West of Scotland Cancer Network

Colorectal Cancer
Managed Clinical Network

Audit Report

Colorectal Cancer Quality Performance Indicators

Clinical Audit Data:
1st April 2022 and 31st March 2023

Dr Janet Graham
MCN Clinical Lead

Kevin Campbell
MCN Manager

Christine Urquhart
Information Analyst

Colorectal Cancer Quality Performance Indicators: Data Overview

Patients diagnosed April 2022 - March 2023

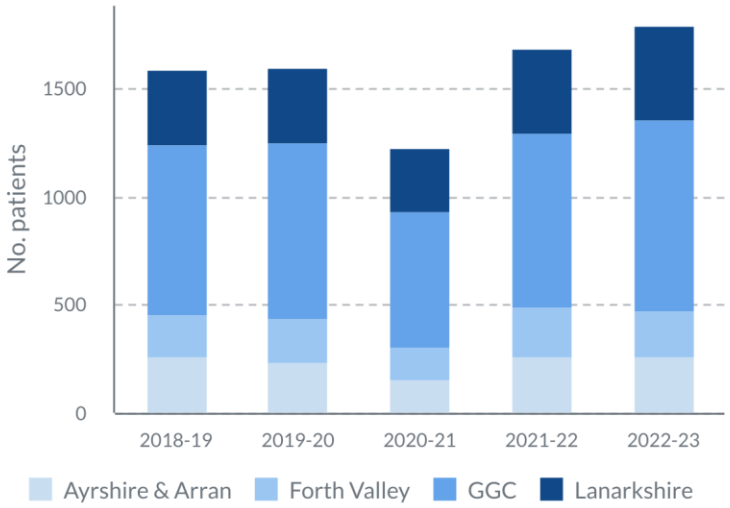
Number of patients	1791
Median age of patients	70

Age Standardised Net Survival*

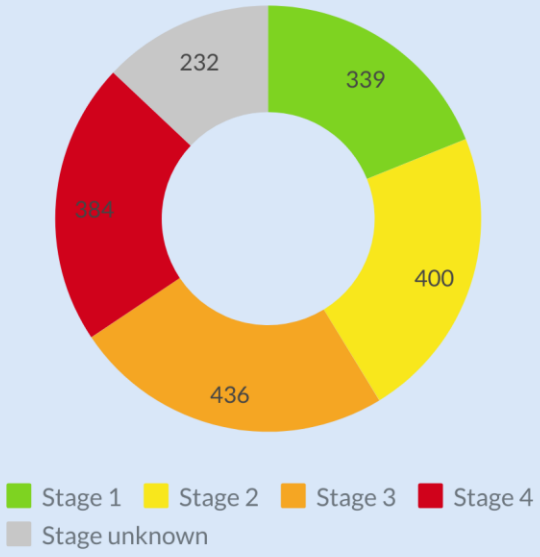
1 Year Survival	78%
5 Year Survival	60%

* patients diagnosed 2015-2019.
www.publichealthscotland.scot/publications/cancer-survival-statistics/

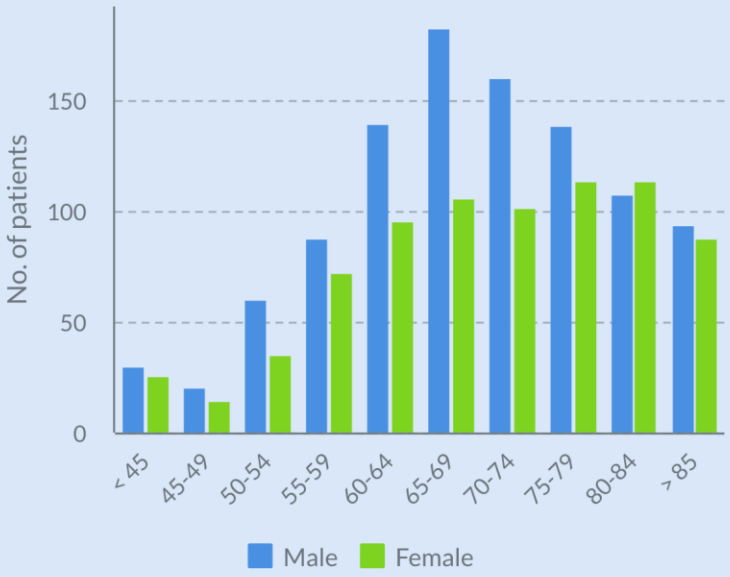
Where are patients diagnosed



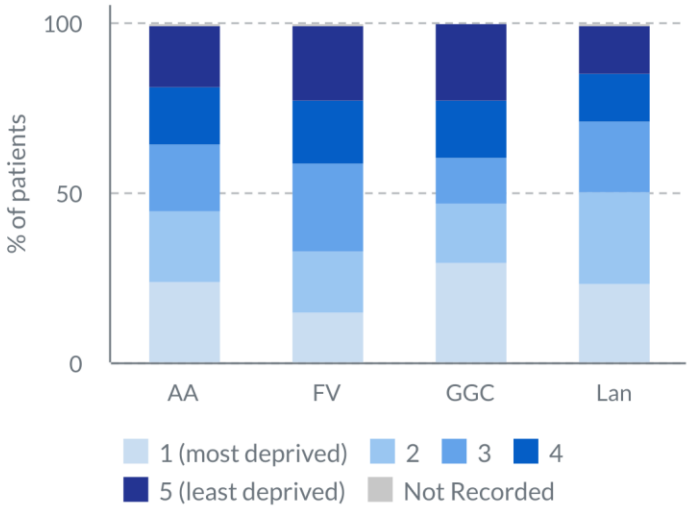
Stage at Presentation



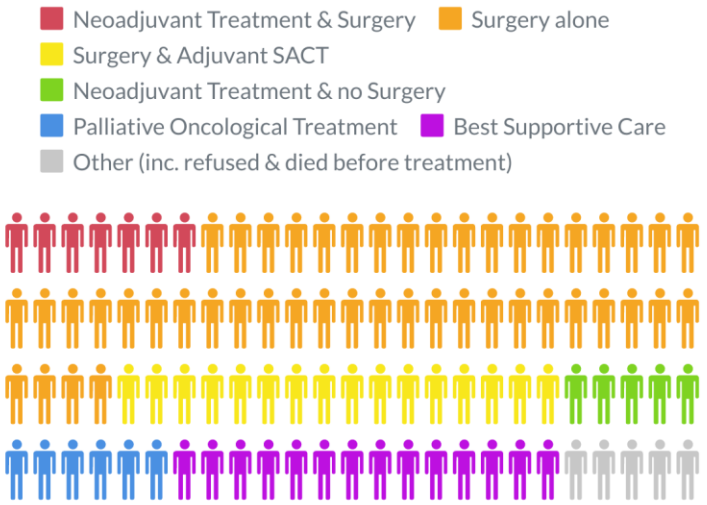
Age of patients



Deprivation Index of Patients



First Treatment



Executive Summary

This report presents an assessment of performance of the West of Scotland (WoS) Colorectal Cancer services relating to patients diagnosed in the twelve months between 1st April 2022 and 31st March 2023.

Cancer audit has underpinned much of the regional development and service improvement work of the MCN and the regular reporting of activity and performance have been fundamental in assuring the quality of care delivered across the region. With the development of QPIs, this has now become a national programme to drive continuous improvement and ensure equity of care for patients across Scotland.

The Colorectal Cancer MCN is encouraged by the results presented in this report which demonstrate that patients with colorectal cancer in the WoS continue to receive a consistently high standard of care. Targets were met at regional level for all but four of the QPIs reported with excellent outcomes for QPIs related to radical treatment; surgery, radiotherapy and chemotherapy. This reflects the very high quality of care provided by Colorectal Cancer MDTs across the WoS and allows the MCN to focus on the aspects of the service that did not achieve the QPI target this year. Note that QPI measures that have been met by all NHS Boards are included in the summary results table but not within the body of the report.

Two new QPIs were reported for the second time; these have been challenging to meet however improvements in service can been seen since the introduction of the measures. The proportion of patients with synchronous or metachronous colorectal liver metastases that are referred to the HPB MDT has increased in 2022-23 (QPI 15); however, all NHS Boards need to ensure that all patients with colorectal liver metastases not meeting the specific exclusions of QPI 15 are referred to enable the HPB MDT to make decisions on the treatment of the liver metastases. NHSGGC have a CRC Liver Mets MDT and are keen to expand this service to other NHS Boards within the region, although there are resourcing constraints.

QPI 16 focusses on MMR/MSI testing of patients and referral to genetics. MMR/MSI testing was not routinely undertaken for all patients in WoSCAN in 2021 but was rolled out throughout the region in early 2022, explaining the considerable improvement in this second year of reporting for QPI 16(i). However, there is further work for NHS Boards to streamline this pathway for MMR/MSI testing. QPI 16(ii) results also highlighted the need for further work to ensure that all patients where MMR/MSI testing is suggestive of Lynch Syndrome are referred to Genetics Services.

Actions Required:

- **MCN to initiate discussions to reach a national consensus on the definition for rectal cancer with the aim of including this within the Colorectal Cancer QPI dataset at the upcoming Formal Review of Colorectal Cancer QPIs.**
- **NHS Lanarkshire to provide feedback to the MCN on an internal audit to be undertaken by the pathology department to review cases not meeting QPI 5.**
- **NHS Forth Valley to highlight to both surgery and pathology services the need to ensure adequate lymph nodes are resected and examined by pathology.**
- **NHS Boards to ensure that all patients with colorectal liver metastases not meeting the specific exclusions of QPI 15 are referred to enable the HPB MDT to make decisions on the treatment of the liver metastases**.

- **NHSGGC to report to MCN on patients where MMR/MSI testing was requested but not reported.**
- **NHS Forth Valley to provide feedback to the MCN on the benefit of appointing a CNS to oversee MMR/MSI testing and referrals to genetics.**
- **NHS Ayrshire & Arran to provide feedback to the MCN on the review of the MMR/MSI testing pathway and ensure that remedial action is taken to improve performance against QPI 16(i).**
- **NHS Ayrshire & Arran to provide the MCN with an update on progress with improving communications with NHSGGC genetics laboratory in instances where results are suggestive of Lynch Syndrome.**
- **MCN to work with all NHS Boards to review any patients where MMR/MSI results are suggestive of Lynch Syndrome but have not yet been referred to Genetics Services and consider referral at this time.**
- **MCN to agree wording for communications with the families of deceased patients where MMR/MSI results are suggestive of Lynch Syndrome.**

A summary of actions has been included within the Action Plan accompanying this report and templates have been provided to Boards. **Completed Action Plans should be returned to WoSCAN in a timely manner to allow the plans to be reviewed at the Regional Cancer Oversight Group in February.**

WoSCAN Colorectal Cancer Performance Summary Report

Key	
	Above Target Result
	Below Target Result
-	No patients included within measure

QPI	Target	Year	AA	FV	NG	SG	Clyde	GGC	Lan	WoS
QPI 1(i): Proportion of patients with colon cancer who undergo CT chest, abdomen and pelvis before definitive treatment.	**95%**	2022-23	99% (99/100)	99% (88/89)	100% (99/99)	100% (131/131)	100% (125/125)	100% (355/355)	100% (178/178)	100% (720/722)
		2021-22	100%	99%	98%	99%	100%	99%	100%	99%
		2020-21								
QPI 1(ii): Proportion of patients with rectal cancer who undergo CT chest, abdomen and pelvis and MRI pelvis before definitive treatment.	**95%**	2022-23	100% (37/37)	100% (21/21)	98% (44/45)	84% (41/49)	100% (42/42)	93% (127/136)	100% (50/50)	96% (235/244)
		2021-22	96%	100%	90%	93%	98%	94%	98%	96%
		2020-21								
QPI 2: 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 the colon is to be removed.	**95%**	2022-23	88% (98/111)	90% (87/97)	87% (111/128)	88% (143/163)	86% (116/135)	87% (370/426)	85% (145/170)	87% (700/804)
		2021-22	90%	89%	87%	85%	77%	83%	88%	86%
		2020-21	80%	88%	85%	83%	81%	83%	85%	84%
† **QPI 5:** Proportion of patients with colorectal cancer who undergo surgical resection where ≥ 12 lymph nodes are pathologically examined.	**90%**	2022-23	99% (132/133)	87% (33/38)	91% (137/150)	92% (176/191)	93% (154/166)	92% (467/507)	87% (165/189)	92% (797/867)
		2021-22	96%	96%	89%	91%	88%	90%	96%	93%
		2020-21								
† **QPI 7(i):** Proportion of patients with rectal cancer who undergo surgical resection in which the circumferential margin is clear of tumour (neoadjuvant short course radiotherapy).	**95%**	2022-23	96% (25/26)	100% (15/15)	100% (28/28)	97% (31/32)	96% (24/25)	98% (83/85)	100% (21/21)	98% (144/147)
		2021-22	81%	87%	95%	100%	100%	98%	95%	94%
		2020-21								

QPI	Target	Year	AA	FV	NG	SG	Clyde	GGC	Lan	WoS
† **QPI 7(ii):** Proportion of patients with rectal cancer who undergo surgical resection in which the circumferential margin is clear of tumour (neoadjuvant chemotherapy, long course radiotherapy, long course chemoradiotherapy or short course radiotherapy with long course intent).	**85%**	2022-23	100% (6/6)	-	92% (23/25)	87% (13/15)	100% (10/10)	92% (46/50)	92% (12/13)	93% (66/71)
		2021-22	-	-	100%	88%	88%	91%	92%	92%
		2020-21								
† **QPI 8:** 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).	**<10%**	2022-23	7% (10/149)	5% (5/101)	3% (5/169)	5% (11/208)	4% (7/181)	4% (23/558)	5% (10/212)	5% (48/1020)
		2021-22	6%	3%	4%	4%	3%	4%	7%	5%
		2020-21	11%	1%	3%	4%	7%	5%	9%	6%
† **QPI 9(i):** Proportion of patients who undergo colonic anastomosis with anastomotic leak as a post-operative complication.	**< 5%**	2022-23	6% (4/65)	6% (3/47)	0% (0/69)	5% (5/95)	1% (1/69)	3% (6/233)	2% (2/96)	3% (15/441)
		2021-22	1%	2%	0%	2%	0%	1%	7%	2%
		2020-21								
† **QPI 9(ii):** Proportion of patients who undergo rectal anastomosis with anastomotic leak as a post-operative complication.	**< 10%**	2022-23	9% (5/54)	3% (1/34)	3% (2/64)	3% (2/61)	3% (2/64)	3% (6/189)	8% (6/72)	5% (18/349)
		2021-22	2%	3%	5%	5%	5%	5%	6%	5%
		2020-21								
† **QPI 10(i):** Proportion of patients with colorectal cancer who die within 30 days of elective surgical resection.	**< 3%**	2022-23	2% (3/123)	1% (1/97)	0% (0/145)	1% (1/176)	1% (2/151)	1% (3/472)	1% (1/177)	1% (8/869)
		2021-22	2%	0%	0%	1%	1%	1%	1%	1%
		2020-21	2%	1%	0%	1%	2%	1%	1%	1%
† **QPI 10(i):** Proportion of patients with colorectal cancer who die within 90 days of elective surgical resection.	**< 4%**	2022-23	3% (4/121)	1% (1/96)	0% (0/135)	1% (1/176)	2% (3/150)	1% (4/461)	1% (2/172)	1% (11/850)
		2021-22	2%	0%	0%	1%	2%	1%	2%	1%
		2020-21	2%	1%	0%	3%	6%	3%	3%	3%

QPI	Target	Year	AA	FV	NG	SG	Clyde	GGC	Lan	WoS
† **QPI 10(ii):** Proportion of patients with colorectal cancer who die within 30 days of emergency surgical resection.	**< 15%**	2022-23	17% (4/24)	-	11% (2/19)	6% (2/31)	7% (2/29)	8% (6/79)	3% (1/33)	9% (12/140)
		2021-22	14%	6%	0%	0%	0%	0%	7%	5%
		2020-21	0%	0%	0%	18%	6%	8%	5%	5%
† **QPI 10(ii):** Proportion of patients with colorectal cancer who die within 90 days of emergency surgical resection.	**< 20%**	2022-23	21% (5/24)	-	11% (2/19)	6% (2/31)	14% (4/29)	10% (8/79)	3% (1/32)	11% (15/139)
		2021-22	14%	6%	11%	0%	0%	4%	10%	8%
		2020-21	9%	10%	0%	18%	6%	8%	7%	8%
QPI 11: Proportion of patients who are ≤ 74 years of age at diagnosis with stage III colorectal cancer that receive adjuvant chemotherapy.	**70%**	2022-23	84% (27/32)	90% (18/20)	76% (25/33)	93% (38/41)	76% (26/34)	82% (89/108)	78% (43/55)	82% (177/215)
		2021-22	97%	87%	90%	97%	84%	90%	85%	90%
		2020-21								
***QPI 12(i):** Proportion of patients with colorectal cancer who die within 30 days of **neoadjuvant chemoradiotherapy** treatment with curative intent.	**< 1%**	2022-23	0% (0/5)	0% (0/6)	0% (0/17)	0% (0/12)	0% (0/24)	0% (0/53)	0% (0/24)	0% (0/88)
		2021-22	0%	0%	0%	0%	0%	0%	0%	0%
		2020-21	0%	-	0%	0%	0%	0%	0%	0%
***QPI 12(ii):** Proportion of patients with colorectal cancer who die within 90 days of **neoadjuvant chemoradiotherapy** treatment with curative intent.	**< 1%**	2022-23	0% (0/5)	0% (0/6)	0% (0/16)	0% (0/11)	0% (0/23)	0% (0/50)	0% (0/23)	0% (0/84)
		2021-22	0%	0%	0%	0%	0%	0%	0%	0%
		2020-21	0%	-	0%	0%	0%	0%	0%	0%
***QPI 12(i):** Proportion of patients with colorectal cancer who die within 30 days of **radiotherapy** treatment with curative intent.	**< 1%**	2022-23	0% (0/8)	0% (0/6)	6% (1/18)	0% (0/32)	0% (0/13)	2% (1/63)	0% (0/28)	1% (1/105)
		2021-22	0%	-	0%	0%	0%	0%	0%	0%
		2020-21	0%	0%	0%	0%	0%	0%	-	0%

QPI	Target	Year	AA	FV	NG	SG	Clyde	GGC	Lan	WoS
***QPI 12(ii):** Proportion of patients with colorectal cancer who die within 90 days of **radiotherapy** treatment with curative intent.	**< 1%**	2022-23	0% (0/8)	0% (0/6)	6% (1/18)	0% (0/32)	8% (1/13)	3% (2/63)	0% (0/28)	2% (2/105)
		2021-22	0%	-	0%	0%	0%	0%	0%	0%
		2020-21	0%	0%	0%	13%	0%	4%	-	2%
QPI 15(i): Proportion of patients with a new diagnosis of **synchronous** colorectal liver metastases who are referred to a HPB MDT to discuss their management.	**95%**	2022-23	100% (5/5)	100% (5/5)	100% (14/14)	75% (9/12)	100% (8/8)	91% (31/34)	100% (21/21)	95% (62/65)
		2021-22	100%	92%	64%	67%	100%	74%	95%	85%
		2020-21								
QPI 15(ii): Proportion of patients with a new diagnosis of **metachronous** colorectal liver metastases who are referred to a HPB MDT to discuss their management.	**95%**	2022-23	-	-	80% (4/5)	100% (7/7)	-	93% (14/15)	89% (8/9)	93% (28/30)
		2021-22	100%	-	-	80%	-	88%	-	81%
		2020-21								
QPI 16(i): Proportion of patients with colorectal cancer who have MMR/MSI status assessed.	**95%**	2022-23	86% (192/223)	92% (147/160)	96% (213/223)	94% (299/317)	96% (240/250)	95% (752/790)	99% (381/386)	94% (1472/1559)
		2021-22	48%	62%	77%	71%	72%	73%	63%	65%
		2020-21								
QPI 16(i): Proportion of patients with results suggestive of Lynch Syndrome who are referred to genetics	**90%**	2022-23	50% (3/6)	20% (1/5)	67% (4/6)	100% (5/5)	-	80% (12/15)	50% (3/6)	59% (19/32)
		2021-22	-	45%	80%	-	40%	67%	67%	59%
		2020-21								

† QPIs 5, 7, 8, 9 and 10 are analysed by Board/hospital of surgery.

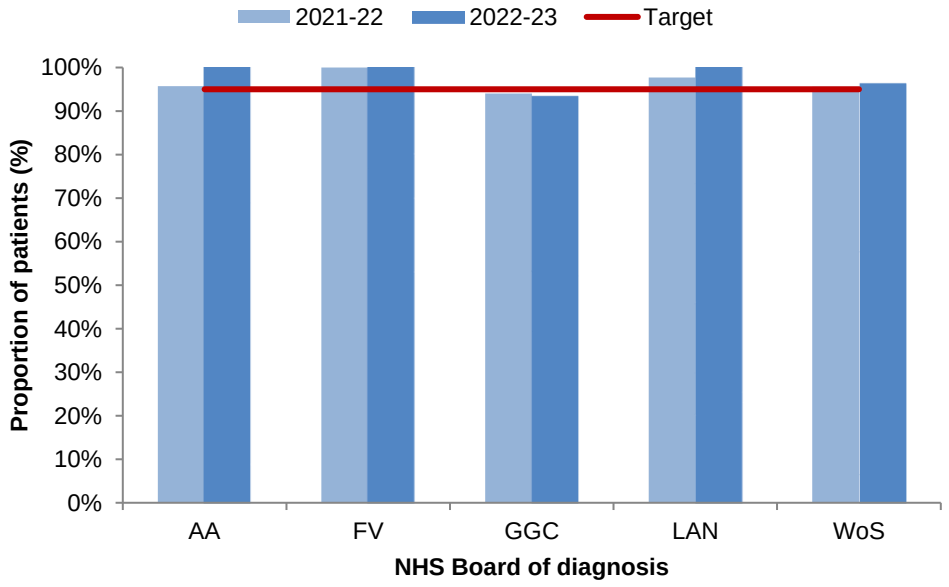
**Small numbers in some Boards - percentage comparisons over a single year should be viewed with caution.*

QPI 1: Radiological Diagnosis and Staging

QPI 1:		Patients with colorectal cancer should be evaluated with appropriate imaging to detect extent of disease and guide treatment decision making.
Numerator:	(i)	Number of patients with colon cancer who undergo CT chest, abdomen and pelvis before definitive treatment.
	(ii)	All patients with rectal cancer undergoing definitive treatment who undergo CT chest, abdomen and pelvis and MRI pelvis before definitive treatment.
Denominator:	(i)	All patients with colon cancer.
	(ii)	All patients with rectal cancer undergoing definitive treatment (chemoradiotherapy or surgical resection).
Exclusions:	(i)	Patients who refuse investigation, patients who undergo emergency surgery, patients undergoing supportive care only, patients who undergo palliative treatment (chemotherapy, radiotherapy, surgery or stenting) and patients who died before first treatment.
	(ii)	Patients who refuse investigation, patients who undergo emergency surgery, 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) and patients who died before treatment.
Target:		95%

Specification (i) – patients with colon cancer. The QPI was met by all NHS Boards and Sectors.

Specification (ii) – patients with rectal cancer



Board / Area	Performance (%)	Numerator	Denominator
AA	100%	37	37
FV	100%	21	21
NG	97.8%	44	45
SG	83.7%	41	49
Clyde	100%	42	42
GGC	93.4%	127	136
Lan	100%	50	50
WoS	**96.3%**	**235**	**244**

Patients not meeting this QPI in the South Glasgow sector of NHSGGC were reviewed. The failure to achieve the target was due to adjustments to the site of tumour recorded following review of data, which identified some patients previously recorded as having colon cancer as having rectal cancer; prior to this review performance was above the 95% target.

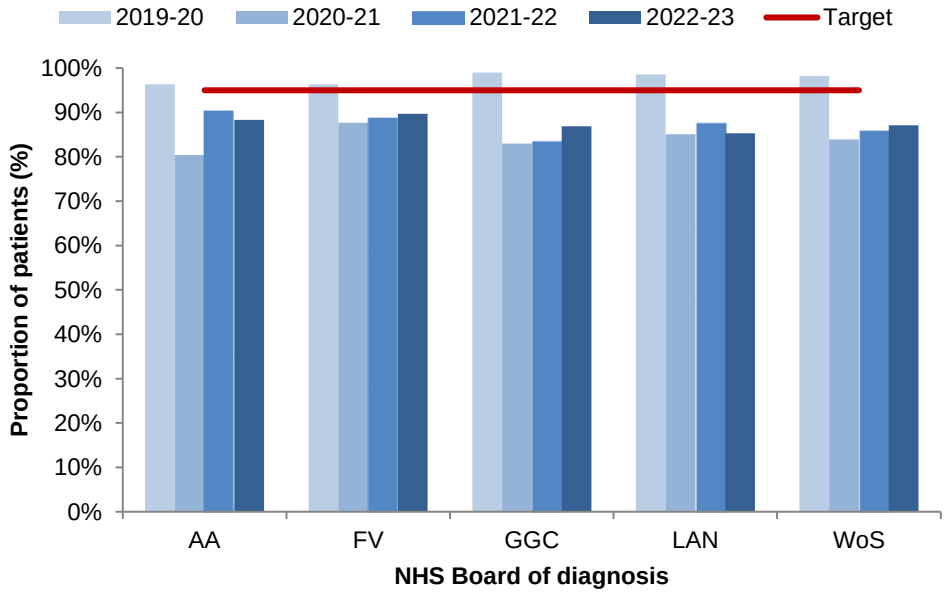
Rectal cancer can be defined by CT, MRI or endoscopy (15cm from anal verge on rigid sigmoidoscopy) or at the time of surgery; different MDTs may use different definitions. In South Glasgow retrospective review and reclassification has resulted in a higher proportion of cancers in the recto-sigmoid area being classed as rectal cancers, however the lack of a pre-operative MRI for these patients has had no negative impact on patient outcomes.

Action Required:

- **MCN to initiate discussions to reach a national consensus on the definition for rectal cancer with the aim of including this within the Colorectal Cancer QPI dataset at the upcoming Formal Review of Colorectal Cancer QPIs.**

QPI 2: Pre-Operative Imaging of the Colon

QPI 2:	Patients with colorectal cancer undergoing elective surgical resection should have the whole colon visualised pre-operatively
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 is to be removed.
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%



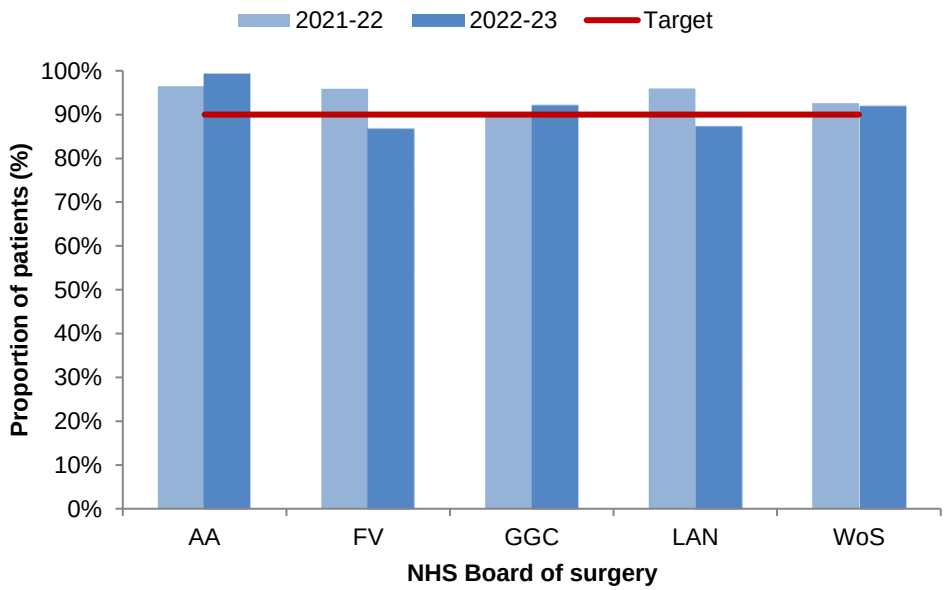
Board / Area	Performance (%)	Numerator	Denominator
AA	88.3%	98	111
FV	89.7%	87	97
NG	86.7%	111	128
SG	87.7%	143	163
Clyde	85.9%	116	135
GGC	86.9%	370	426
Lan	85.3%	145	170
WoS	**87.1%**	**700**	**804**

The QPI definition was changed at the last Formal Review to require imaging to be undertaken within 6 months of surgery. However, more patients now receive chemotherapy following chemoradiotherapy or radiotherapy and this has lengthened the period from endoscopy to time of surgery; consequently the six month timeframe is no longer appropriate. If the 2022-23 cohort were analysed using the

previous definition (excluding the requirement for imaging to have been within 6 months of surgery) then performance would have been considerably better at 97.3%; comfortably meeting the 95% target. The definition of this QPI will be considered at the next Formal Review of colorectal cancer QPIs and it is anticipated that amendments will be made to take account of patients having imaging prior to neo-adjuvant therapy.

QPI 5: Lymph Node Yield

QPI 5:	For patients undergoing resection for colorectal cancer the number of lymph nodes examined should be maximised.
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%



Board / Area	Performance (%)	Numerator	Denominator
AA	99.2%	132	133
FV	86.8%	33	38
NG	91.3%	137	150
SG	92.1%	176	191
Clyde	92.8%	154	166
GGC	92.1%	467	507
Lan	87.3%	165	189
WoS	**91.9%**	**797**	**867**

Review of patients where less than 12 lymph node were pathologically examined in NHS Lanarkshire concluded that there was a cohort of patients where less radical surgery was considered appropriate due to the frailty and comorbidities of the patients; the number of patients in whom less than 12 lymph nodes harvested without explanation was very low. The pathology department will undertake an internal audit of these cases and report findings to the MCN. Within NHS Forth Valley the need to maximise lymph node yield will be highlighted to both surgical and pathology services.

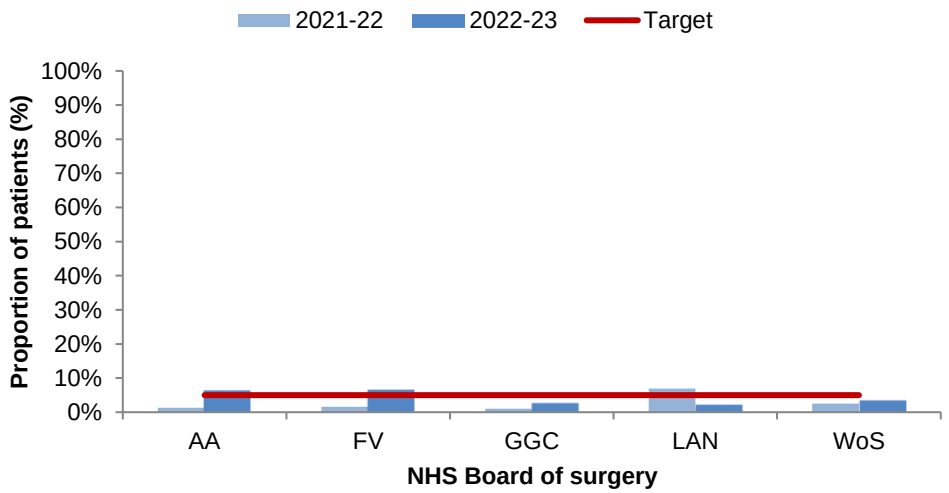
Action Required:

- **NHS Lanarkshire to provide feedback to the MCN on an internal audit to be undertaken by the pathology department to review cases not meeting QPI 5.**
- **NHS Forth Valley to highlight to both surgery and pathology services the need to ensure adequate lymph nodes are resected and examined by pathology.**

QPI 9: Anastomotic Dehiscence

QPI 9:	For patients who undergo surgical resection for colorectal cancer anastomotic dehiscence should be minimised.
Numerator:	(i) 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). (ii) Number of patients with colorectal cancer who undergo a surgical procedure involving anastomosis of the rectum (including anterior resection with total mesorectal excision (TME)) having anastomotic leak requiring intervention (medical, endoscopic, radiological or surgical).
Denominator:	(i) All patients with colorectal cancer who undergo a surgical procedure involving anastomosis of the colon. (ii) All patients with colorectal cancer who undergo a surgical procedure involving anastomosis of the rectum (including anterior resection with TME).
Exclusions:	No exclusions.
Target:	(i) <5% (ii) <10%

Specification (i) – Anastomosis of the colon



Board / Area	Performance (%)	Numerator	Denominator
AA	6.2%	4	65
FV	6.4%	3	47
NG	0%	0	69
SG	5.3%	5	95
Clyde	1.4%	1	69
GGC	2.6%	6	233
Lan	2.1%	2	96
WoS	**3.4%**	**15**	**441**

Review of patients from NHS Ayrshire & Arran, NHS Forth Valley and the South Glasgow sector of NHSGGC concluded that there were no common factors identified with each surgery where leaks occurred being undertaken by a different surgeon. NHS Ayrshire & Arran noted that two of the four patients having an anastomotic leak had an emergency admission prompting urgent surgery. Following

review, no systemic failures were identified, however all NHS Boards will continue to review patients who have an anastomotic leak. The outcomes of small numbers of patients can have a considerable impact on performance against this QPI and it should be noted that no NHS Boards consistently fail this measure.

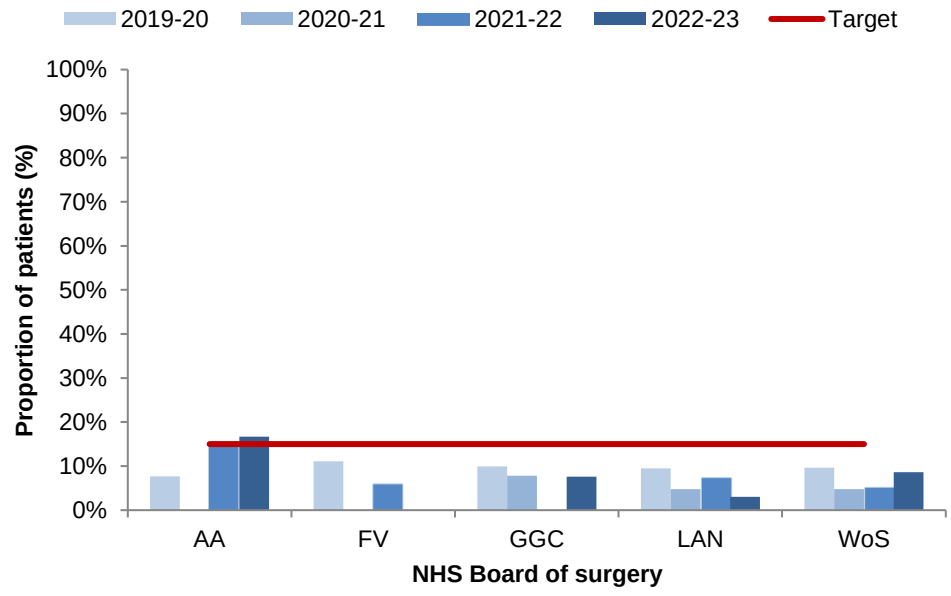
Specification (ii) – Anastomosis or the rectum. The QPI was met by all NHS Boards and Sectors.

QPI 10: 30 and 90 Day Mortality Following Surgical Resection

QPI 10:	Mortality after surgical resection for colorectal cancer.		
Numerator:	(i) Number of patients with colorectal cancer who undergo elective surgical resection who die within 30 or 90 days of surgery. (ii) Number of patients with colorectal cancer who undergo emergency surgical resection who die within 30 or 90 days of surgery.		
Denominator:	(i) All patients with colorectal cancer who undergo elective surgical resection. (ii) All patients with colorectal cancer who undergo emergency surgical resection.		
Exclusions:	No exclusions.		
Target:	**(i)**	**Elective surgery:**	30 day <3% 90 day <4%
	(ii)	**Emergency surgery:**	30 day <15% 90 day <20%

Elective Surgery – 30 & 90 day mortality. The QPI was met by all NHS Boards and Sectors.

Emergency Surgery – 30 day mortality

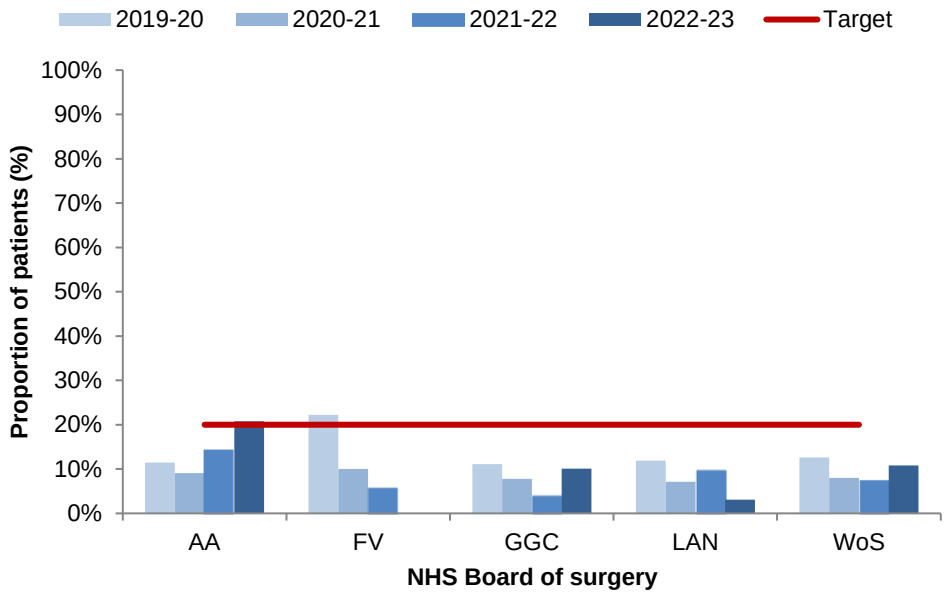


Board / Area	Performance (%)	Numerator	Denominator
AA	16.7%	4	24
FV	-	-	-
NG	10.5%	2	19
SG	6.5%	2	31
Clyde	6.9%	2	29
GGC	7.6%	6	79
Lan	3.0%	1	33
WoS	**8.6%**	**12**	**140**

NHS Ayrshire Arran have reviewed the patients that died within 30 days of emergency surgery. All patients had comorbidities and advanced disease that were causing either obstruction or perforation of

the bowel and received ITU/HDU level post-operative support. Review of two patients that died following an anastomotic leak concluded that the decision to operate was clinically appropriate. It should be noted that the outcomes of small numbers of patients can have a considerable impact on performance against this QPI and review has not highlighted any areas of clinical concern.

Emergency Surgery – 90 day mortality



Board / Area	Performance (%)	Numerator	Denominator
AA	20.8%	5	24
FV	-	-	-
NG	10.5%	2	19
SG	6.5%	2	31
Clyde	13.8%	4	29
GGC	10.1%	8	79
Lan	3.1%	1	32
WoS	**10.8%**	**15**	**139**

NHS Ayrshire Arran have reviewed the patients that died within 90 days of emergency surgery. In addition to the four patients that died within 30 days or surgery, and discussed above, one further patient died within 90 days of surgery. Review of the outcome of this patient indicated that there were no areas of clinical concern.

QPI 12: 30 and 90 Day Mortality Following Radical Radiotherapy

QPI 12:	Mortality after radical radiotherapy for colorectal cancer.
Numerator:	Number of patients with colorectal cancer who undergo neo-adjuvant chemoradiotherapy or radiotherapy with curative intent who die within 30 or 90 days of treatment
Denominator:	All patients with colorectal cancer who undergo neo-adjuvant chemoradiotherapy or radiotherapy with curative intent.
Exclusions:	No exclusions.
Target:	<1%

Neoadjuvant chemoradiotherapy. The QPI was met by all NHS Boards and Sectors.

Radical radiotherapy

Board / Area	30 Day Mortality					90 Day Mortality				
	2022 - 23 Performance	Numerator	Denominator	2021 - 22 Performance	2020 - 21 Performance	2022 - 23 Performance	Numerator	Denominator	2021 - 22 Performance	2020 - 21 Performance
AA	0%	0	8	0%	0%	0%	0	8	0%	0%
FV	0%	0	6	-	0%	0%	0	6	-	0%
NG	5.6%	1	18	0%	0%	5.6%	1	18	0%	0%
SG	0%	0	32	0%	0%	0%	0	32	0%	12.5%
Clyde	0%	0	13	0%	0%	7.7%	1	13	0%	0%
GGC	1.6%	1	63	0%	0%	3.2%	2	63	0%	3.8%
Lan	0%	0	28	0%	-	0%	0	28	0%	-
WoS	**1.0%**	**1**	**105**	**0%**	**0%**	**1.9%**	**2**	**105**	**0%**	**2.2%**

Review of the two patients that died within 90 days of radical radiotherapy in NHSGGC did not identify any areas of clinical concern. It should be noted mortality was 0% in both the Clyde and North Glasgow sectors of NHCGGC in previous years. Due to the small numbers of patients included within this measure, the outcome of a single patient can affect performance against this measure.

QPI 15: Colorectal Liver Metastases

QPI 15: Patients with a new diagnosis of colorectal liver metastases should be referred to a Hepatobiliary (HPB) multidisciplinary team (MDT) to discuss their management.

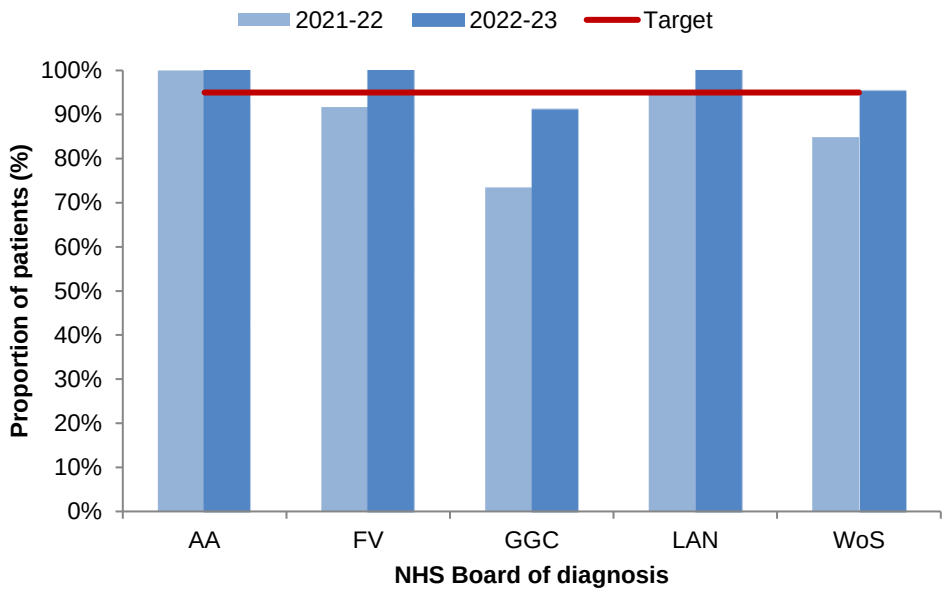
Numerator:
(i) Number of patients with a new diagnosis of synchronous colorectal liver metastases who are referred to a HPB MDT.
(ii) Number of patients registered at a Colorectal Cancer MDT with a new diagnosis of metachronous colorectal liver metastases who are referred to a HPB MDT.

Denominator:
(i) All patients with a new diagnosis of synchronous colorectal liver metastases.
(ii) 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.

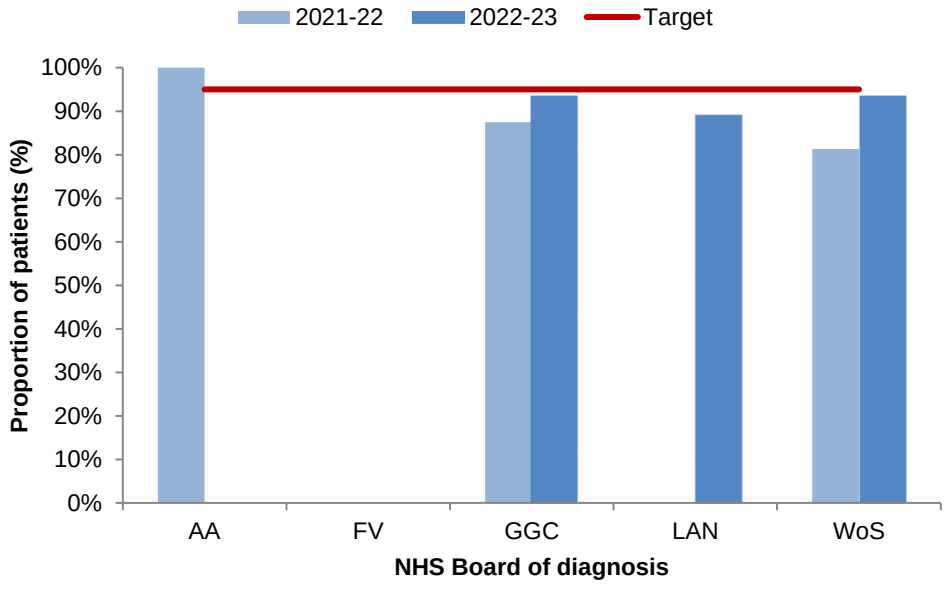
Target: **95%**

Specification (i)



Board / Area	Performance (%)	Numerator	Denominator
AA	100%	5	5
FV	100%	5	5
NG	100%	14	14
SG	75.0%	9	12
Clyde	100%	8	8
GGC	91.2%	31	34
Lan	100%	21	21
WoS	**95.4%**	**62**	**65**

Specification (ii)



Board / Area	Performance (%)	Numerator	Denominator
AA	-	-	-
FV	-	-	-
NG	80.0%	4	5
SG	100%	7	7
Clyde	-	-	-
GGC	93.3%	14	15
Lan	88.9%	8	9
WoS	**93.3%**	**28**	**30**

The proportion of patients with synchronous or metachronous colorectal liver metastases that are referred to the HPB MDT has increased in 2022-23, the second year of reporting of this new measure, suggests that the introduction of this new QPI has prompted improvements in referrals. Of the small number of patients not meeting the QPI, one had a complete response to SACT and 2 were still undergoing SACT at the time of reporting. For very small numbers of patients, colorectal cancer services have made a decision that patients were not suitable for treatment and patients were therefore not referred to an HPB MDT; these patients should be referred to the HPB MDT for decisions on their suitability for treatment of their liver metastases.

NHSGGC have a Colorectal Cancer Liver Metastases MDT and are keen to expand this service to other NHS Boards within the region, however this would require additional resource.

This QPI reports only a small proportion of the 345 patients diagnosed with colorectal cancer liver metastases and registered with the colorectal cancer MDT during 2022-23, as the vast majority fall into one of the four exclusion categories (the most common being patients having extra-hepatic disease). While some patients will not be recorded as having colorectal cancer liver metastases within the audit if their liver metastases diagnosis is not registered with the colorectal cancer MDT, it is estimated that this will be relatively small numbers of patients and that the vast majority of liver metastases are captured within cancer audit.

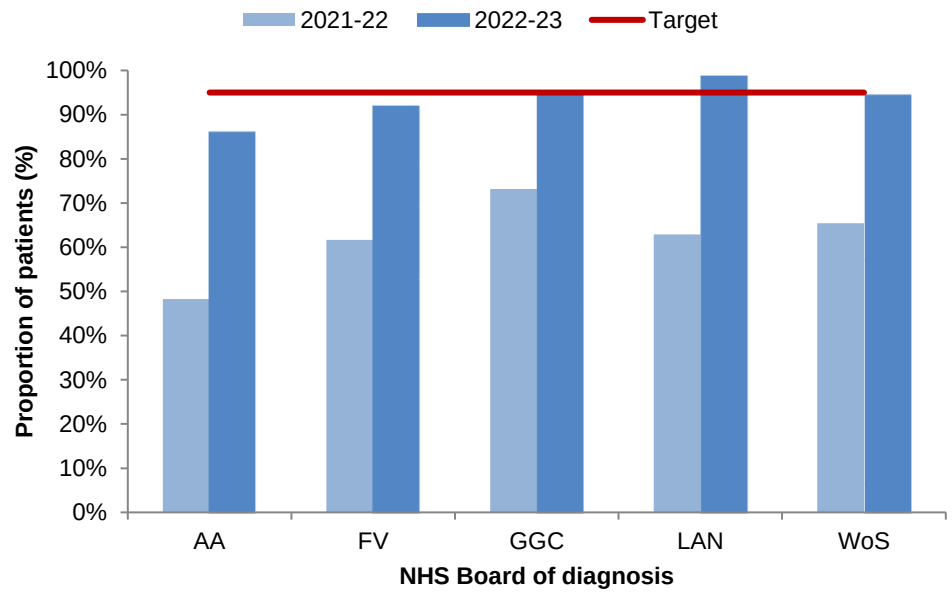
Action Required:

- **NHS Boards to ensure that all patients with colorectal liver metastases not meeting the specific exclusions of QPI 15 are referred to enable the HPB MDT to make decisions on the treatment of liver metastases**.

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

QPI 16:	Patients with colorectal cancer should have their tumour Mismatch Repair (MMR) / Microsatellite Instability (MSI) status assessed and be referred to genetics if results are suggestive of Lynch Syndrome.
Numerator:	(i) Number of patients with colorectal cancer who have MMR/MSI status assessed. (ii) Number of patients with colorectal cancer who have MMR/MSI status assessed and where results are suggestive of Lynch Syndrome are referred to genetics.
Denominator:	(i) All patients with colorectal cancer. (ii) All patients with colorectal cancer who have MMR/MSI status assessed where results are suggestive of Lynch Syndrome.
Exclusions:	No exclusions.
Target:	**(i) 95%** **(ii) 90%**

Specification (i)



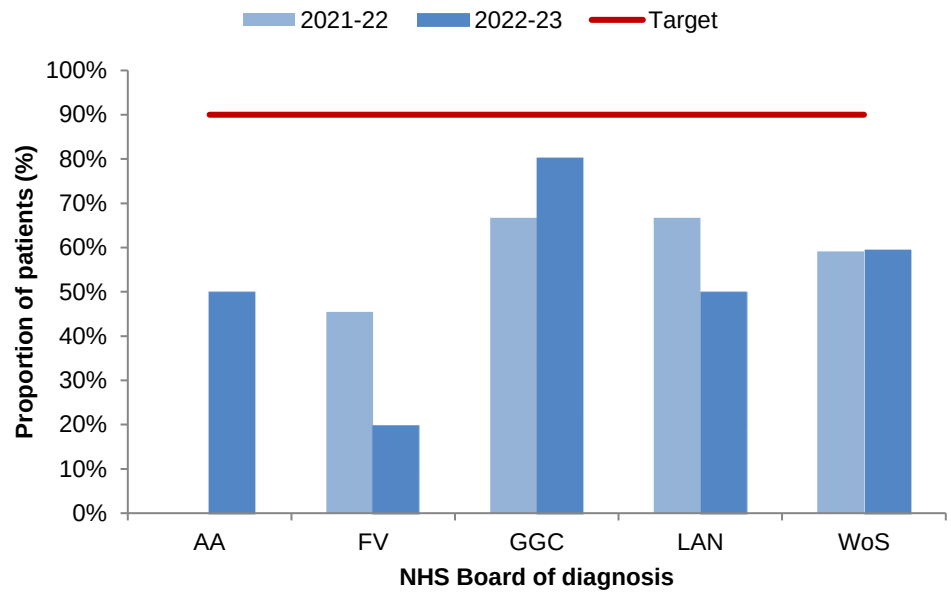
Board / Area	Performance (%)	Numerator	Denominator
AA	86.1%	192	223
FV	91.9%	147	160
NG	95.5%	213	223
SG	94.3%	299	317
Clyde	96.0%	240	250
GGC	95.2%	752	790
Lan	98.7%	381	386
WoS	**94.4%**	**1472**	**1559**

MMR/MSI testing was not routinely undertaken for all patients in WoSCAN in 2021 but was rolled out throughout the region in early 2022, explaining the considerable improvement in this second year of reporting, where the 95% target was only narrowly missed. Review of patients not meeting the QPI indicate that some did not have a resection (e.g. patients with polyp cancer or metastatic disease). For small numbers of patients in NHSGGC testing was requested but no results were available; this is currently being investigated with the pathology department. NHS Forth Valley plan to create a new role for the CNS to ensure assessment of MMR/MSI status is undertaken and patients are referred to genetics where appropriate; further the Board plan to develop a standard patient and Generics Services referral letter. A detailed review of patients not meeting this QPI was undertaken by the NHS Ayrshire & Arran pathology service. Although this identified 13 patients who had died and additional patients that were for best supportive care, all of these patients should have been tested at the time of initial biopsy. This pathway is currently being considered by NHS Ayrshire & Arran and it is hoped that improvements in testing are seen in future years.

Actions required:

- **NHSGGC to report to MCN on patients where MMR/MSI testing was requested but not reported.**
- **NHS Forth Valley to provide feedback to the MCN on the benefit of appointing a CNS to oversee MMR/MSI testing and referrals to genetics.**
- **NHS Ayrshire & Arran to provide feedback to the MCN on the review of the MMR/MSI testing pathway and ensure that remedial action is taken to improve performance against QPI 16(i).**

Specification (ii)



Board / Area	Performance (%)	Numerator	Denominator
AA	50.0%	3	6
FV	20.0%	1	5
NG	66.7%	4	6
SG	100%	5	5
Clyde	-	-	-
GGC	80.0%	12	15
Lan	50.0%	3	6
WoS	**59.4%**	**19**	**32**

Results for this QPI are based on small numbers of patients. Of the 13 patients not referred to genetics across WoSCAN, 3 patients in NHS Lanarkshire passed away, never-the-less relatives of these patients should be informed and offered referral to genetics. Review of patients not meeting this QPI in NHS Ayrshire & Arran has highlighted a systemic communications failure between the NHSGGC genetics laboratory and the requesting consultant, resulting in consultants not being aware of the need for referral to genetics. NHS Ayrshire & Arran are currently working with NHSGGC genetics laboratory to develop a safe and robust process for alerting clinical staff within the colorectal cancer services when results are suggestive of Lynch Syndrome.

As highlighted for QPI 16(i), NHS Forth Valley plan to create a new role for the CNS to ensure assessment of MMR/MSI status is undertaken and patients are referred to genetics where appropriate and will also develop a standard patient and Genetic Service referral letter. NHS Lanarkshire will encourage MDT members to ensure genetics analysis is reviewed and will explore the possibility of an alert system in conjunction with the pathology department.

Actions Required:

- **NHS Ayrshire & Arran to provide the MCN with an update on progress with improving communications with NHSGGC genetics laboratory in instances where results are suggestive of Lynch Syndrome.**
- **MCN to work with all NHS Boards to review any patients where MMR/MSI results are suggestive of Lynch Syndrome but have not yet been referred to Genetics Services and consider referral.**
- **MCN to agree wording for communications with the families of deceased patients where MMR/MSI results are suggestive of Lynch Syndrome.**

Appendix 1: Meta Data

Report Title	Cancer Audit Report: Colorectal Cancer Quality Performance Indicators
Time Period	Patients diagnosed between 01 April 2022 to 31 March 2023
QPI Version	Colorectal Cancer QPIs v4
Data extraction date	2200 hrs on 4 October 2023
Data Quality	

Health Board of diagnosis	2022-23 Audit Data	Cases from Cancer registry (2017-2021)	Case Ascertainment
Ayrshire & Arran	267	259	103.1%
FV	207	210	98.6%
GGC	883	831	106.3%
Lanarkshire	434	366	118.6%
WoS Total	**1791**	**1666**	**107.5%**