 - 2023	100%	92.9%	100%	96.3%	97.3%
Target - 95%	95%	95%	95%	95%	95%

QPI 2: Pre-Operative Imaging of the Colon

Target = 95%

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 colon has been removed. (Date of Final Definitive (or only) Surgery minus Date of Imaging Large Bowel is less than 180 days).

Denominator = All patients who undergo elective surgical resection for colorectal cancer.

Exclusions = Patients who undergo palliative surgery. Patients who have incomplete bowel imaging due to obstructing tumour.

Target 95%	Borders	D&G	Fife	Lothian	SCAN
2022-23 Cohort	94	121	256	559	**1030**
Ineligible for this QPI	44	59	122	284	**509**
Numerator	46	61	127	253	**487**
Not Recorded for the Numerator	0	0	0	0	**0**
Denominator	50	62	134	275	**521**
Not Recorded for Exclusions	0	0	0	2	**2**
Not Recorded for the Denominator	0	0	1	0	**1**
% Percentage	92.0%	98.4%	94.8%	92.0%	**93.5%**

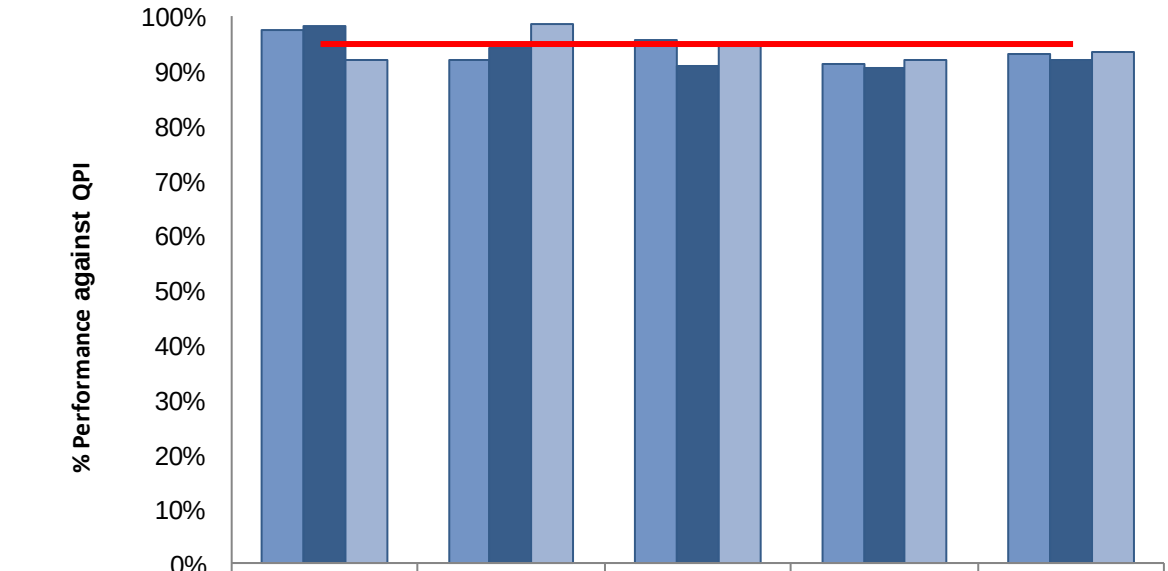
Comments where this QPI was not met:

Borders: The QPI target was not met showing a shortfall of 3%, (4 cases) 2 patients had neo-adjuvant treatment pre surgery leading to more than 180 days between colonoscopy/CT colon and surgery. 1 patient had TEMs procedure before final surgery with more than 180 days between colonoscopy/CT colon and definitive surgery. 1 patient did not have a colonoscopy/CT colon as they became symptomatic with a known polyp before undergoing surgery.

Fife: The QPI target was not met showing a shortfall of 0.2% (7 cases) 4 patients had neoadjuvant treatment - time to surgery all over 180 days; 2 patients had incomplete colonoscopies due to patient discomfort. Both patients discussed at MDT and decision was to proceed to surgery (1 had resection and 1 had defunctioning stoma prior to neoadjuvant long course chemorads). 1 patient had EUA instead of colonoscopy.

Lothian: The QPI target was not met showing a shortfall of 3% (22 cases) 9 patients were treated with neo-adjuvant radiotherapy then chemotherapy (Rapido style) and were scoped pre treatment - time to surgery was more than 180 days. 8 patients had sigmoidoscopy only pre surgery. 3 patients had no colonoscopy/CT colon performed. 1 patient had incomplete colonoscopy due to bowel prep, it was not repeated. 1 patient refused treatment then changed their mind, colonoscopy/CT colon not repeated, leading to more than 180 days to surgery.

QPI 2 - Pre-Operative Imaging of Colon



	Borders	D&G	Fife	Lothian	SCAN
2020 - 2021	97.4%	92.1%	95.5%	91.3%	93.0%
2021 - 2022	98.3%	94.1%	90.9%	90.4%	91.8%
2022 - 2023	92.0%	98.4%	94.8%	92.0%	93.5%
Target - 95%	95%	95%	95%	95%	95%

Comment: At last Formal Review this QPI was updated with pre-operative imaging now having to take place <180 days from final surgery. There was discussion around the QPI measurability being updated to pre-operative imaging taking place <180 days from commencing definitive treatment. This would ensure patients undertaking neo-adjuvant treatment meet the target. No action identified.

SURGICAL OUTCOMES

QPI 5: Lymph Node Yield – Hospital of Surgery

Target = 90%

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 chemoradiotherapy or radiotherapy. Patients who undergo Transanal Endoscopic Microsurgery (TEM)/Transanal Minimally Invasive Surgery (TAMIS) or Transanal Resection of Tumour (TART).

Target 90%	Borders	D&G	Fife	Lothian	SCAN
Numerator	44	71	118	286	**519**
Not Recorded for the Numerator	0	0	0	0	**0**
Denominator	55	72	150	321	**598**
Not Recorded for Exclusions	0	0	0	0	**0**
Not Recorded for Denominator	0	0	1	3	**4**
% Percentage	80.0%	98.6%	78.7%	89.1%	**86.8%**

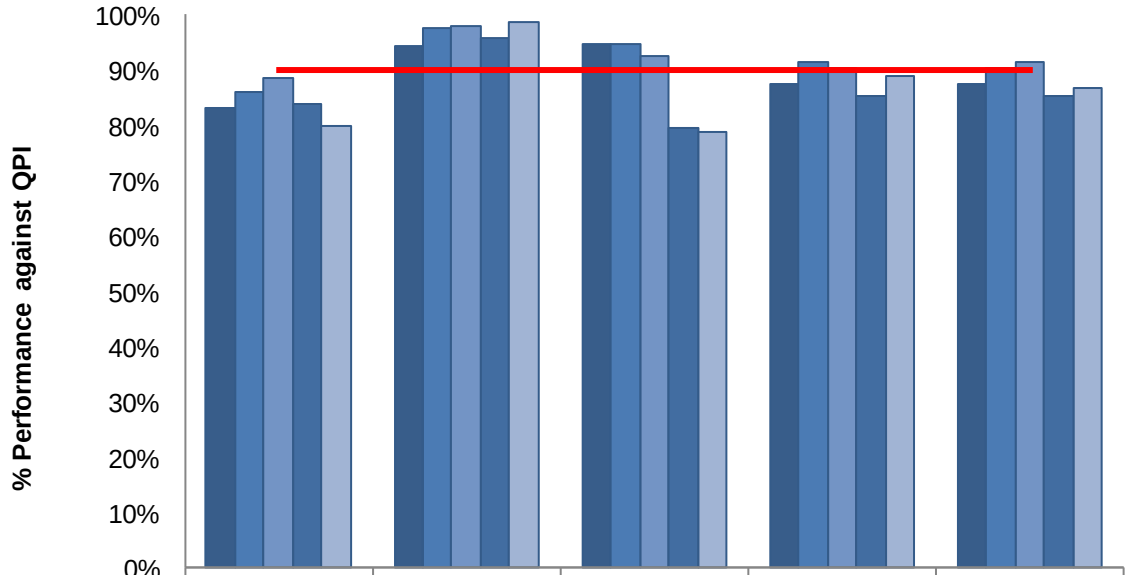
Comments where this QPI was not met:

Borders: The QPI target was not met showing a shortfall of 10% (11 cases) All cases have been checked by the Lead Surgeon and Pathologist, length and size of bowel checked and no common factor found of small number of lymph nodes examined - not surgeon dependant.

Fife: The QPI target was not met showing a shortfall of 11.2% (32 cases) 3 patients had neoadjuvant treatment (2 had SCRT and 1 had SCRT followed by chemotherapy); with the remaining 29 patients there is no clear reason for the decrease in number of nodes examined. This will be discussed locally with the pathology team at the next Colorectal Business Meeting.

Lothian: This QPI was not met with a shortfall of 0.9% (35 cases) 1 of the patients was treated with short course radiotherapy with delay, which is not an exclusion criterion, but does allow the tumour to be staged using the ypT criteria and may account for low nodal count. Several of the patients with low node counts contained multiple involved nodes, which can hamper enumeration of positive nodes as node margins get obliterated. Several patients also had additional positive nodes by the N1c criteria in TNM8, but by convention these are not included in the nodal count. 3 of the patients were re-examined in an effort to find more nodes, and in a further 12 patients note was made at the time of trimming of small and difficult to find nodes, including 2 patients where all or almost all mesenteric fat was processed in an effort to find nodes. 1 was a proctectomy in a patient who had previously had a total colectomy, so lacked node-bearing tissue.

QPI 5 - Lymph Node Yield



	Borders	D&G	Fife	Lothian	SCAN
2018 - 2019	83.3%	94.5%	94.7%	87.6%	87.5%
2019 - 2020	86.0%	97.5%	94.7%	91.6%	90.5%
2020 - 2021	88.6%	98.0%	92.4%	90.5%	91.6%
2021 - 2022	83.9%	95.9%	79.4%	85.3%	85.2%
2022 - 2023	80.0%	98.6%	78.7%	89.1%	86.8%
Target - 90%	90%	90%	90%	90%	90%

Comment: Discussion centred on the 90% target, with the feeling that this was too high and should revert back to the 80% it was before. There was also discussion regarding robotic surgery and neo-adjuvant treatment making a difference to lymph node yield. It was noted that although SCAN figures overall have been consistent, in the last two years Fife percentage has dropped. This will be looked at locally by the Fife Team.

QPI 7 (i): Surgical Margins – **Hospital of Surgery**

Target = 95%

Numerator = Number of patients with **rectal cancer** who undergo elective primary surgical resection or immediate / early 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 immediate / early surgical resection following neo-adjuvant short course radiotherapy.

Exclusions = Patients who undergo Transanal Endoscopic Microsurgery (TEM)/Transanal Minimally Invasive Surgery (TAMIS) or Transanal Resection of Tumour (TART).

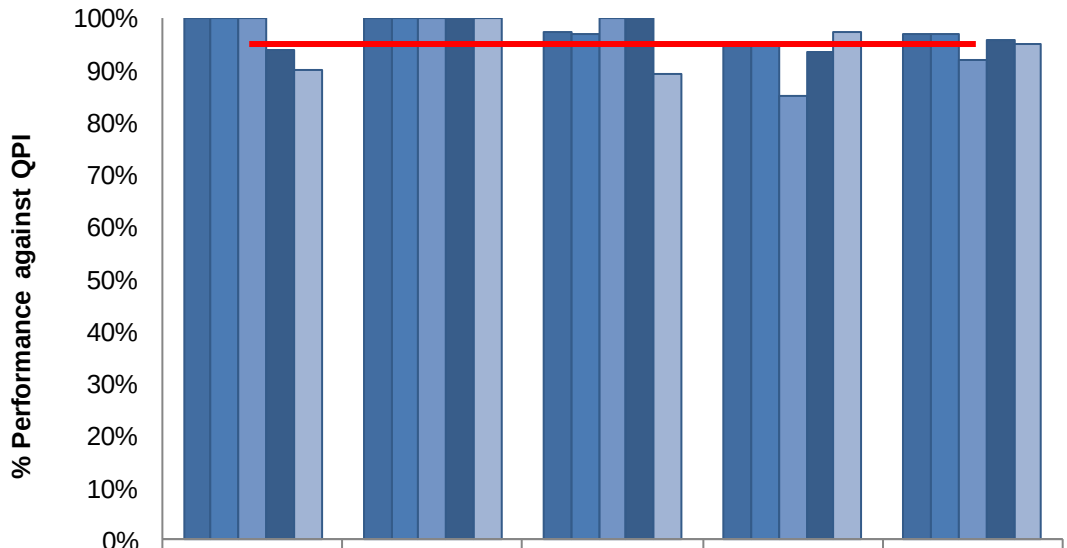
Target 95%	**Borders**	**D&G**	**Fife**	**Lothian**	**SCAN**
Numerator	9	13	25	66	**113**
Not Recorded for the Numerator	0	0	0	0	**0**
Denominator	10	13	28	68	**119**
Not Recorded for Exclusions	0	0	0	0	**0**
Not Recorded for Denominator	0	0	1	1	**2**
% Percentage	90.0%	100%	89.3%	97.1%	**95.0%**

Comments where this QPI was not met:

Borders: The QPI target was not met showing a shortfall of 5%, (1 case) the predicted margin was clear therefore no neo-adjuvant treatment was offered. However, the CRM was found to be less than 1mm at resection.

Fife: The QPI target was not met showing a shortfall of 5.7% (3 cases) 1 patient tumour extends to the CRM, 1 patient the surface fat is rather ragged making accurate assessment of CRM clearance rather difficult; however tumour is seen in the region of 1 mm from inked margin. Discussion at MDT is advised to clarify CRM clearance. Consultant reviewed video of robotic resection which was quite difficult and could not clearly see an area where it seems close to tumour. Oncology documents CRM as involved. 1 patient, invasive adenocarcinoma extends into diathermy artefact at the inked CRM (microscopic R1 excision).

QPI 7 (i) Surgical Margins



	Borders	D&G	Fife	Lothian	SCAN
2018 - 2019	100%	100%	97.0%	95.3%	96.7%
2019 - 2020	100%	100%	96.6%	95.0%	96.6%
2020 - 2021	100%	100%	100%	84.9%	91.8%
2021 - 2022	93.8%	100%	100%	93.3%	95.8%
2022 - 2023	90.0%	100%	89.3%	97.1%	95.0%
Target - 95%	95%	95%	95%	95%	95%

QPI 7 (ii): Surgical Margins – Hospital of Surgery

Target = 85%

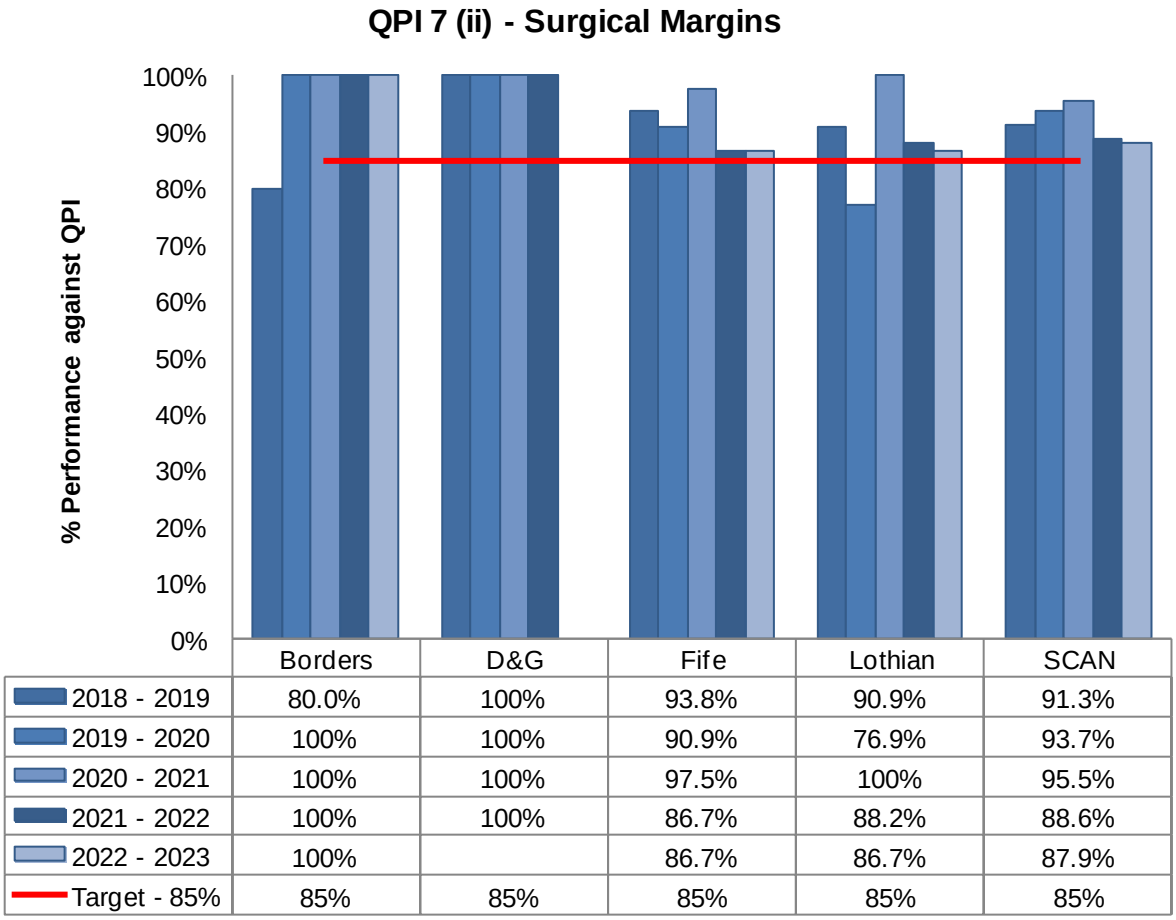
Numerator = Number of patients with **rectal cancer** who undergo elective surgical resection following neo-adjuvant chemotherapy, long course chemoradiotherapy, long course radiotherapy or short course radiotherapy with long course intent (delay to surgery) in which the circumferential margin is clear of tumour.

Denominator = All patients with rectal cancer who undergo elective surgical resection following neo-adjuvant chemotherapy, long course chemoradiotherapy, long course radiotherapy or short course radiotherapy with delay to surgery.

Exclusions = Patients who undergo Transanal Endoscopic Microsurgery (TEM)/Transanal Minimally Invasive Surgery (TAMIS) or Transanal Resection of Tumour (TART).

Target 85%	Borders	D&G	Fife	Lothian	SCAN
Numerator	3	0	13	13	29
Not Recorded for the Numerator	0	0	0	0	0
Denominator	3	0	15	15	33
Not Recorded for Exclusions	0	0	0	0	0
Not Recorded for Denominator	0	0	1	0	1
% Percentage	100%	n/a	86.7%	86.7%	**87.9%**

All Boards met this QPI (D&G had no patients eligible for this QPI)



	Borders	D&G	Fife	Lothian	SCAN
2018 - 2019	80.0%	100%	93.8%	90.9%	91.3%
2019 - 2020	100%	100%	90.9%	76.9%	93.7%
2020 - 2021	100%	100%	97.5%	100%	95.5%
2021 - 2022	100%	100%	86.7%	88.2%	88.6%
2022 - 2023	100%		86.7%	86.7%	87.9%
Target - 85%	85%	85%	85%	85%	85%

QPI 8: Re-operation Rates - Hospital of Surgery

Target = <10%

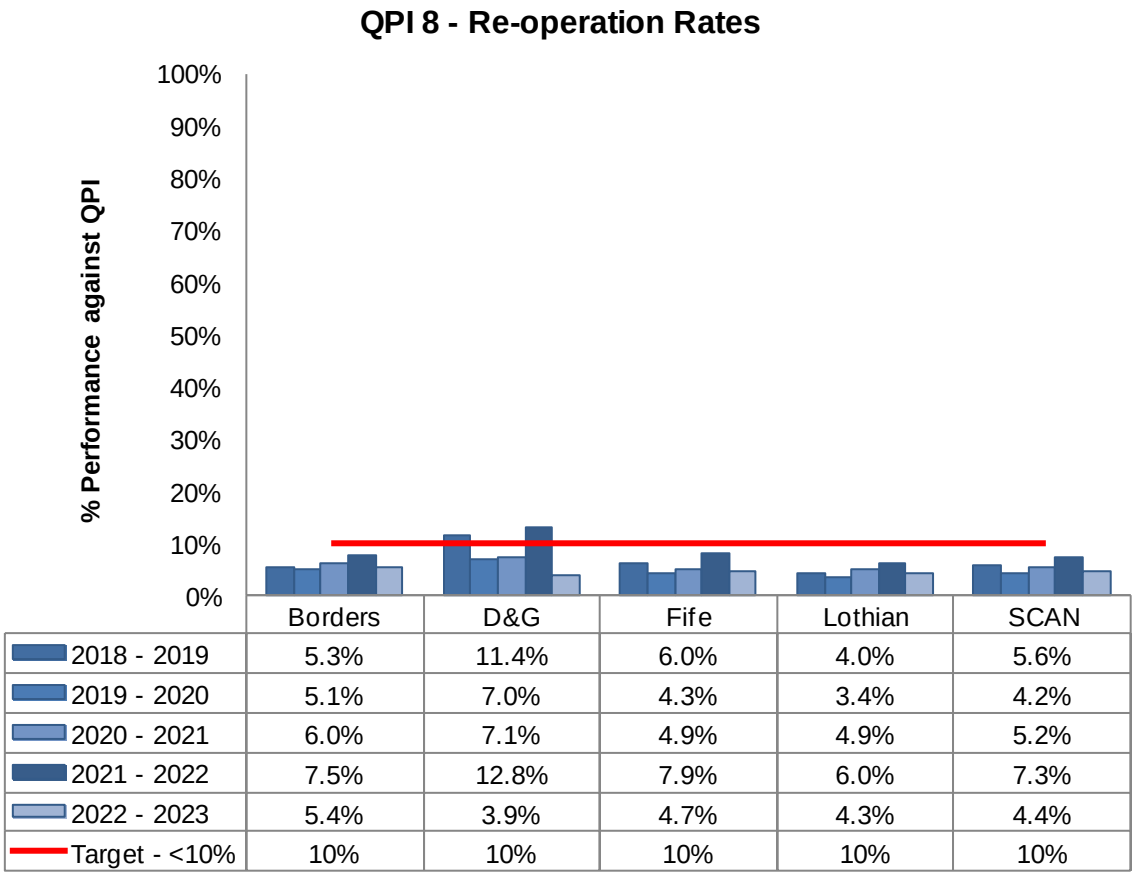
Numerator = Number of patients with colorectal cancer who undergo surgical resection who return to theatre following initial surgical procedure (within 30 days of surgery) to deal with complications related to the index procedure.

Denominator = All patients with colorectal cancer who undergo surgical resection.

Exclusions = No exclusions.

Target <10%	Borders	D&G	Fife	Lothian	SCAN
Numerator	3	3	8	16	**30**
Not Recorded for the Numerator	0	0	0	0	**0**
Denominator	56	77	171	373	**677**
Not Recorded for Exclusions	0	0	0	0	**0**
Not Recorded for Denominator	0	0	1	1	**2**
% Percentage	5.4%	3.9%	4.7%	4.3%	**4.4%**

All Boards met this QPI



	Borders	D&G	Fife	Lothian	SCAN
2018 - 2019	5.3%	11.4%	6.0%	4.0%	5.6%
2019 - 2020	5.1%	7.0%	4.3%	3.4%	4.2%
2020 - 2021	6.0%	7.1%	4.9%	4.9%	5.2%
2021 - 2022	7.5%	12.8%	7.9%	6.0%	7.3%
2022 - 2023	5.4%	3.9%	4.7%	4.3%	4.4%
Target - <10%	10%	10%	10%	10%	10%

QPI 9 (i): Anastomotic Dehiscence – Hospital of Surgery

Target = <5%

Numerator = Number of patients with colorectal cancer who undergo a surgical procedure involving anastomosis of the colon having anastomotic leak requiring intervention (medical, endoscopic, radiological or surgical).

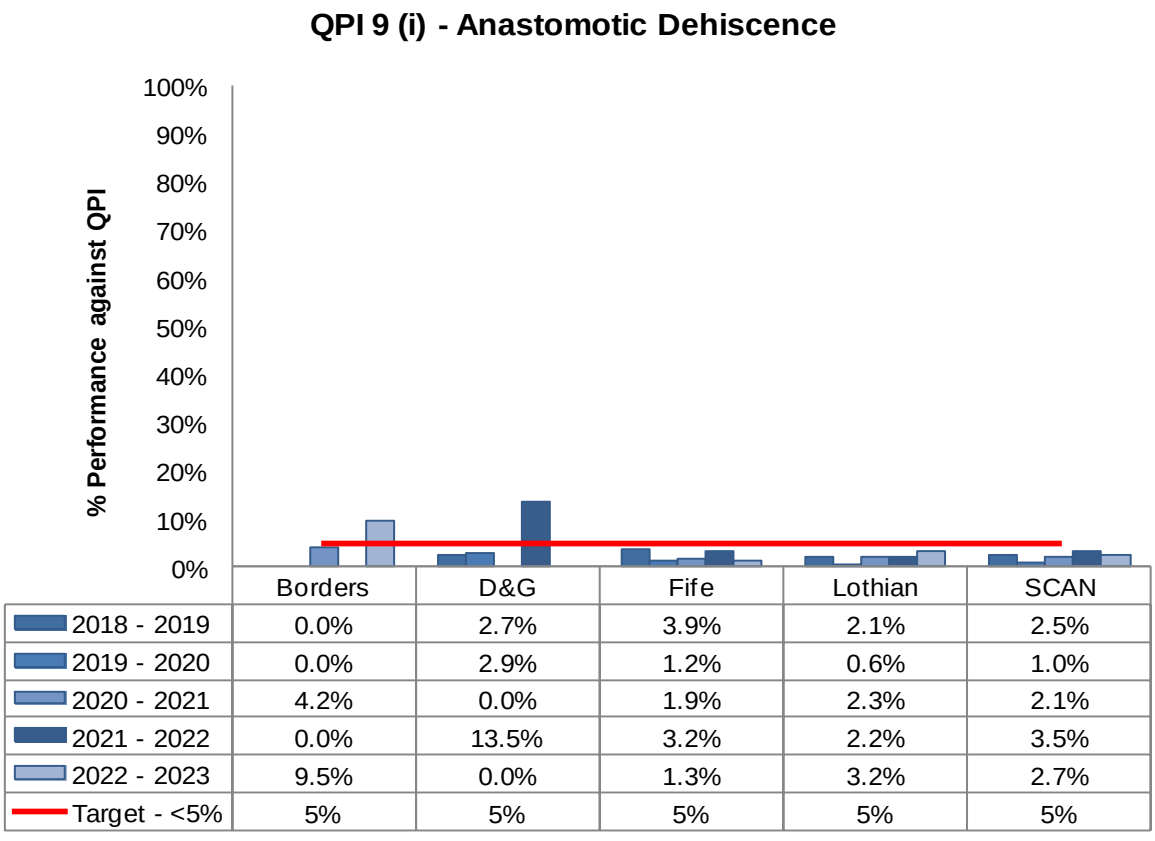
Denominator = All patients with colorectal cancer who undergo a surgical procedure involving anastomosis of the colon.

Exclusions = No exclusions.

Target <5%	Borders	D&G	Fife	Lothian	SCAN
Numerator	2	0	1	5	**8**
Not Recorded for the Numerator	0	0	0	0	**0**
Denominator	21	40	76	158	**295**
Not Recorded for Exclusions	0	0	0	0	**0**
Not Recorded for Denominator	0	0	1	1	**2**
% Percentage	**9.5%**	**0.0%**	**1.3%**	**3.2%**	**2.7%**

Comments where this QPI was not met:

Borders: The QPI target was exceeded by 4.5% (2 cases). Both patients were found to have an anastomotic leak post index procedure, necessitating return to theatre.



	Borders	D&G	Fife	Lothian	SCAN
2018 - 2019	0.0%	2.7%	3.9%	2.1%	2.5%
2019 - 2020	0.0%	2.9%	1.2%	0.6%	1.0%
2020 - 2021	4.2%	0.0%	1.9%	2.3%	2.1%
2021 - 2022	0.0%	13.5%	3.2%	2.2%	3.5%
2022 - 2023	9.5%	0.0%	1.3%	3.2%	2.7%
Target - <5%	5%	5%	5%	5%	5%

Comment: It was noted Borders had particularly sick patients. They also had a number of patients who were operated on at Golden Jubilee Hospital who are not included in this QPI, if their inclusion might have made a different to the QPI outcome.

QPI 9 (ii): Anastomotic Dehiscence – Hospital of Surgery

Target = <10%

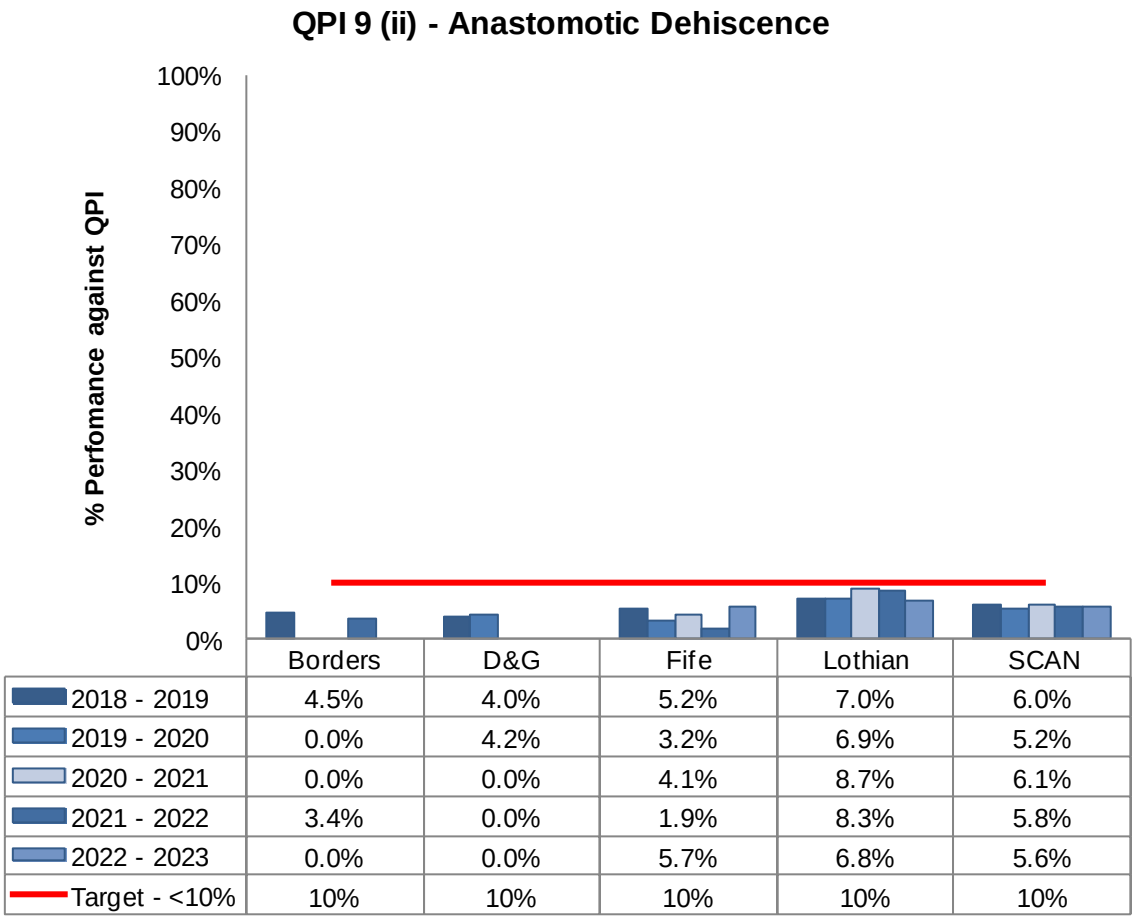
Numerator = Number of patients with colorectal cancer who undergo a surgical procedure involving anastomosis of the rectum (including: anterior resection with TME) having anastomotic leak requiring intervention (medical, endoscopic, radiological or surgical).

Denominator = All patients with colorectal cancer who undergo a surgical procedure involving anastomosis of the rectum (including anterior resection with TME).

Exclusions = No exclusions.

Target <10%	Borders	D&G	Fife	Lothian	SCAN
Numerator	0	0	4	10	**14**
Not Recorded for the Numerator	0	0	0	0	**0**
Denominator	21	11	70	148	**250**
Not Recorded for Exclusions	0	0	0	0	**0**
Not Recorded for Denominator	0	0	1	1	**2**
% Percentage	0.0%	0.0%	5.7%	6.8%	**5.6%**

All Boards met this QPI



	Borders	D&G	Fife	Lothian	SCAN
2018 - 2019	4.5%	4.0%	5.2%	7.0%	6.0%
2019 - 2020	0.0%	4.2%	3.2%	6.9%	5.2%
2020 - 2021	0.0%	0.0%	4.1%	8.7%	6.1%
2021 - 2022	3.4%	0.0%	1.9%	8.3%	5.8%
2022 - 2023	0.0%	0.0%	5.7%	6.8%	5.6%
Target - <10%	10%	10%	10%	10%	10%

QPI 10 (i): 30 and 90 Day Mortality Following Surgical Resection – Hospital of Surgery

Target = Elective surgical resection - 30 day mortality <3%, 90 day mortality <4%

Numerator = Number of patients with colorectal cancer who undergo elective surgical resection who die within 30 or 90 days of surgery.

Denominator = All patients with colorectal cancer who undergo elective surgical resection.

Exclusions = No exclusions

Elective Surgery - 30 day mortality

Target <3%	Borders	D&G	Fife	Lothian	SCAN
Numerator	2	0	1	5	**8**
Not Recorded for the Numerator	0	0	0	0	**0**
Denominator	49	65	154	295	**563**
Not Recorded for Exclusions	0	0	0	0	**0**
Not Recorded for Denominator	0	0	0	0	**0**
% Percentage	4.1%	0.0%	0.6%	1.7%	**1.4%**

Comments where this QPI was not met:

Borders: The QPI target was not met showing an excess of 1.1% (2 cases)

Elective Surgery - 90 day mortality

Target <4%	Borders	D&G	Fife	Lothian	SCAN
Numerator	2	0	3	8	**13**
Not Recorded for the Numerator	0	0	0	0	**0**
Denominator	46	65	145	291	**547**
Not Recorded for Exclusions	0	0	0	0	**0**
Not Recorded for Denominator	0	0	0	0	**0**
% Percentage	4.3%	0.0%	2.1%	2.7%	**2.4%**

Comments where this QPI was not met:

Borders: The QPI target was not met showing an excess of 0.3% (2 cases) Reasons as above.

QPI 10 (ii): 30 and 90 Day Mortality Following Surgical Resection – Hospital of Surgery

Target = Emergency surgical resection - 30 day mortality <15% 90 day mortality <20%

Numerator = Number of patients with colorectal cancer who undergo emergency 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

Emergency Surgery - 30 day mortality

Target <15%	Borders	D&G	Fife	Lothian	SCAN
Numerator	1	0	1	5	**7**
Not Recorded for the Numerator	0	0	0	0	**0**
Denominator	7	12	18	76	**113**
Not Recorded for Exclusions	0	0	0	0	**0**
Not Recorded for Denominator	0	0	0	0	**0**
% Percentage	14.3%	0.0%	5.6%	6.6%	**6.2%**

Emergency Surgery - 90 day mortality

Target <20%	Borders	D&G	Fife	Lothian	SCAN
Numerator	1	1	1	10	**13**
Not Recorded for the Numerator	0	0	0	0	**0**
Denominator	7	12	18	76	**113**
Not Recorded for Exclusions	0	0	0	0	**0**
Not Recorded for Denominator	0	0	0	0	**0**
% Percentage	14.3%	8.3%	5.6%	13.2%	**11.5%**

All Boards met this QPI

Comment: Allowances should be made where small numbers and variation may be due to chance. Aggregation of results over time may be useful, in future years, to clarify results where numbers are small.

ONCOLOGICAL TREATMENT OUTCOMES

QPI 11: Adjuvant Chemotherapy

Target = 70%

Numerator = Number of patients ≤74 years of age at diagnosis with stage III colorectal cancer who undergo surgical resection that receive adjuvant chemotherapy.

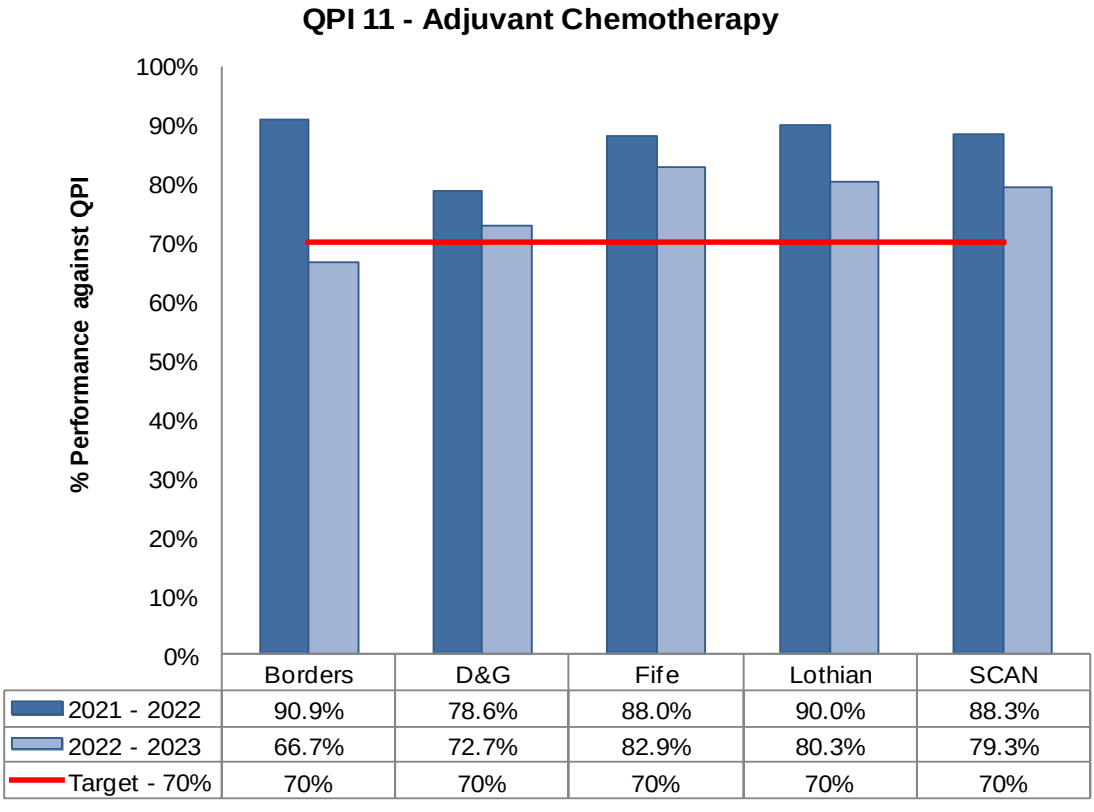
Denominator = All patients ≤74 years of age at diagnosis with stage III colorectal cancer who undergo surgical resection.

Exclusions = Patients who decline chemotherapy. Patients who undergo neo-adjuvant treatment.

Target 70%	Borders	D&G	Fife	Lothian	SCAN
2022-23 Cohort	94	121	256	559	**1030**
Ineligible for the QPI	85	110	221	493	**909**
Numerator	6	8	29	53	**96**
Not Recorded for the Numerator	0	0	0	0	**0**
Denominator	9	11	35	66	**121**
Not Recorded for Exclusions	0	0	0	0	**0**
Not Recorded for Denominator	0	1	1	1	**3**
% Percentage	66.7%	72.7%	82.9%	80.3%	**79.3%**

Comments where this QPI was not met:

Borders: The QPI target was not met showing a shortfall of 3.3% (3 cases) 1 patient started adjuvant chemotherapy outwith the 84 day window specified in the QPI measurability, 1 patient was not offered chemotherapy due to surgical complications. 1 patient died post surgery - this is not an exclusion from the QPI.



Comment: Both NHS Borders and NHS Lothian had patients included in the denominator who died before adjuvant SACT could be discussed. It is felt that an additional exclusion be added to this QPI – Patients who die before SACT.

Addendum: PHS have been made aware of this issue and it will be discussed at the next Colorectal formal review (November 2024).

QPI 12 (i): 30 and 90 Day Mortality Following Radical Radiotherapy

Target = <1%

Numerator = Number of patients with colorectal cancer who undergo neo-adjuvant chemoradiotherapy or radiotherapy with curative intent who die within 30 days of treatment.

Denominator = All patients with colorectal cancer who undergo neo-adjuvant chemoradiotherapy or radiotherapy with curative intent.

Exclusions = No exclusions.

30 day mortality after neo-adjuvant chemoradiotherapy with curative intent

Target <1%	Borders	D&G	Fife	Lothian	SCAN
Numerator	0	0	0	0	**0**
Not Recorded for the Numerator	0	0	0	0	**0**
Denominator	3	0	8	11	**22**
Not Recorded for Exclusions	0	0	0	0	**0**
Not Recorded for Denominator	0	0	0	0	**0**
% Percentage	0.0%	n/a	0.0%	0.0%	**0.0%**

90 day mortality after neo-adjuvant chemoradiotherapy with curative intent

Target <1%	Borders	D&G	Fife	Lothian	SCAN
Numerator	0	0	0	0	**0**
Not Recorded for the Numerator	0	0	0	0	**0**
Denominator	3	0	8	10	**21**
Not Recorded for Exclusions	0	0	0	0	**0**
Not Recorded for Denominator	0	0	0	0	**0**
% Percentage	0.0%	n/a	0.0%	0.0%	**0.0%**

All Boards met this QPI

Comment:

For QPI 12 there will be more neo-adjuvant SACT patients coming through, some of whom are on the FOXTORT Trials and just because we are doing a bit more now generally.

QPI 12 (ii): 30 and 90 Day Mortality Following Radical Radiotherapy

Target = <1%

Numerator = Number of patients with colorectal cancer who undergo neo-adjuvant chemoradiotherapy or radiotherapy with curative intent who die within 90 days of treatment.

Denominator = All patients with colorectal cancer who undergo neo-adjuvant chemoradiotherapy or radiotherapy with curative intent.

Exclusions = No exclusions.

30 day mortality radiotherapy with curative intent

Target <1%	Borders	D&G	Fife	Lothian	SCAN
Numerator	0	0	0	0	**0**
Not Recorded for the Numerator	0	0	0	0	**0**
Denominator	5	2	14	20	**41**
Not Recorded for Exclusions	0	0	0	0	**0**
Not Recorded for Denominator	0	0	1	1	**2**
% Percentage	0.0%	0.0%	0.0%	0.0%	**0.0%**

90 day mortality after radiotherapy with curative intent

Target <1%	Borders	D&G	Fife	Lothian	SCAN
Numerator	0	0	0	0	**0**
Not Recorded for the Numerator	0	0	0	0	**0**
Denominator	5	2	13	20	**40**
Not Recorded for Exclusions	0	0	0	0	**0**
Not Recorded for Denominator	0	0	1	1	**2**
% Percentage	0.0%	0.0%	0.0%	0.0%	**0.0%**

All Boards met this QPI

QPI 14: 30 Day Mortality following Systemic Anti-Cancer Therapy (SACT)

The regional cancer networks no longer report 30 Day mortality following SACT. This has recently been undertaken by Public Health Scotland (PHS) which published its first annual report in July 2023, using data collected on Chemocare: the national chemotherapy electronic prescribing and administration system. The report presents the number and percentage of patients treated in 2022 that died within 30 days of starting their last cycle of SACT, reported for NHS Scotland and the three regional cancer networks. The data has been made available in a dashboard on the PHS website:

30-day mortality after systemic anti-cancer therapy (SACT) - patients treated in 2022 - 30-day mortality after systemic anti-cancer therapy (SACT) - Publications - Public Health Scotland

QPI 15 (i): Colorectal Liver Metastasis

Target = 95%

Numerator = Number of patients with a new diagnosis of **synchronous** colorectal liver metastases who are referred to a HPB MDT.

Denominator = All patients with a new diagnosis of **synchronous** colorectal liver metastases.

Exclusions = Patients in whom the primary colorectal cancer is unresectable. Patients with extrahepatic disease. Patients who are clinically unfit for surgery. Patients who decline consideration of surgery.

Target 95%	**Borders**	**D&G**	**Fife**	**Lothian**	**SCAN**
2022-23 Cohort	94	121	256	559	**1030**
Ineligible for the QPI	92	115	243	524	**974**
Numerator	2	6	12	24	**44**
Not Recorded for the Numerator	0	0	0	0	**0**
Denominator	2	6	13	35	**56**
Not Recorded for Exclusions	0	0	0	0	**0**
Not Recorded for Denominator	0	0	0	0	**0**
% Percentage	100%	100%	92.3%	65.3%	**78.6%**

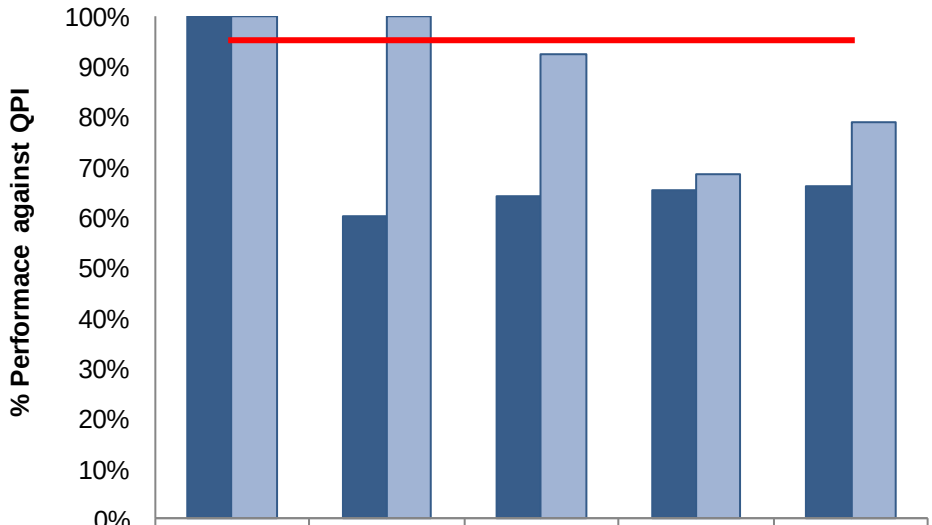
Comments where this QPI was not met:

Fife: The QPI target was not met showing a shortfall of 2.7% (1 case) Patient died 8 days post op following resection for primary.

Lothian: The QPI target was not met showing a shortfall of 26.4% (11 cases) The Colorectal MDM did not record a reason why no referral was made to the HPB MDM. 8 patients are now deceased with 3 patients undergoing palliative treatment or best supportive care.

Action: As per the Action plan for 2021/2022, it was agreed that Lothian would continue to monitor this QPI and its outcomes.

QPI 15 - Colorectal Liver Metastases - Synchronous



	Borders	D&G	Fife	Lothian	SCAN
2021 - 2022	100%	60.0%	64.0%	65.3%	65.9%
2022 - 2023	100%	100%	92.3%	68.6%	78.6%
Target - 95%	95%	95%	95%	95%	95%

QPI 15 (ii): Colorectal Liver Metastasis

Target = 95%

Numerator = Number of patients registered at a Colorectal Cancer MDT with a new diagnosis of **metachronous** colorectal liver metastases who are referred to a HPB MDT.

Denominator = All patients registered at a Colorectal Cancer MDT with a new diagnosis of **metachronous** colorectal liver metastases.

Exclusions = Patients in whom the primary colorectal cancer is unresectable. Patients with extrahepatic disease. Patients who are clinically unfit for surgery. Patients who decline consideration of surgery.

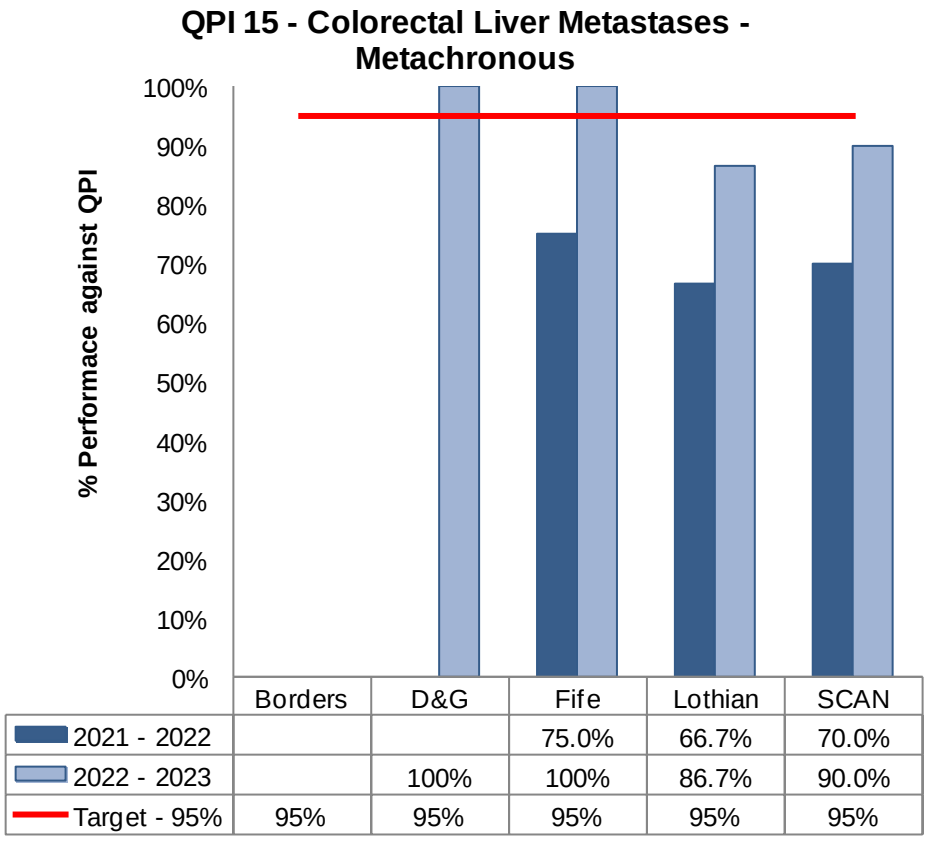
Target 95%	Borders	D&G	Fife	Lothian	SCAN
2022-23 Cohort	94	121	526	559	**1030**
Ineligible for the QPI	94	120	252	544	**1010**
Numerator	0	1	4	13	**18**
Not Recorded for the Numerator	0	0	0	0	**0**
Denominator	0	1	4	15	**20**
Not Recorded for Exclusions	0	0	0	0	**0**
Not Recorded for Denominator	0	0	0	0	**0**
% Percentage	n/a	100%	100%	86.7%	**90.0%**

Comments where this QPI was not met:

Lothian: The QPI target was not met showing a shortfall of 8.3% (2 cases) The Colorectal MDM did not record a reason why no referral was made to the HPB MDM. Both patients are now deceased.

The Lothian Colorectal MDM Chair was contacted via email and in person to discuss the QPI target and action identified from last year's report. A new MDM Chair has recently been appointed with discussions already taking place regarding the QPI target having not been met again this year.

Action: As per the Action plan for 2021/2022, it was agreed that Lothian would continue to monitor this QPI and its outcomes.



	Borders	D&G	Fife	Lothian	SCAN
2021 - 2022			75.0%	66.7%	70.0%
2022 - 2023		100%	100%	86.7%	90.0%
Target - 95%	95%	95%	95%	95%	95%

QPI 16 (i): Assessment of Mismatch Repair (MMR)/Microsatellite Instability (MSI) Status

Target = 95%

Numerator = Number of patients with colorectal cancer who have MMR/MSI status assessed.

Denominator = All patients with colorectal cancer.

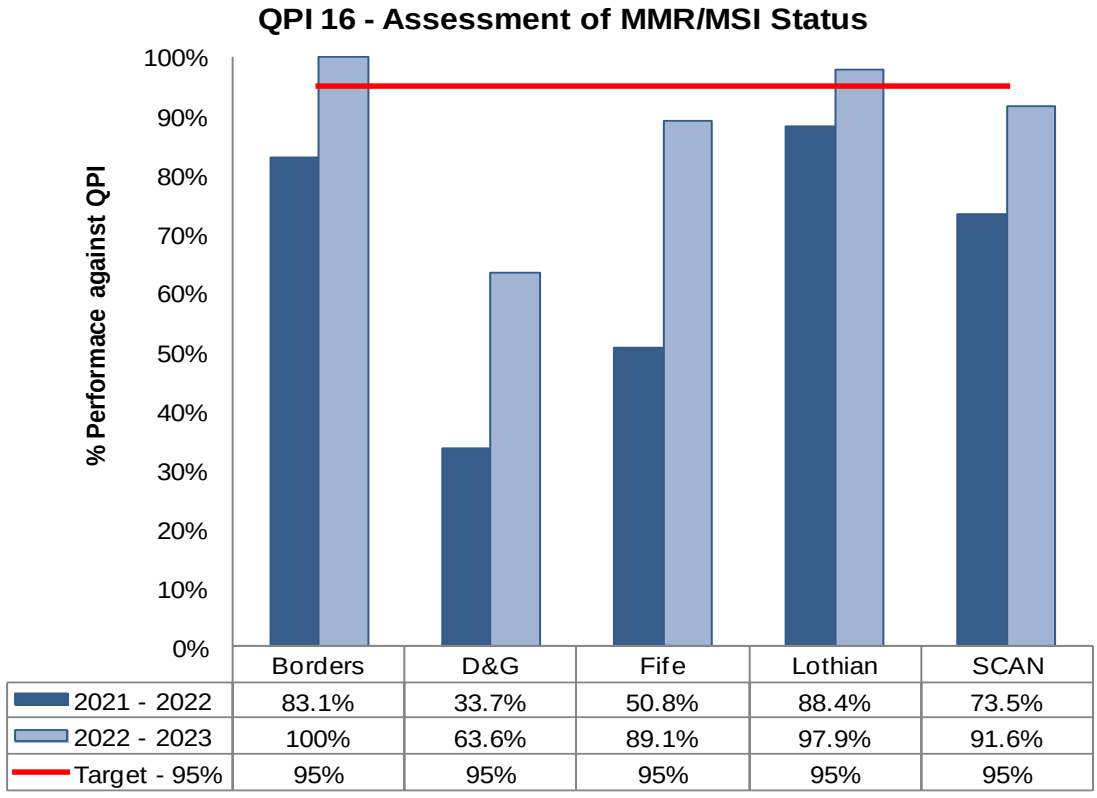
Exclusions = No exclusions.

Target 95%	Borders	D&G	Fife	Lothian	SCAN
2022-23 Cohort	94	121	256	559	**1030**
Ineligible for the QPI	21	14	36	91	**162**
Numerator	73	68	196	458	**795**
Not Recorded for the Numerator	0	0	0	1	**1**
Denominator	73	107	220	468	**868**
Not Recorded for Exclusions	0	0	0	0	**0**
Not Recorded for Denominator	0	0	0	0	**0**
% Percentage	100%	63.6%	89.1%	97.9%	**91.6%**

Comments where this QPI was not met:

D&G: The QPI target was not met showing a shortfall of 31.4% (39 cases) historically resection samples only were being sent for molecular tests. All biopsies are now being sent so expect improvement in the next year.

Fife: The QPI target was not met showing a shortfall of 5.9% (24 cases) 12 patients had no MMR requested. 9 patients had MMR requested but no further reports were found. 3 patients had no MMR requested by Pathology.



	Borders	D&G	Fife	Lothian	SCAN
2021 - 2022	83.1%	33.7%	50.8%	88.4%	73.5%
2022 - 2023	100%	63.6%	89.1%	97.9%	91.6%
Target - 95%	95%	95%	95%	95%	95%

Comment: It is noted that although NHS D&G and NHS Fife did not meet this QPI this year, there has been significant progress from the outcomes in the 2021/22 report. It is predicted that progress made with this QPI so far will continue in the future. No action has been identified.

However, discussion took place around biopsies taken in the private sector; there needs to be appropriate molecular testing carried out and this should be made clear as these results can influence decision making. Local Colorectal MDTs should ensure this information is provided before discussion at MDM. It is noted in SCAN pathology specimens from the private sector are processed in Manchester, this may be an issue trying to get more information. Subsequent email discussions have taken place between Colorectal Leads and this issue will be raised with the SCAN Regional Lead Cancer Clinician.

QPI 16 (ii): Assessment of Mismatch Repair (MMR)/Microsatellite Instability (MSI) Status

Target = 90%

Numerator = Number of patients with colorectal cancer who have MMR/MSI status assessed and where the results are suggestive of Lynch Syndrome are referred to Genetics.

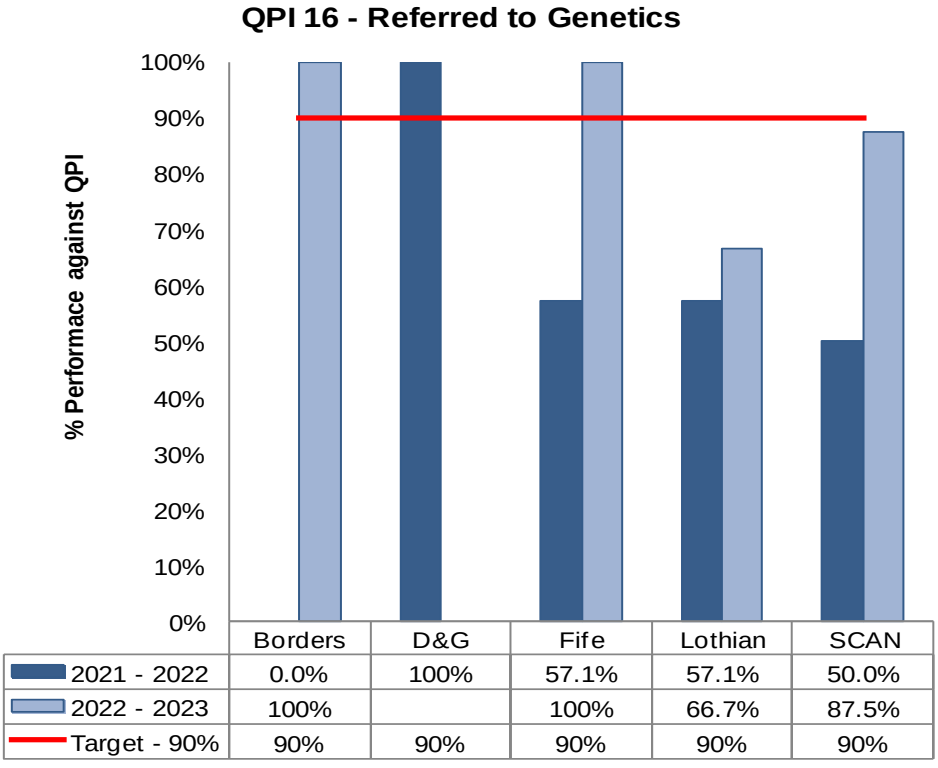
Denominator = All patients with colorectal cancer who have MMR/MSI status assessed where results are suggestive of Lynch Syndrome.

Exclusions = No exclusions.

Target 90%	Borders	D&G	Fife	Lothian	SCAN
2022-23 Cohort	94	121	256	559	**1030**
Ineligible for the QPI	93	121	252	556	**1022**
Numerator	1	0	4	2	**7**
Not Recorded for the Numerator	0	0	0	0	**0**
Denominator	1	0	4	3	**8**
Not Recorded for Exclusions	0	0	0	0	**0**
Not Recorded for Denominator	0	1	0	2	**3**
% Percentage	100%	n/a	100%	66.7%	**87.5%**

Comments where this QPI was not met:

Lothian: The QPI target was not met showing a shortfall of 23.3% (1 case) this has been raised with the Consultant Surgeon responsible. Two cases were not recorded for the denominator, one where molecular testing was missed (this has now been requested) and one case had been tested but the MLH1 result was not on TRAK. This has also been requested (patient has since died).



	Borders	D&G	Fife	Lothian	SCAN
2021 - 2022	0.0%	100%	57.1%	57.1%	50.0%
2022 - 2023	100%		100%	66.7%	87.5%
Target - 90%	90%	90%	90%	90%	90%

Comment: As per the Action plans for 2021/2022, it was agreed that Lothian would continue to monitor this QPI. The Lothian Analyst will forward the names of patients whose pathology suggests referral to Clinical Genetics to the Lothian Lead Clinician to action.

KEY CATEGORIES

Table 1: Rectal v Other Colorectal Patients, percentage of patients undergoing Surgery

	Number of Patients Diagnosed	All patients who had surgery		Number of patients diagnosed with rectal cancer		Number of patients diagnosed with rectal cancer who had surgery	
Borders	94	67	71.3%	27	28.7%	18	66.7%
D&G	121	87	71.9%	27	22.3%	20	74.1%
Fife	256	189	73.8%	70	27.3%	67	95.7%
Lothian	559	429	76.7%	143	25.6%	109	76.2%
SCAN	**1030**	**772**	**75.0%**	267	**25.9%**	**214**	**80.1%**

Table 2: Rectal v Other Colorectal Patients, percentage of patients undergoing definitive Surgery
(Excluding non definitive surgery – Endoscopic Treatment/Stents/Defunctioning Stomas/Bypass Surgery)

	Number of Patients Diagnosed	All patients who had definitive surgery		Number of patients diagnosed with rectal cancer		Number of patients diagnosed with rectal cancer who had definitive surgery	
Borders	94	62	66.0%	27	28.7%	17	63.0%
D&G	121	79	65.3%	27	22.3%	17	63.0%
Fife	256	167	65.2%	70	27.3%	43	61.4%
Lothian	559	363	64.9%	143	25.6%	88	61.5%
SCAN	**1030**	**671**	**65.1%**	**267**	**25.9%**	**165**	**61.8%**

Table 3: Emergency v Elective Surgery
(Excluding non definitive surgery – Endoscopic Treatment/Stents/Defunctioning Stomas/Bypass Surgery)

	All patients who had definitive surgery	Elective		Emergency		Inapplicable		Missing Data	
Borders	62	55	88.7%	7	11.3%	0	0.0%	0	0.0%
D&G	79	67	84.8%	12	15.2%	0	0.0%	0	0.0%
Fife	167	149	89.2%	18	10.8%	0	0.0%	0	0.0%
Lothian	363	288	79.3%	75	20.7%	0	0.0%	0	0.0%
SCAN	**671**	**559**	**83.3%**	**112**	**16.7%**	**0**	**0.0%**	**0**	**0.0%**

Table 4: Rectal Cancer Patients Emergency v Elective Surgery
(Excluding non definitive surgery – Endoscopic Treatment/Stents/Defunctioning Stomas/Bypass Surgery)

	All patients diagnosed with rectal cancer who had definitive surgery	Elective		Emergency		Not Recorded		Missing Data	
Borders	17	16	94.1%	1	5.9%	0	0.0%	0	0.0%
D&G	17	17	100%	0	0.0%	0	0.0%	0	0.0%
Fife	43	43	100%	0	0.0%	0	0.0%	0	0.0%
Lothian	88	87	98.9%	1	1.1%	0	0.0%	0	0.0%
SCAN	**165**	**163**	**98.8%**	**2**	**1.2%**	**0**	**0.0%**	**0**	**0.0%**

Table 5: Intent of Surgery
(Excluding non definitive surgery – Endoscopic Treatment/Stents/Defunctioning Stomas/Bypass Surgery)

	All patients who had definitive Surgery	Curative		Palliative		Not Recorded		Missing Data	
Borders	62	61	98.4%	1	1.6%	0	0.0%	0	0.0%
D&G	79	76	96.2%	3	3.8%	0	0.0%	0	0.0%
Fife	167	157	94.0%	10	6.0%	0	0.0%	0	0.0%
Lothian	363	330	90.9%	32	8.8%	1	0.3%	0	0.0%
SCAN	**671**	**624**	**93.0%**	**46**	**6.9%**	**1**	**0.1%**	**0**	**0.0%**

Table 6: Intent of Surgery – Rectal Cancer
N=All patients diagnosed with rectal cancer who had definitive surgery
(Excluding non definitive surgery – Endoscopic Treatment/Stents/Defunctioning Stomas/Bypass Surgery)

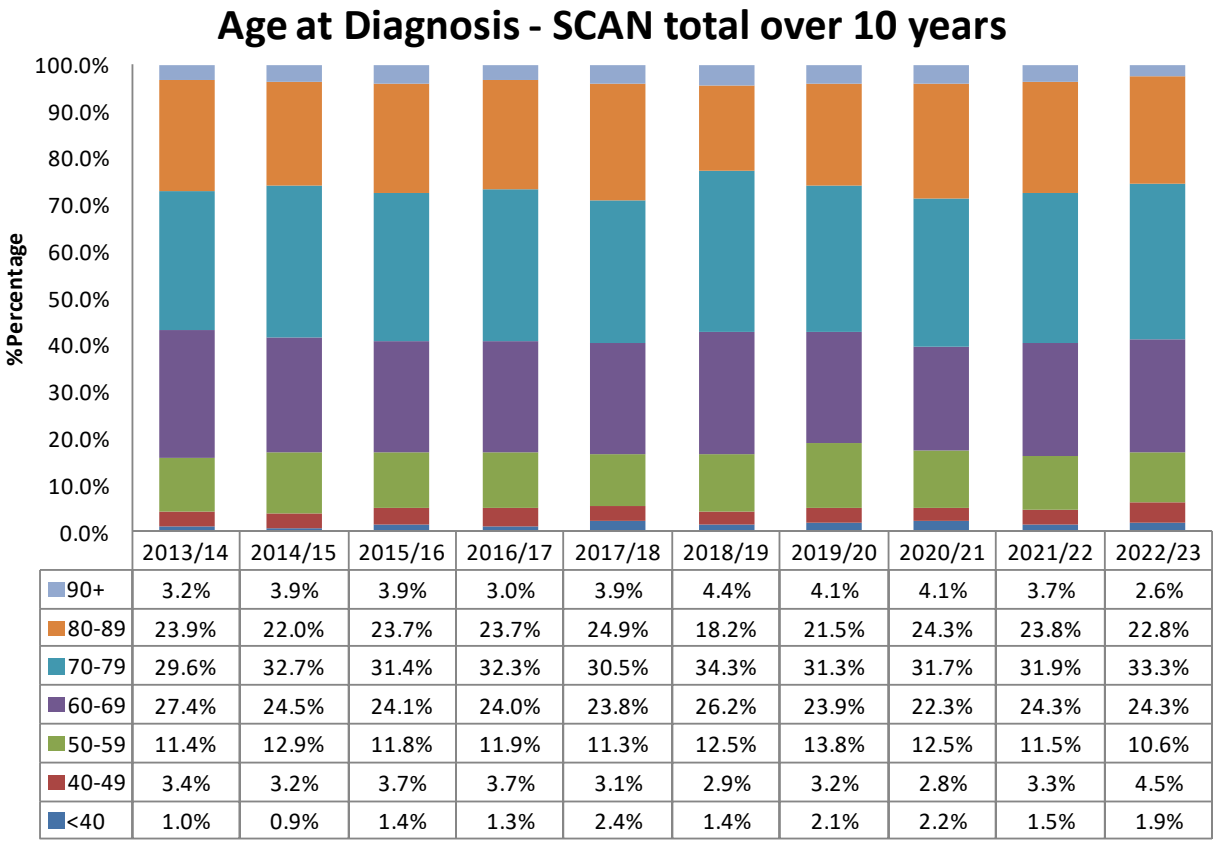
	All patients diagnosed with rectal cancer who had definitive surgery	Curative		Palliative		Not Recorded		Missing Data	
Borders	17	17	100%	0	0.0%	0	0.0%	0	0.0%
D&G	17	17	100%	0	0.0%	0	0.0%	0	0.0%
Fife	43	41	95.3%	2	4.7%	0	0.0%	0	0.0%
Lothian	88	86	97.7%	2	2.3%	0	0.0%	0	0.0%
SCAN	**165**	**161**	**97.6%**	**4**	**2.4%**	**0**	**0.0%**	**0**	**0.0%**

Table 7: Gender
N= All patients diagnosed

	Total Patients Diagnosed	Male		Female	
Borders	94	60	63.8%	34	36.2%
D&G	121	58	47.9%	63	52.1%
Fife	256	131	51.2%	125	48.8%
Lothian	559	283	50.6%	276	49.4%
SCAN	**1030**	**532**	**51.7%**	**498**	**48.3%**

Table 8: Age at Diagnosis
N=All patients diagnosed

Age	Borders		D&G		Fife		Lothian		SCAN	
<40	0	0.0%	1	0.8%	5	2.0%	14	2.5%	20	1.9%
40-49	5	5.3%	2	1.7%	10	3.9%	29	5.2%	46	4.5%
50-59	8	8.5%	7	5.8%	19	7.4%	75	13.4%	109	10.6%
60-69	15	16.0%	27	22.3%	79	30.9%	129	23.1%	250	24.3%
70-79	43	45.7%	49	40.5%	85	33.2%	166	29.7%	343	33.3%
80-89	21	22.3%	29	24.0%	54	21.1%	131	23.4%	235	22.8%
90+	2	2.1%	6	5.0%	4	1.6%	15	2.7%	27	2.6%
Total	**94**	**100%**	**121**	**100%**	**256**	**100%**	**559**	**100%**	**1030**	**100%**



	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
90+	3.2%	3.9%	3.9%	3.0%	3.9%	4.4%	4.1%	4.1%	3.7%	2.6%
80-89	23.9%	22.0%	23.7%	23.7%	24.9%	18.2%	21.5%	24.3%	23.8%	22.8%
70-79	29.6%	32.7%	31.4%	32.3%	30.5%	34.3%	31.3%	31.7%	31.9%	33.3%
60-69	27.4%	24.5%	24.1%	24.0%	23.8%	26.2%	23.9%	22.3%	24.3%	24.3%
50-59	11.4%	12.9%	11.8%	11.9%	11.3%	12.5%	13.8%	12.5%	11.5%	10.6%
40-49	3.4%	3.2%	3.7%	3.7%	3.1%	2.9%	3.2%	2.8%	3.3%	4.5%
<40	1.0%	0.9%	1.4%	1.3%	2.4%	1.4%	2.1%	2.2%	1.5%	1.9%

Table 9: Age at Diagnosis by Sex

N=All patients diagnosed

Age at Diagnosis	Borders		D&G		Fife		Lothian		SCAN	
	M	F	M	F	M	F	M	F	M	F
<45	1	1	0	1	6	4	11	17	**18**	**23**
45-49	2	1	1	1	4	1	7	7	**14**	**10**
50-54	1	0	1	2	2	6	11	19	**15**	**27**
55-59	2	5	1	3	4	7	22	23	**29**	**38**
60-64	5	2	7	5	23	20	35	28	**70**	**55**
65-69	4	4	9	6	20	16	35	31	**68**	**57**
70-74	24	6	10	14	21	20	51	45	**106**	**85**
75-79	9	4	12	13	25	19	37	33	**83**	**69**
80-84	8	6	9	10	15	20	36	40	**68**	**76**
85+	4	5	8	8	11	12	38	33	**61**	**58**
Total	**60**	**34**	**58**	**63**	**131**	**125**	**283**	**276**	**532**	**498**

Table 10: Mode of Referral

n=All colorectal cancer patients

	Borders		D&G		Fife		Lothian		SCAN	
Primary Care (GP, Nurse)	56	59.6%	70	57.9%	112	43.8%	212	37.9%	**450**	**43.7%**
Screening Service	15	16.0%	26	21.5%	53	20.7%	106	19.0%	**200**	**19.4%**
Incidental finding	5	5.3%	19	15.7%	20	7.8%	93	16.6%	**137**	**13.3%**
Review Clinic	2	2.1%	1	0.8%	23	9.0%	6	1.1%	**32**	**3.1%**
Cancer Genetic Clinic	0	0.0%	0	0.0%	0	0.0%	1	0.2%	**1**	**0.1%**
Self-referral to A&E	15	16.0%	4	3.3%	9	3.5%	59	10.6%	**87**	**8.4%**
GP directly to hospital	0	0.0%	0	0.0%	32	12.5%	39	7.0%	**71**	**6.9%**
Previous GP referral but subsequently admitted to hospital	0	0.0%	0	0.0%	1	0.4%	28	5.0%	**29**	**2.8%**
Referral from private healthcare	1	1.1%	0	0.0%	0	0.0%	11	2.0%	**12**	**1.2%**
Other	0	0.0%	1	0.8%	6	2.3%	3	0.5%	**10**	**0.0%**
Not Recorded	0	0.0%	0	0.0%	0	0.0%	1	0.2%	**1**	**0.1%**
Total	94	100%	121	100%	256	100%	559	100%	**1030**	**100%**

Table 11: Tumour Site

N=All patients diagnosed

Site of Tumour	Borders		D&G		Fife		Lothian		SCAN	
Ascending Colon	14	14.9%	15	12.4%	40	15.6%	75	13.4%	**144**	**14.0%**
Caecum	11	11.7%	22	18.2%	36	14.1%	90	16.1%	**159**	**15.4%**
Colon, unspecified	1	1.1%	1	0.8%	4	1.6%	4	0.7%	**10**	**1.0%**
Descending Colon	3	3.2%	9	7.4%	10	3.9%	19	3.4%	**41**	**4.0%**
Hepatic Flexure	5	5.3%	5	4.1%	15	5.9%	24	4.3%	**49**	**4.8%**
Rectum	27	28.7%	27	22.3%	70	27.3%	143	25.6%	**267**	**25.9%**
Sigmoid Colon	19	20.2%	21	17.4%	61	23.8%	106	19.0%	**207**	**20.1%**
Splenic Flexure	5	5.3%	4	3.3%	4	1.6%	19	3.4%	**32**	**3.1%**
Transverse Colon	1	1.1%	11	9.1%	16	6.3%	40	7.2%	**68**	**6.6%**
Overlapping Lesion	8	8.5%	6	5.0%	0	0.0%	39	7.0%	**53**	**5.1%**
Not Recorded	0	0.0%	0	0.0%	0	0.0%	0	0.0%	**0**	**0.0%**
Missing Data	0	0.0%	0	0.0%	0	0.0%	0	0.0%	**0**	**0.0%**
Total	94	100%	121	100%	256	100%	559	100%	**1030**	**100%**

Table 12: Cancer Stage

N=All patients (final staging as reported by the Colorectal MDM)

	Borders		D&G		Fife		Lothian		SCAN	
Stage I	16	17.0%	22	18.2%	59	23.0%	119	21.3%	**216**	**21.0%**
Stage II	34	36.2%	26	21.5%	46	18.0%	129	23.1%	**235**	**22.8%**
Stage III	23	24.5%	34	28.1%	64	25.0%	152	27.2%	**273**	**26.5%**
Stage IV	17	18.1%	13	10.7%	55	21.5%	117	20.9%	**202**	**19.6%**
Not Applicable	1	1.1%	0	0.0%	32	12.5%	31	5.5%	**64**	**6.2%**
Not Recorded	3	3.2%	26	21.5%	0	0.0%	11	2.0%	**40**	**3.9%**
Total	94	100%	121	100%	256	100%	559	100%	**1030**	**100%**

This table has been updated from previous reports to account for the move from TNM 5 to TNM 8 Colorectal Cancer Staging.

Table 13: Clinical Stage IV

N=All patients diagnosed **presenting** with Final M1 Stage of disease at presentation

Patients presenting with Clinical Stage IV disease	Borders		D&G		Fife		Lothian		SCAN	
Metastatic Disease	18	19.1%	13	10.7%	47	18.4%	117	20.9%	**195**	**18.9%**
No Metastatic Disease	73	77.7%	83	68.6%	207	80.9%	418	74.8%	**781**	**75.8%**
Cannot Determine	0	0.0%	0	0.0%	2	0.8%	2	0.4%	**4**	**0.4%**
Not Recorded	3	3.2%	25	20.7%	0	0.0%	22	3.9%	**50**	**4.9%**
Missing Data	0	0.0%	0	0.0%	0	0.0%	0	0.0%	**0**	**0.0%**
Total	94	100%	121	100%	256	100%	559	100%	**1030**	**100%**

Table 14: Clinical Stage IV – SCAN yearly %Totals

SCAN Patients presenting with Clinical Stage IV disease	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
Metastatic Disease	24.0%	18.8%	22.2%	16.4%	22.8%	19.1%	18.9%
No Metastatic Disease	65.8%	72.2%	74.3%	78.0%	70.9%	69.1%	75.8%
Cannot Determine	8.8%	4.6%	0.7%	2.8%	4.5%	5.9%	0.4%
Not Recorded	1.2%	0.7%	2.8%	0.8%	1.8%	5.9%	4.9%
Missing Data	0.2%	4.8%	0.0%	2.0%	0.1%	0.0%	0.0%

Table 15: Radiotherapy
N = All patients diagnosed with **rectal cancer** who received Radiotherapy or Chemoradiotherapy

	Borders		D&G		Fife		Lothian		SCAN	
Neo-adjuvant single therapy	7	70.0%	2	33.3%	9	37.5%	9	20.9%	**27**	**32.5%**
Neo-adjuvant combined therapy	3	30.0%	0	0.0%	8	33.3%	9	20.9%	**20**	**24.1%**
Neo-adjuvant Long Course RT only	0	0.0%	0	0.0%	1	4.2%	4	9.3%	**5**	**6.0%**
Neo-adjuvant Radiotherapy-Chemotherapy (RAPIDO approach)	0	0.0%	0	0.0%	4	16.7%	6	14.0%	**10**	**12.0%**
Primary radical	0	0.0%	0	0.0%	0	0.0%	3	7.0%	**3**	**3.6%**
Adjuvant only	0	0.0%	0	0.0%	1	4.2%	0	0.0%	**1**	**1.2%**
Palliative	0	0.0%	4	66.7%	1	4.2%	9	20.9%	**14**	**16.9%**
Not Recorded	0	0.0%	0	0.0%	0	0.0%	3	7.0%	**3**	**3.6%**
Total	10	100%	6	100%	24	100%	43	100%	**83**	**100%**

Table 16: Chemotherapy
N=All patients who receive Chemotherapy or Chemoradiotherapy

	Borders		D&G		Fife		Lothian		SCAN	
Neo-adjuvant Combined therapy	3	12.5%	0	0.0%	8	8.7%	9	5.9%	**20**	**6.7%**
Palliative Combined therapy	1	4.2%	1	3.2%	1	1.1%	0	0.0%	**3**	**1.0%**
Neo-adjuvant Chemotherapy	0	0.0%	2	6.5%	5	5.4%	4	2.6%	**11**	**3.7%**
Neo-adjuvant Radiotherapy-Chemotherapy (RAPIDO approach)	0	0.0%	0	0.0%	4	4.3%	6	3.9%	**10**	**3.3%**
Primary Chemotherapy	1	4.2%	0	0.0%	0	0.0%	0	0.0%	**1**	**0.3%**
Palliative Chemotherapy	0	0.0%	4	12.9%	18	19.6%	35	22.9%	**57**	**19.0%**
Adjuvant Chemotherapy	19	79.2%	24	77.4%	56	60.9%	94	61.4%	**193**	**64.3%**
Not Recorded	0	0.0%	0	0.0%	0	0.0%	5	3.3%	**5**	**3.3%**
Total	24	100%	31	100%	92	100%	153	100%	**300**	**100%**

Table 17: Staging - Screened Patients v Non-Screened Patients
N=All colorectal patients

	Borders		D&G		Fife		Lothian		SCAN	
SCREENED PATIENTS										
Stage I	3	3.2%	10	8.3%	24	9.4%	45	9.9%	**82**	**8.0%**
Stage II	8	8.5%	7	5.8%	8	3.1%	23	5.1%	**46**	**4.5%**
Stage III	3	3.2%	4	3.3%	17	6.6%	31	6.8%	**55**	**5.3%**
Stage IV	1	1.1%	1	0.8%	4	1.6%	7	1.5%	**13**	**1.3%**
Not Applicable	0	0.0%	0	0.0%	0	0.0%	0	0.0%	**0**	**0.0%**
Not Recorded	0	0.0%	4	3.3%	0	0.0%	0	0.0%	**4**	**0.4%**
Total - Screened	15		26		53		106		**200**	
NON-SCREENED PATIENTS										
Stage I	13	13.8%	12	9.9%	35	13.7%	74	16.3%	**134**	**13.0%**
Stage II	26	27.7%	19	15.7%	38	14.8%	96	21.2%	**179**	**17.4%**
Stage III	20	21.3%	30	24.8%	47	18.4%	93	20.5%	**190**	**18.4%**
Stage IV	16	17.0%	12	9.9%	51	19.9%	110	24.3%	**189**	**18.3%**
Not Applicable	1	1.1%	0	0.0%	30	11.7%	70	15.5%	**101**	**9.8%**
Not Recorded	3	3.2%	22	18.2%	2	0.8%	10	2.2%	**37**	**3.6%**
Total - Non-screened	79		95		203		453		**830**	
TOTAL PATIENTS	**94**	**100%**	**121**	**100%**	**256**	**100%**	**559**	**100%**	**1030**	**100%**

Table 18: Type of First Cancer Treatment
N=All colorectal patients

	Borders		D&G		Fife		Lothian		SCAN	
Surgery	55	58.5%	82	67.8%	155	60.5%	343	61.4%	**635**	**61.7%**
Radiotherapy	7	7.4%	5	4.1%	12	4.7%	27	4.8%	**51**	**5.0%**
Chemoradiotherapy	4	4.3%	1	0.8%	7	2.7%	9	1.6%	**21**	**2.0%**
SACT	1	1.1%	2	1.7%	17	6.6%	18	3.2%	**38**	**3.7%**
Radical Endoscopic (e.g. EMR)	4	4.3%	7	5.8%	15	5.9%	37	6.6%	**63**	**6.1%**
Palliative Endoscopic (e.g. stent)	0	0.0%	0	0.0%	1	0.4%	17	3.0%	**18**	**1.7%**
Other therapy	0	0.0%	0	0.0%	0	0.0%	0	0.0%	**0**	**0.0%**
Supportive Care only	20	21.3%	22	18.2%	34	13.3%	66	11.8%	**142**	**13.8%**
Patient died before treatment	0	0.0%	2	1.7%	3	1.2%	11	2.0%	**16**	**1.6%**
Patient refused treatment	3	3.2%	0	0.0%	11	4.3%	30	5.4%	**44**	**4.3%**
Not Recorded	0	0.0%	0	0.0%	1	0.4%	1	0.2%	**2**	**1.6%**
Total	94	100.0%	121	100%	256	100%	559	100%	**1030**	**100%**

Table 19: Surgical Approach
N=All colorectal cancer patients undergoing surgery

	Borders		D&G		Fife		Lothian		SCAN	
Laparoscopic	57	85.1%	36	41.4%	40	21.2%	185	43.1%	**318**	**41.2%**
Laparoscopic converted to Open	1	1.5%	7	8.0%	7	3.7%	33	7.7%	**48**	**6.2%**
Open	3	4.5%	39	44.8%	57	30.2%	104	24.2%	**203**	**26.3%**
Transanal Endoscopic Microsurgery	2	3.0%	2	2.3%	0	0.0%	9	2.1%	**13**	**1.7%**
Transanal Resection of Tumour	0	0.0%	1	1.1%	5	2.6%	11	2.6%	**17**	**2.2%**
Robotic	3	4.5%	0	0.0%	70	37.0%	47	11.0%	**120**	**15.5%**
Robotic converted to Open	0	0.0%	0	0.0%	0	0.0%	2	0.5%	**2**	**0.3%**
Endoscopic	0	0.0%	2	2.3%	10	5.3%	36	8.4%	**48**	**6.2%**
Not Recorded	1	1.5%	0	0.0%	0	0.0%	2	0.5%	**3**	**0.4%**
Total	67	100%	87	100%	189	100%	429	100%	**772**	**100%**

Table 20: Grade of Differentiation
N= All colorectal cancer patients

	Borders		D&G		Fife		Lothian		SCAN	
Well/Moderate	59	62.8%	83	68.6%	159	62.1%	345	61.7%	**646**	**62.7%**
Poor	8	8.5%	12	9.9%	26	10.2%	64	11.4%	**110**	**10.7%**
Not applicable (Mucinous or other special type)	1	1.1%	0	0.0%	27	10.5%	41	7.3%	**69**	**6.7%**
Not applicable (No path available)	23	24.5%	20	16.5%	35	13.7%	81	14.5%	**159**	**15.4%**
Not Recorded	3	3.2%	6	5.0%	9	3.5%	28	5.0%	**46**	**4.5%**
Total	94	100%	121	100%	256	100%	559	100%	**1030**	**100%**

Table 21: EMR/TEMS/TAMIS Resection
N= all patients having endoscopic mode of first treatment (excluding colonic stents)

	Borders		D&G		Fife		Lothian		SCAN	
Endoscopic Mucosal Resection	4		6		17		22		**49**	
EMR followed by definitive Surgery	3	75.0%	0	0.0%	7	41.2%	5	22.7%	**15**	**30.6%**
TEMS resection	2		1		0		9		**12**	
TEMS followed by definitive surgery	0	0.0%	0	0.0%	0	0.0%	1	11.1%	1	**8.3%**
TAMIS resection	0		0		5		1		**6**	
TAMIS followed by definitive surgery	0	0.0%	0	0.0%	0	0.0%	0	0.0%	**0**	**0.0%**

Table 22: Permanent Stoma rate is not more than 40% in patients with rectal tumours
(Old QIS Standard 8b1)

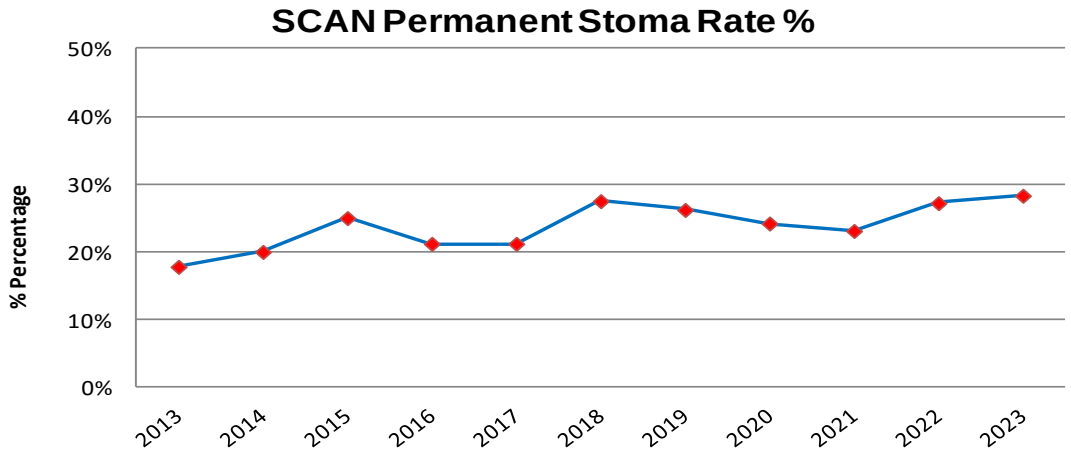
In many cases it is not possible to tell if a stoma is permanent until a number of years have passed. For the purposes of this report, a stoma is defined as permanent only for those procedures (abdominoperineal resection and colostomy and panproctocolectomy and ileostomy) which the stoma was fashioned with the intention of being permanent.

N= All Rectal Cancer patients undergoing elective surgery excluding non-definitive surgery

	Borders		D&G		Fife		Lothian		SCAN	
All Rectal Cancer patients undergoing elective Surgery	17		17		43		**88**		**165**	
Patients undergoing APER with Colostomy OR Panproctocolectomy with ileostomy left with a permanent stoma	7	41.2%	3	17.6%	12	27.9%	25	28.4%	**47**	**28.5%**

Table 23: SCAN %Permanent Stoma rates

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
SCAN	17.8%	20.0%	25.0%	21.2%	21.2%	27.5%	26.2%	24.2%	23.1%	27.2%	28.5%



Clinical Trial and Research Study Access

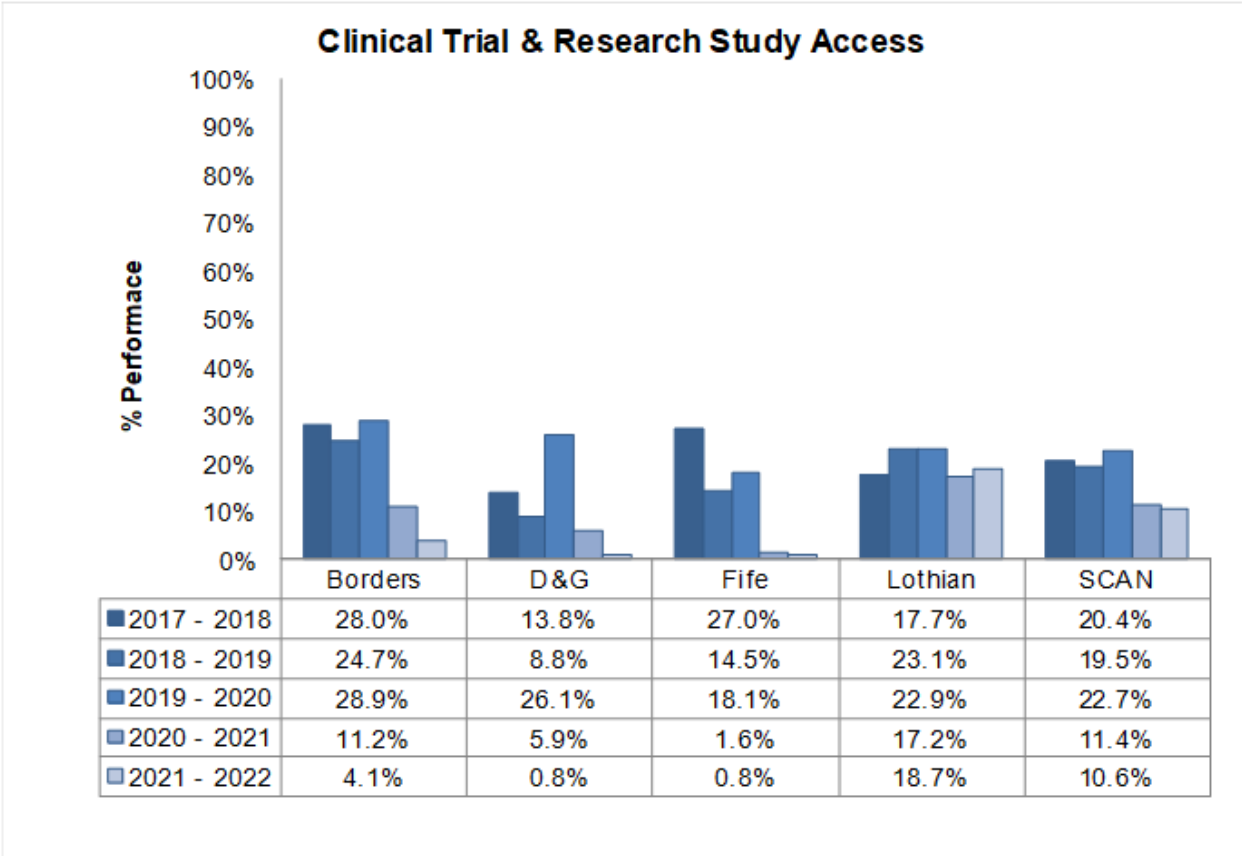
From 2021 the Clinical Trial and Research Study Access QPI has been dropped and will no longer be reported on as a QPI. However, it was felt useful by the Colorectal SCAN Group to keep reporting this data in the Key Category section of this report.

Numerator = Number of patients with colorectal cancer consented for a clinical trial/research study. Data provided by SCRN.

Denominator = Cancer Registry colorectal cancer 5 year average (2017-2021)

	Borders	D&G	Fife	Lothian	SCAN
Numerator	13	10	5	23	**51**
Denominator	93	121	257	559	**1030**
% Performance	14.0%	8.3%	1.9%	4.1%	**5.0%**

Open Trials 2022	**Numbers consented**
Add-Aspirin Trial	4
ARIEL	2
Biobank SR1418	1
BNT411-01	1
Cell Free DNA	1
Mint5	1
SABR-COMET 10	1
SABR-COMET-3	4
SCCAMP V1.0	1
Scottish Colorectal Cancer Genetic Susceptibility study 3 (SOCCS3)	35
Total	**51**
Trials not currently registered with SCRN (supplied by Clinician)	

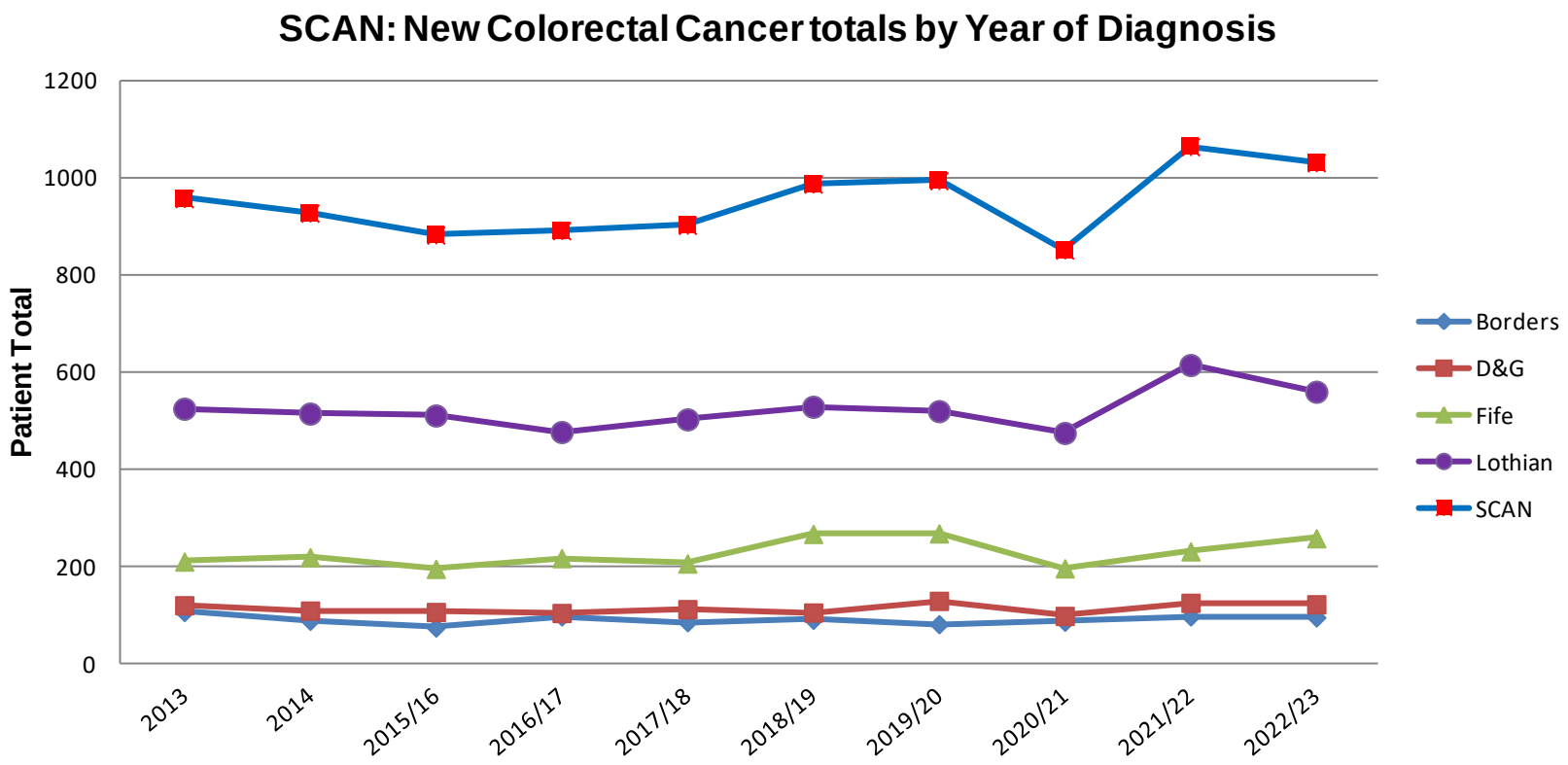


	Borders	D&G	Fife	Lothian	SCAN
2017 - 2018	28.0%	13.8%	27.0%	17.7%	20.4%
2018 - 2019	24.7%	8.8%	14.5%	23.1%	19.5%
2019 - 2020	28.9%	26.1%	18.1%	22.9%	22.7%
2020 - 2021	11.2%	5.9%	1.6%	17.2%	11.4%
2021 - 2022	4.1%	0.8%	0.8%	18.7%	10.6%

SCAN: New Colorectal Cancer totals by Year of Diagnosis

Note: Totals reflect collection of data by calendar year until 2015 when period of audit changed to financial year

	2013	2014	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
Borders	105	87	73	96	84	89	80	85	99	94
D&G	119	108	105	103	111	104	128	97	126	121
Fife	209	218	194	216	205	266	267	195	237	256
Lothian	524	514	510	476	502	528	519	474	614	559
SCAN	**957**	**927**	**882**	**891**	**902**	**987**	**994**	**851**	**1076**	**1030**



CRC QPI Attainment Summary 2021-2022		Target%	Borders		D&G		Fife		Lothian		SCAN	
1. Radiological Staging & Diagnosis	Colon	95	N 41 D 43	95.3%	N 59 D 61	96.7%	N 95 D 96	99.0%	N 252 D 253	99.6%	N 447 D 453	98.7%
	Rectum	95	N 20 D 20	100%	N 19 D 21	90.5%	N 34 D 34	100%	N 73 D 73	100%	N 146 D 148	98.6%
2. Pre-operative imaging of the Colon		95	N 57 D 58	98.3%	N 64 D 68	94.1%	N 100 D 110	90.9%	N 274 D 303	90.4%	N 495 D 539	91.8%
5. Lymph Node Yield: surgical resection where ≥12 lymph nodes		90	N 47 D 56	83.9%	N 71 D 74	95.9%	N 100 D 126	79.4%	N 307 D 360	85.3%	N 525 D 616	85.2%
7. Surgical Margins	Primary surgery or surgery after short course XRT	95	N 15 D 16	93.8%	N 21 D 21	100%	N 21 D 21	100%	N 56 D 60	93.3%	N 113 D 118	95.8%
	After NACT, or long course XRT ± chemo, or short course XRT with long course intent	85	N 2 D 2	100%	N 1 D 1	100%	N 13 D 15	86.7%	N 15 D 17	88.2%	N 31 D 35	88.6%
8. Re-operation Rates		<10	N 4 D 53	7.5%	N 10 D 78	12.8%	N 12 D 151	7.9%	N 25 D 414	6.0%	N 51 D 696	7.3%
9. Anastomotic Dehiscence	Colon	<5	N 0 D 28	0%	N 5 D 37	13.5%	N 2 D 62	3.2%	N 4 D 185	2.2%	N 11 D 312	3.5%
	Rectum incl. TME	<10	N 1 D 29	3.4%	N 0 D 18	0.0%	N 1 D 52	1.9%	N 12 D 144	8.3%	N 14 D 243	5.8%
10 (i). 30 day mortality following surgical resection	Elective	<3	N 0 D 50	0%	N 1 D 72	1.4%	N 3 D 125	2.4%	N 8 D 325	2.5%	N 12 D 572	2.1%
	Emergency	<15	N 0 D 6	0%	N 1 D 5	20.0%	N 1 D 23	4.3%	N 4 D 88	4.5%	N 6 D 122	4.9%
10 (ii). 90 day mortality following surgical resection	Elective	<4	N 1 D 50	2.0%	N 2 D 69	2.9%	N 3 D 125	2.4%	N 10 D 317	3.2%	N 16 D 561	2.9%
	Emergency	<20	N 0 D 6	0%	N 2 D 5	40.0%	N 1 D 23	4.3%	N 7 D 87	8.0%	N 10 D 121	8.3%
11. Adjuvant Chemotherapy		70	N 10 D 11	90.9%	N 11 D 14	78.6%	N 22 D 25	88.0%	N 63 D 70	90.0%	N 106 D 120	88.3%

CRC QPI Attainment Summary 2021-2022		Target%	Borders		D&G		Fife		Lothian		SCAN	
12 (i). 30 day Mortality following Radical Radiotherapy	Neo-adjuvant	<1	N 0 D 0	-	N 0 D 0	-	N 0 D 6	0%	N 0 D 16	0%	N 0 D 22	0%
	Radiotherapy	<1	N 0 D 7	0%	N 0 D 6	0%	N 0 D 14	0%	N 0 D 25	0%	N 0 D 52	0%
12 (ii). 90 day Mortality following Radical Radiotherapy	Neo-adjuvant	<1	N 0 D 0	-	N 0 D 0	-	N 0 D 6	0%	N 0 D 16	0%	N 0 D 22	0%
	Radiotherapy	<1	N 0 D 7	0%	N 0 D 6	0%	N 0 D 14	0%	N 0 D 25	0%	N 0 D 52	0%
14. 30 day Mortality following SACT	Curable	<1	N - D -	-	N - D -	-	N - D -	-	N - D -	-	N - D -	-
	Non-Curable	<5	N - D -	-	N - D -	-	N - D -	-	N - D -	-	N - D -	-
15. Colorectal Liver Metastases	Synchronous	95	N 4 D 4	100%	N 6 D 10	60.0%	N 16 D 25	64.0%	N 32 D 49	65.3%	N 58 D 88	65.9%
	Metachronous	95	N 0 D 0	-	N 0 D 0	-	N 6 D 8	75.0%	N 8 D 12	66.7%	N 14 D 20	70.0%
16. Assessment of Mismatch Repair (MMR)/Microsatellite (MSI) Status	Assessed	95	N 69 D 83	83.1%	N 35 D 104	33.7%	N 99 D 195	50.8%	N 463 D 524	88.4%	N 666 D 906	73.5%
	Referred to Genetics	90	N 0 D 3	0%	N 1 D 1	100%	N 4 D 7	57.1%	N 4 D 7	57.1%	N 9 D 18	50.0%

KEY	*Numerator (N)*	*% Performance*
	Denominator (D)	

GLOSSARY

Active treatment: Treatment which is intended to improve the cancer and/or alleviate symptoms, as opposed to supportive care.

Adenocarcinoma: A malignant growth of glandular tissue.

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 rejoining 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

Audit: The measuring and evaluation of care against best practice with a view to improving current practice and care delivery.

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.

Cancer: The name given to a group of diseases that can occur in any organ of the body, and in blood, and which involve abnormal uncontrolled growth of cells.

Cancer Centre: Cancer services are based in cancer centres. Such centres provide the entire spectrum of cancer care - both on-site and to associated cancer units.

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 Governance: Ensures that patients receive the highest quality of care possible, putting each patient at the centre of his or her care. This is achieved by making certain that those providing services work in an environment that supports them and places the safety and quality of care at the top of the organisation's agenda.

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 centimetres 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.

Dataset: A list of required and specific information relating to a single disease.

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: The direct invasion of a blood vessel (usually a vein) by tumour. In rectal cancer, this can occur on a macroscopic level and be detected on staging MRI. It is a significant prognostic factor, being a predictor of haematogenous spread.

Fatal: Results in death.

HIS Healthcare Improvement Scotland: Healthcare Improvement Scotland (HIS) brings together the roles of the former Clinical Standards Board of Scotland (CSBS) and NHS Quality Improvement Scotland (NHS QIS). This is a statutory body whose purpose is to support healthcare providers in Scotland to deliver high quality, evidence-based, safe, effective and person-centred care; and to scrutinise those services to provide public assurance about the quality and safety of that care. www.healthcareimprovementscotland.org

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: Refers to a range of techniques which rely on the use of radiological image guidance (X-ray fluoroscopy, ultrasound, computed tomography (CT) or magnetic resonance imaging (MRI) to precisely target therapy.

Intravenous iodinated contrast: A substance administered intravenously (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 structures 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: The collective name for a group of clinicians from various medical and non-medical disciplines appropriate to the disease area.

Multi Disciplinary Meeting (MDM): A regular meeting where participants from various clinical disciplines appropriate to the disease meet to discuss and agree diagnosis and subsequent clinical management of patients.

Neo-adjuvant Therapy: The use of chemotherapy and/or radiotherapy prior to surgery. The aim of neo-adjuvant therapy is to reduce the size of any cancerous tumour.

NCA: North Cancer Alliance.

Oncologist: A doctor who specialises in the treatment of cancer patients. A clinical oncologist, or radiotherapist, specialises in treating cancer with radiation or drugs, and a medical oncologist specialises in treating cancer with drugs.

Outcome: A measure of effects, beneficial or adverse, which a person experiences as a result of the care, treatments or services they have received.

Palliative: Treatment 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).

PHS: Public Health Scotland is Scotland's lead national agency for improving and protecting the health and wellbeing of all Scotland's people. www.publichealthscotland.scot

Polyp: A small finger-like growth arising from the skin or a mucus surface, usually attached by a stem.

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.

Quality assurance (QA): When a sample of data is compared with the data definitions.

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 colon or ano-rectum is removed and the remaining ends joined together.

Rectal Cancer: Cancer that forms in the tissues of the rectum (the last several centimetres 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.
SACT: All anti-cancer drug treatments such as chemotherapy and immunotherapy.
SCAN: South East Scotland Cancer Network.
Short course radiotherapy: 5 treatments of radiotherapy given (as a course of therapy) 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 colorectal tumours presenting at the same time in the colon or rectum.
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): An alternative to open or laparoscopic excision whereby small rectal lesions are surgically excised using a minimally invasive approach.
Transanal resection of tumour (TART): Surgical procedure performed to remove a tumour in the rectum through the anus.
WoSCAN: West of Scotland Cancer Network.