

NOSCAN

North of Scotland
Cancer Network



**NORTH OF SCOTLAND
PLANNING GROUP**

**Colorectal Cancer
Managed Clinical Network**

Audit Report

Colorectal Cancer Quality Performance Indicators

Patients diagnosed April 2014 – March 2015

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The North of Scotland Cancer Network (or NOSCAN), is one of the 3 regional Scottish Cancer Networks, which report to their respective regional NHS Board Planning Groups and for specific workstreams, to the Scottish Cancer Taskforce Group.

The principle role of NOSCAN is to support the organization, planning and delivery of regional and national cancer services, and thereby to ensure consistent and high quality cancer care is being provided equitably across the North of Scotland.

www.noscan.scot.nhs.uk

EXECUTIVE SUMMARY

This publication reports the performance of colorectal cancer services in the six NHS Boards in the North of Scotland (NOS) against the Colorectal Cancer Quality Performance Indicators (QPI's) for patients diagnosed between 1st April 2014 and 31st March 2015. This is the second year in which Colorectal Cancer QPIs have been reported in Scotland and results for 2014-2015 are compared with those from 2013-2014.

Key points

- 854 patients diagnosed with colorectal cancer were audited in the North of Scotland, during 2014-2015. These numbers are similar to 2013-2014 (841 patients).
- Overall case ascertainment was 85%, representing a decrease from 88% in 2013-2014, nonetheless results were considered to be adequately representative of colorectal cancer services in the region.
- As in previous years, the main sources of referral were via a Primary Care Clinician, GP referral directly to hospital and Screening Services (44%, 21% and 18% of referrals respectively).

Summary of QPI Results

QPI	QPI Target	Performance ^b						
		NOSCAN	NHS Grampian	NHS Highland	NHS Orkney	NHS Shetland	NHS Tayside	NHS W Isles
QPI 1: Radiological Diagnosis and Staging - Proportion of patients with colorectal cancer who undergo CT chest, abdomen and pelvis (colorectal cancer) plus MRI pelvis (rectal cancer only) before definitive treatment.								
i. Patients with colon cancer who undergo CT chest, abdomen and pelvis.	95%	94% n=402	92% n=146	96% n=89	-	100% n=6	93% n=148	100% n=10
ii. Patients with rectal cancer who undergo CT chest, abdomen and pelvis and MRI.	95%	93% n=160	89% n=61	90% n=30	-	-	97% n=62	-
QPI 2: Pre-Operative Imaging of the Colon - Proportion of patients with colorectal cancer who undergo surgical resection who have the whole colon visualised by colonoscopy or CT colonography pre-operatively, unless the non-visualised segment of colon is to be removed.	95%	86% n=469	72% n=173	97% n=99	-	100% n=7	91% n=178	100% n=9
QPI 3: MDT Meeting - Proportion of patients with colorectal cancer who are discussed at MDT meeting before definitive treatment.	95%	91% n=664	92% n=250	92% n=134	83% n=6	100% n=11	89% n=247	88% n=16

QPI	QPI Target	Performance ^b						
		NOSCAN	NHS Grampian	NHS Highland	NHS Orkney	NHS Shetland	NHS Tayside	NHS W Isles
QPI 4: Stoma Care - Proportion of patients with colorectal cancer who undergo elective surgical resection which involves stoma creation who are seen and have their stoma site marked pre-operatively by a nurse with expertise in stoma care.	95%	87% n=131	81% n=70	100% n=28	-	-	87% n=31	-
QPI 5: Lymph Node Yield - Proportion of patients with colorectal cancer who undergo surgical resection where ≥12 lymph nodes are pathologically examined.	80%	92% n=235	95% n=22	99% n=85	-	100% n=8	88% n=114	-
QPI 6: Neoadjuvant Radiotherapy - Proportion of patients with locally advanced rectal cancer with threatened or involved circumferential resection margin (CRM) on preoperative MRI who receive long course neo-adjuvant chemoradiotherapy designed to facilitate a margin-negative resection.	90%	50% n=44	43% n=23	80% n=10	-	-	36% n=11	-
QPI 7: Surgical Margins - Proportion of patients with rectal cancer who undergo surgical resection in which the circumferential margin is clear of tumour.								
i. Primary surgery, or surgery following neo-adjuvant short course radiotherapy.	95%	86% n=92	93% n=27	100% n=14	-	-	78% n=49	-
ii. Surgery following neo-adjuvant long course radiotherapy or chemo radiotherapy.	85%	79% n=34	85% n=20	100% n=10	-	-	-	-
QPI 8: Re-operation Rates - 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).								
i. Elective surgical resection.	<10%	3% n=448	2% n=173	2% n=82	-	0% n=7	3% n=183	-
ii. Emergency surgical resection.	< 15%	5% n=99	10% n=42	0% n=19	-	-	3% n=36	-
QPI 9: Anastomotic Dehiscence - Proportion of patients who undergo surgical resection for colorectal cancer with anastomotic leak as a post operative complication.								
i. Colonic anastomosis.	<5%	5% n=270	6% n=88	3% n=68	-	0% n=6	7% n=105	-
ii. Rectal anastomosis (including: anterior resection with total mesorectal excision (TME)).	<10%	4% n=170	2% n=56	2% n=41	-	-	6% n=69	-

QPI	QPI Target	Performance ^b						
		NOSCAN	NHS Grampian	NHS Highland	NHS Orkney	NHS Shetland	NHS Tayside	NHS W Isles
QPI 10: 30 and 90 Day Mortality Following Surgical Resection - Mortality after surgical resection for colorectal cancer.								
i. Elective surgical resection - 30 Day Mortality	<5%	2% n=465	2% n=174	2% n=101	-	0% n=6	1% n=179	-
i. Elective surgical resection - 90 Day Mortality	<5%	2% n=459	3% n=172	2% n=97	-	0% n=6	1% n=179	-
ii. Emergency surgical resection - 30 Day Mortality	<15%	9% n=98	9% n=43	0% n=20	-	-	16% n=32	-
ii. Emergency surgical resection - 90 Day Mortality	<15%	13% n=98	12% n=43	10% n=20	-	-	19% n=32	-
QPI 11: Adjuvant Chemotherapy - Proportion of patients between 50 and 74 years of age at diagnosis with Dukes C, or high risk Dukes B, colorectal cancer who receive adjuvant chemotherapy.								
i. Patients with Dukes C colorectal cancer	70%	83% n=109	83% n=40	91% n=23	-	-	80% n=45	-
ii. Patients with high risk Dukes B colorectal cancer	50%	42% n=26	40% n=10	67% n=6	-	-	30% n=10	-
QPI 12: 30 and 90 Day Mortality Following Chemotherapy or Radiotherapy - Proportion of patients with colorectal cancer who die within 30 or 90 days of chemotherapy or radiotherapy treatment with curative intent.								
Neo-adjuvant chemoradiotherapy – 30 Day Mortality	<2%	0% n=51	0% n=24	0% n=15	-	-	0% n=11	-
Neo-adjuvant chemoradiotherapy – 90 Day Mortality	<2%	0% n=51	0% n=24	0% n=15	-	-	0% n=11	-
Adjuvant chemotherapy – 30 Day Mortality	<2%	0% n=171	0% n=72	0% n=43	-	-	0% n=52	-
Adjuvant chemotherapy – 90 Day Mortality	<2%	1% n=161	1% n=71	0% n=37	-	-	0% n=50	-
Radiotherapy – 30 Day Mortality	<2%	0% n=21	0% n=13	-	-	-	-	-
Radiotherapy – 90 Day Mortality	<2%	0% n=20	0% n=12	-	-	-	-	-

Clinical Trials Access - Proportion of patients with colorectal cancer who are enrolled in an interventional clinical trial or translational research.	Target	NOSCAN
Interventional clinical trials	7.5%	2% n=1007
Translational research	15%	12% n=7001

Performance shaded pink where QPI target has not been met.

^b Excluding results based on less than 5 patients.

2014-2015 is only the second year of QPI reporting, during which time the performance of NOSCAN boards has once again been mixed: though Boards have individually successfully met (or in some cases well exceeded) many of the required performance levels, collectively as a region NOSCAN has only achieved the required performance target for 4 of the 13 measured outcomes. This is very similar to results from 2013-2014 where only 4 of 11 indicators were met or exceeded.

Whilst the apparent lack of any significant performance improvement being reported this cycle is perhaps disappointing, it requires noted that there have been a number of minor changes that have been made (at national level to enhance reporting clarity) in the data definitions and inclusion criteria used since the MCN reported for 2013-2014. Consequently, the MCN regards the results for 2014-2015 as a more representative baseline of performance across the North of Scotland and thereby to plan any quality improvements identified.

At Board level, it is noted that although they may not have achieved the performance level currently set, nonetheless for many of the QPIs they came very near to achieving the performance level nationally required of them: regarding QPI 1 (Radiological Diagnosis and Staging) for example, whilst one Board exceeded the required target of 95%, the other Boards only just fell short by no more than 2-3 percentage points, and a similar range of 'near-achievement' is reported for the majority of the remaining QPIs.

Whilst the MCN is encouraged that general overall performance across the NoS, as measured by the QPIs, is either approaching or very near to the quality standards required, it acknowledges that there is still room for improvement.

Variance in treatment of rectal cancers between boards merits further exploration, to see whether there is significant variation in practice or areas where pre-operative capture of high risk patients could be improved. It appears on the face of it that a lower use of pre-operative treatment translates, as might be expected, into a greater rate of margin involvement with all that this entails for recurrence risk in rectal cancer.

It is also suggested that surgical intervention for emergency patients requires further detailed study and that NHS Boards should collaborate to ensure uniform best practice. It is possible that overzealous attempts at "resection" in the emergency situation may be reflected in an increase in early mortality. It is also possible that patients who may benefit from resection are not receiving this option.

The following actions have been identified to help monitor and maintain excellent patient care and compliance with the QPI standards:

- **With modern CT scanning technology and rapid acquisition times, all NHS Boards should put local systems in place to ensure that a CT chest is carried out pre-operatively.**
- **All Boards to review their imaging criteria to ensure all relevant rectal patients are appropriately imaged. It is recommended that if there is doubt about the location of the tumour MRI should be used pre-operatively.**
- **NHS Grampian to develop an Action Plan to address the low levels of performance for QPI 2 and ensure that patients have their whole colon visualised before elective colorectal resection.**
- **All NHS Boards not meeting QPI 4 to review arrangements around pre-operative stoma siting and ensure that details of pre-operative stoma siting are adequately recorded.**
- **As part of the MDT process chairs of all MDTs should ensure that intent of surgery is recorded in the treatment plan for each patient.**
- **MCN to look for any variance in pre-operative neoadjuvant treatment strategies and margin involvement rates between NHS Boards in the North of Scotland (and possibly between cancer networks) for patients with rectal cancer and address any issues highlighted.**
- **All NHS Boards to check the results of QPI 8 to ascertain whether they are a true reflection of re-operation rates.**
- **All NHS Boards to ensure that date of death information is appropriately collected prior to QPI analysis.**
- **MCN to facilitate collaboration between NHS Boards in the North of Scotland to ensure uniform best practice in respect to surgical intervention in patients presenting with colorectal cancer as an emergency.**

The Colorectal Cancer QPIs are due to be formally reviewed following analysis of the third year of QPI results. In addition to the action point above, this report also highlights some issues with the QPI definitions to be discussed this review.

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1. Introduction

In 2010, the [Scottish Cancer Taskforce](#) established the [National Cancer Quality Steering Group](#) (NCQSG) to take forward the development of national [Quality Improvement Indicators](#) (QPIs) for all cancer types to enable national comparative reporting and drive continuous improvement for patients. In collaboration with the three Regional Cancer Networks ([NoSCAN](#), [SCAN](#) & [WoSCAN](#)) and [Information Services Division](#) (ISD), the first QPIs were published by [Healthcare Improvement Scotland](#) (HIS) in January 2012. [CEL 06 \(2012\)](#) mandates all NHS Boards in Scotland to report on specified QPIs on an annual basis. Data definitions and measurability criteria to accompany the Colorectal Cancer QPIs are available from the ISD website¹.

Regular reporting of activity and performance is a fundamental requirement of a Managed Clinical Network (MCN) to assure the quality of care delivered across the region. The need for regular reporting of activity and performance (to assure the quality of care delivered) was first set out nationally as a fundamental requirement of a Managed Clinical Network (MCN) in [NHS MEL\(1999\)10](#)². This has since been further restated and reinforced in [HDL\(2002\)69](#)³, [HDL \(2007\) 21](#)⁴, and most recently in [CEL 29 \(2012\)](#)⁵.

This report assesses the performance of the North of Scotland (NoS) colorectal cancer services, as measured against the Colorectal Cancer Quality Performance Indicators (QPIs)⁶ which were implemented for patients diagnosed on or after 1st April 2014, using clinical audit for patients diagnosed with colorectal cancer in the twelve months from 1st April 2014 to 31st March 2015. Comparison with the results from 2013 - 2014, as reported in the ISD Colorectal QPI report⁷ is also provided to illustrate trends in performance.

2. Background

Six NHS Boards across the NoS serve the 1.38 million population⁸. There were 854 patients diagnosed with colorectal cancer in the North of Scotland between 1st April 2014 and 31st March 2015.

Best practice recommends that patients diagnosed with cancer should have all aspects of their clinical management multidisciplinary considered thereby ensuring enhanced consistency and quality of patient care and clinical outcomes. The configuration of the three Multidisciplinary Teams (MDTs) pertaining to the management of colorectal cancer in the region is set out below.

MDT	Constituent Boards
Grampian	NHS Grampian, NHS Orkney and NHS Shetland
Highland	NHS Highland and NHS Western Isles
Tayside	NHS Tayside

2.1 National Context

Colorectal cancer is the third most common cancer in Scotland⁹ with over 3,800 cases diagnosed in Scotland each year since 2008¹⁰. Over the last decade the incidence rate has increased by 3% in women while there has been a decrease of 3% for men. Modifiable risk factors for colorectal cancer are thought to include diet, lack of physical activity and long-term smoking⁹.

Relative survival for colorectal cancer is also increasing¹¹. The table below shows the percentage change in one-year and five-year age-standardised survival rates for patients diagnosed in 1987-1981 compared to those diagnosed in 2007-2011.

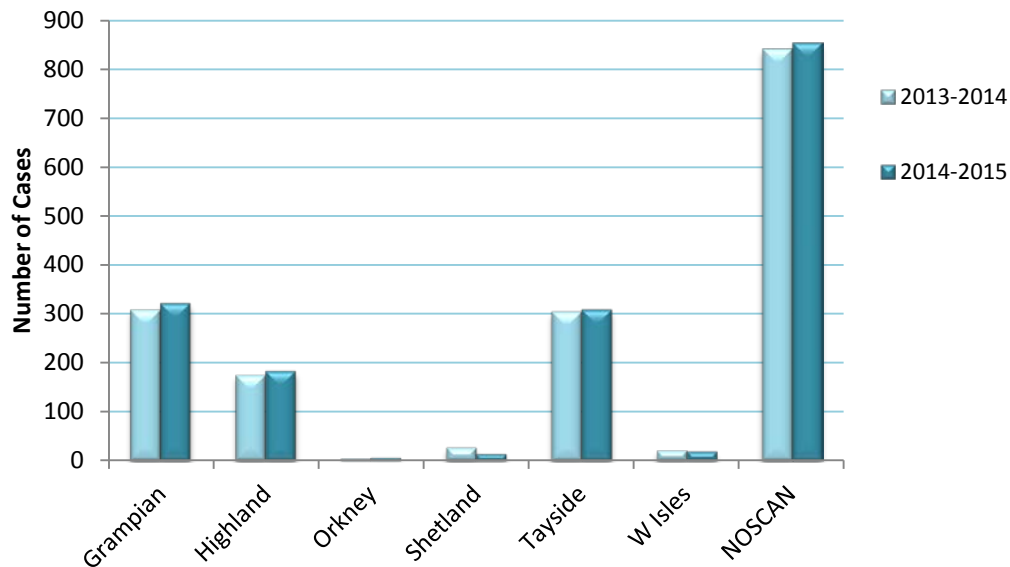
Relative age-standardised survival for colorectal cancer in Scotland at 1 year and 5 years showing percentage change from 1987-1981 to 2007-2011¹¹.

	Relative survival at 1 year (%)		Relative survival at 5 years (%)	
	2007-2011	% change	2007-2011	% change
Colorectal Cancer	78.0%	+ 13.1%	60.4%	+ 18.0%

2.2 North of Scotland Context

A total of 854 cases of colorectal cancer were recorded through audit as diagnosed in the North of Scotland between 1st April 2014 and 31st March 2015, which is very similar to 2013-2014 when 841 patients were recorded. The number of patients diagnosed within each Board is presented below.

	Grampian	Highland	Orkney	Shetland	Tayside	W Isles	NoS
Number of Patients	322	184	6	14	309	19	854
% of NoS total	37.7%	21.5%	0.7%	1.6%	36.2%	2.2%	100%



3. Methodology

The audit data presented in this report was collected by clinical audit staff in each NHS Board in accordance with an agreed dataset and definitions¹. The data was entered locally into the electronic Cancer Audit Support Environment (eCASE): a secure centralised web-based database.

Data for patients diagnosed between 1st April 2014 and 31st March 2015 and any comments on QPI results were then signed-off at NHS Board level to ensure that the data was an accurate representation of service in each area prior to submission to NOSCAN for collation at a regional level. The reporting timetable was developed to take into account the patient pathway and ensure that a complete treatment record was available for the vast majority of cases.

Where the number of patients meeting the denominator criteria for any indicator is between one and four, the results has not been shown in any associated charts or tables. This is to avoid any unwarranted variation associated with small numbers and to minimise the risk of disclosure. Any charts or tables impacted by this are denoted with an asterisk (*). However, any commentary provided by NHS Boards relating to the impacted indicators will be included as a record of continuous improvement.

4. Results

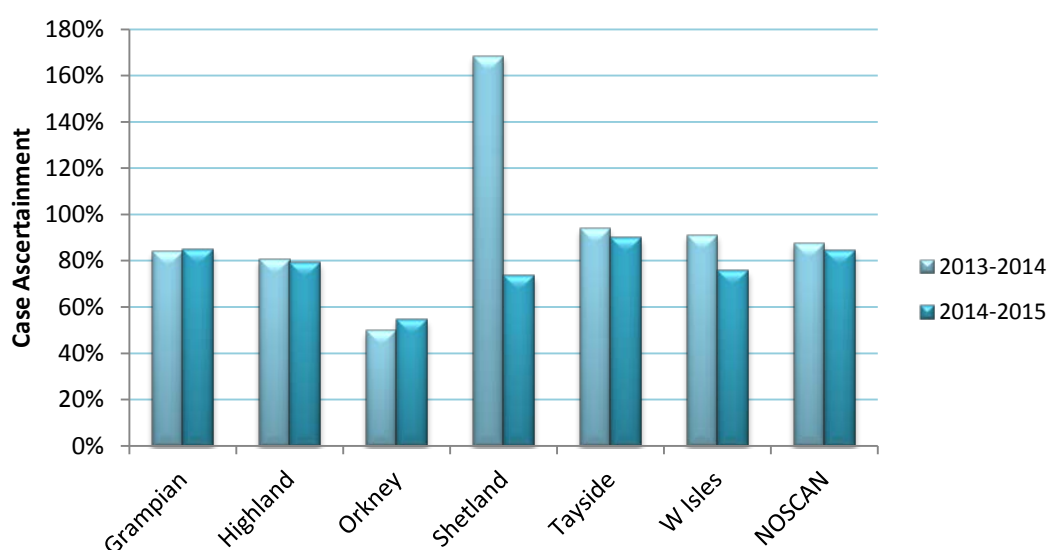
4.1 Case Ascertainment

Audit data completeness can be assessed from case ascertainment, which is the proportion of expected patients that have been identified through audit. Case ascertainment is calculated by comparing the number of new cases identified by the cancer audit with a five year average of the numbers recorded by the National Cancer Registry, with analysis being undertaken by NHS Board of diagnosis. Cancer Registry figures were extracted from

ACaDMe (Acute Cancer Deaths and Mental Health), a system provided by ISD. Due to timescale of data collection and verification processes, National Cancer Registry data are not available for 2014. Consequently an average of the previous five years' figures is used to take account of annual fluctuations in incidence within NHS Boards.

Overall case ascertainment for the North of Scotland was relatively low at 84.8%. This is a decrease from the 2013-2014 figure of 88.0%, although number of patients audited was in fact higher. Case ascertainment figures are provided for guidance and are not an exact measurement of audit completeness as it is not possible to compare the same cohort of patients. Figures for each Board across the North of Scotland are illustrated below. There is variation in percentage case ascertainment across the Boards ranging from 55% to 90%.

The wider variation in the Western Isles, Orkney and Shetland is due to the small numbers of patients diagnosed within these Boards.



Case ascertainment by NHS Board for patients diagnosed with colorectal cancer 2013–2014 & 2014-2015.

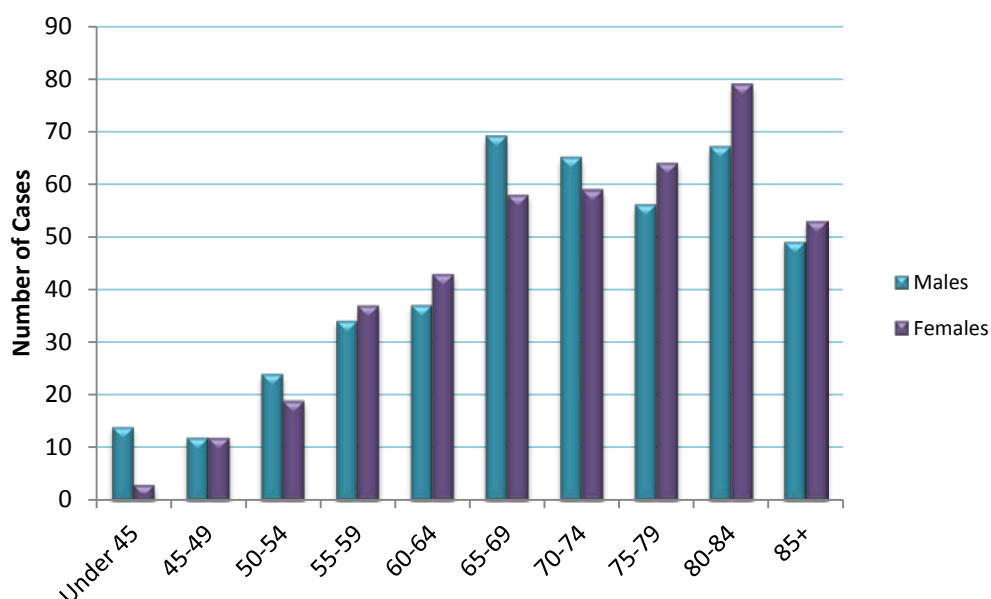
	Grampian	Highland	Orkney	Shetland	Tayside	W Isles	NoS
Cases from audit 2014-2015	322	184	6	14	309	19	854
ISD Cases annual average (2009-2013)	378	232	11	19	343	25	1007
% Case ascertainment 2014-2015	85.2%	79.3%	54.5%	73.7 %	90.1%	76.0%	84.8%
% Case ascertainment 2013-2014	84.2%	80.7%	50.0%	168.8%	94.1%	91.3%	88.0%

Audit data were considered to be sufficiently complete to allow QPI calculations: the number of instances of data not being recorded was generally very low, however there were a few notable gaps across the region, which will affect the accuracy of QPI results. The most considerable gap was the absence of data on 'Intent of Surgery' for 288 patients across the North of Scotland, most notably in NHS Grampian but also in NHS Tayside and NHS Highland. This omission will have affected the results of QPI 5 considerably. Other data items that were not recorded on a number of occasions include:

- 'Surgical Approach' information in NHS Tayside,
- 'Circumferential Resection Margin – Predicted' information in NHS Tayside and NHS Grampian,
- 'Date Primary / Palliative / Adjuvant Oncology Treatment Completed' information in NHS Highland.

4.2 Age and Sex Distribution

The figure below shows the age distribution of patients diagnosed with colorectal cancer in the North of Scotland during 2014-2015 for both men and women. The number of diagnoses peaked in the 65-69 age group for men and the age 80-84 age group for women.



4.3 Source of referral

The majority of patient referrals in Scotland were from a Primary Care Clinician (44.4%), GP referral directly to hospital (20.7%) and Screening Service (17.5%). The proportions of patients being referred to the various services were similar across NHS Boards, although more patients were referred from the review clinic in NHS Tayside than for other Boards.

Source of referral (%)	Grampian	Highland	Orkney	Shetland	Tayside	W Isles	NoS
Primary Care Clinician	46.9%	51.9%	33.3%	57.1%	36.9%	47.4%	44.4%
GP Referral directly to hospital	22.7%	15.1%	16.7%	14.3%	22.7%	15.8%	20.7%
Screening Service	16.1%	21.1%	33.3%	7.1%	17.5%	10.5%	17.5%
Review Clinic	5.0%	5.4%	0%	7.1%	13.6%	5.3%	8.2%
Incidental Finding	2.5%	0.5%	16.7%	7.1%	6.8%	21.1%	4.2%
Self-referral to A&E	2.2%	4.9%	0%	7.1%	1.0%	0%	2.3%
Referral from private healthcare	2.5%	0%	0%	0%	0%	0%	0.9%
Previous GP Referral but subsequently admitted to hospital	1.6%	1.1%	0%	0%	1.0%	0%	1.2%
Other	0.6%	0%	0%	0%	0.6%	0%	0.5%

4.4 Performance against Quality Performance Indicators (QPIs)

Results of the analysis of Colorectal Cancer Quality Performance Indicators are set out in the following sections. Graphs and charts have been provided where this aids interpretation and, where appropriate, numbers have also been included to provide context. Data are presented in the main by Board of diagnosis. However, the surgical focussed QPIs (ie QPIs 4, 5, 7, 8, 9 and 10) are reported by hospital of surgery.

Data are presented by individual Board of audit and collectively for the whole of the North of Scotland. Where performance is shown to fall below the target, commentary is often included to provide context to the variation. Specific regional and NHS Board actions have been identified to address issues highlighted through the data analysis.

QPI 1: Radiological Diagnosis and Staging

QPI 1(i): Radiological Diagnosis and Staging (Colon): Patients with colorectal cancer should be evaluated with appropriate imaging to detect extent of disease and guide treatment decision making.

Accurate staging is necessary to detect metastatic disease, guide treatment and avoid inappropriate surgery.

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

Denominator: All patients with colon cancer.

Exclusions:

- Patients who refuse investigation.
- Patients who undergo emergency surgery.
- Patients undergoing supportive care only.

Target: 95%

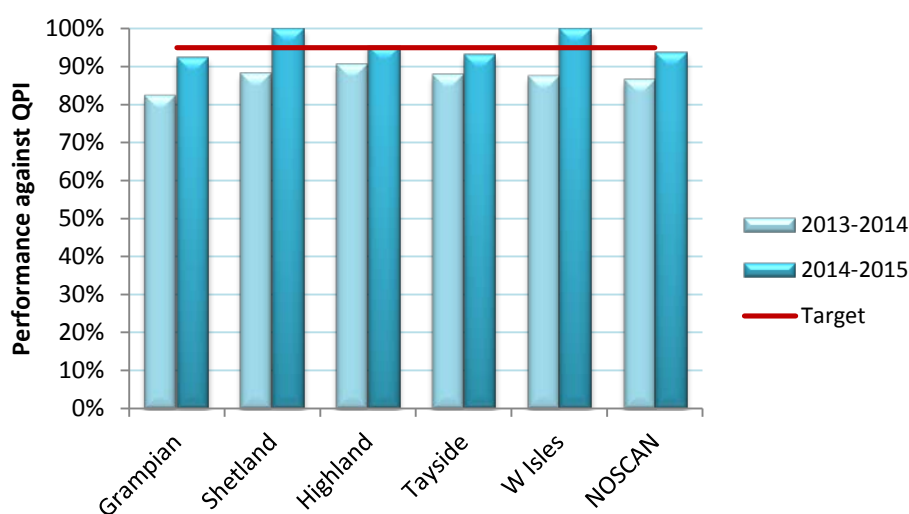
QPI 1(i) Performance against target

Of the 402 patients diagnosed with cancer of the colon in the North of Scotland in 2014-2015, 377 had CT of the chest, abdomen and pelvis before definitive treatment. This equates to a rate of 93.8% and is just below the target rate of 95%.

Results for 2014-2015 are higher than the 86.5% recorded in 2013-2014. Following the first year of reporting there was a minor change to the QPI, with patients undergoing supportive care only now being excluded from the calculations. However if analysis for patients diagnosed in 2014-2015 including patients for supportive care only then 92.0% of patients still meet this QPI, indicating a real improvement in results in the North of Scotland.

This QPI was met by four NHS Boards in the North of Scotland, the two NHS Boards not meeting the target were NHS Grampian and NHS Tayside. Results were higher in 2014-2015 compared with the previous year for all Boards.

QPI 1(i): Target > 95%



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator	Change in Performance since 2013-2014
Grampian	92.5%	135	146	0	0%	0	0%	0	+10.2%
Orkney*	-	-	-	-	-	-	-	-	-
Shetland	100%	6	6	0	0%	0	0%	0	+11.8%
Highland	95.5%	85	89	0	0%	1	1.1%	0	+4.9%
Tayside	93.2%	138	148	0	0%	0	0%	0	+5.3%
W Isles	100%	10	10	0	0%	0	0%	0	+12.5%
NoS	93.8%	377	402	0	0%	1	0.2%	0	+7.3%

The MCN is encouraged to note that performance during 2014-2015 has improved, but acknowledges that further work is required if the national target is to be universally achieved across the network.

It is suggested that the chest be scanned at the time of an emergency abdominal CT where there is a suspicion of obstructing or perforated colorectal cancer. CT in this context may help prevent unnecessary or inappropriate intervention.

Actions Required:

- **With modern CT scanning technology and rapid acquisition times, all NHS Boards should put local systems in place to ensure that a CT chest is carried out pre-operatively.**

QPI 1(ii): Radiological Diagnosis and Staging (Rectal): Patients with colorectal cancer should be evaluated with appropriate imaging to detect extent of disease and guide treatment decision making.

Accurate staging is necessary to detect metastatic disease, guide treatment and avoid inappropriate surgery.

Numerator: Number of patients with rectal cancer who undergo CT chest, abdomen and pelvis and MRI pelvis before definitive treatment.

Denominator: All patients with rectal cancer undergoing definitive treatment (chemoradiotherapy or surgical resection).

Exclusions:

- Patients who refuse investigation.
- Patients who undergo emergency surgery.
- Patients with a contraindication to MRI

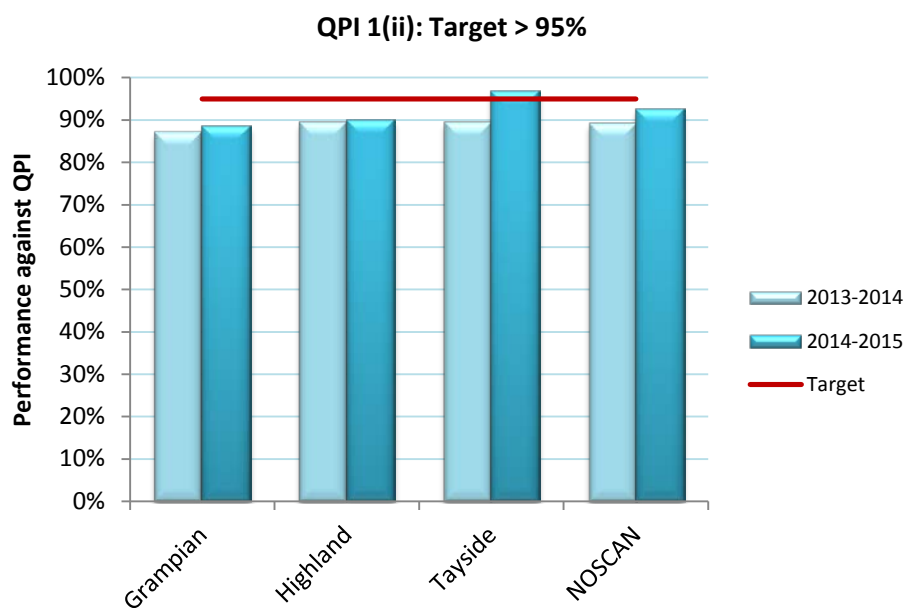
Target: 95%

QPI 1(ii) Performance against target

Of the 160 patients diagnosed with rectal cancer in the North of Scotland in 2014-2015, 148 had CT chest, abdomen and pelvis and MRI pelvis before definitive treatment. This equates to a rate of 92.5% and is just below the target rate of 95%.

Results for 2014-2015 are higher than the 89.2% recorded in 2013-2014. Following the first year of reporting there was a minor change to the QPI; patients with a contraindication to MRI are now excluded from this calculation. However if analysis for patients diagnosed in 2014-2015 including patients with such a contradiction 92.3% of patients still meet this QPI, indicating a real improvement in results in the North of Scotland.

This QPI was met by four NHS Boards in the North of Scotland, the two NHS Boards not meeting the target were NHS Grampian and NHS Highland. Results were higher in 2014-2015 compared with the previous year for all Boards.



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator	Change in Performance since 2013-2014
Grampian	88.5%	54	61	0	0%	0	0%	0	+1.4%
Orkney*	-	-	-	-	-	-	-	-	-
Shetland*	-	-	-	-	-	-	-	-	-
Highland	90.0%	27	30	0	0%	0	0%	0	+0.5%
Tayside	96.8%	60	62	0	0%	0	0%	2	+7.3%
W Isles*	-	-	-	-	-	-	-	-	-
NoS	92.5%	148	160	0	0%	0	0%	2	+3.3%

As with (i) above, the MCN is encouraged to note that performance during 2014-2015 has shown some improvement, but acknowledges that further work is required if the national target is to be universally achieved across the network.

It appears that the small numbers of cases not meeting this QPI are largely explained by a combination of uncertainty as to the location of the primary tumour (distal sigmoid or upper rectum) and some possible communication issues between endoscopist and surgeon.

Actions Required:

- **All Boards to review their imaging criteria to ensure all relevant rectal patients are appropriately imaged. It is recommended that if there is doubt about the location of the tumour MRI should be used pre-operatively.**

QPI 2: Pre-Operative Imaging of the Colon

QPI 2: Pre-Operative Imaging of the Colon - Patients with colorectal cancer undergoing surgical resection should have the whole colon visualised pre-operatively.

The whole colon is visualised preoperatively to avoid missing synchronous tumours and to remove synchronous adenomas.

Numerator: Number of patients who undergo elective surgical resection for colorectal cancer who have the whole colon visualised by colonoscopy or CT colonography before surgery, unless the non visualised segment of the colon has been removed.

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

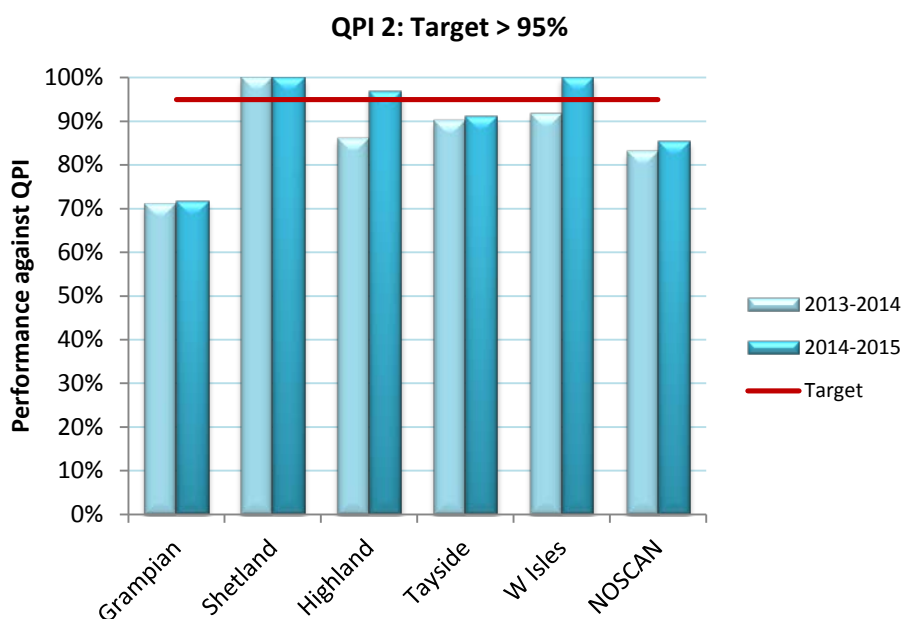
Exclusions: No exclusions.

Target: 95%

QPI 2 Performance against target

Of the 469 patients undergoing elective surgical resection for colorectal cancer, 401 had their whole colon visualised by colonoscopy or CT colonography before surgery. This equates to a rate of 85.5% which is below the target rate of 95%, and a slight increase compared to the 83.1% recorded in 2013-2014.

This QPI was met by four NHS Boards in the North of Scotland, the two NHS Boards not meeting the target were NHS Grampian and NHS Tayside. Results for both NHS Grampian and NHS Tayside were very similar to those in 2013-2014.



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator	Change in Performance since 2013-2014
Grampian	71.7%	124	173	0	0%	0	0%	1	+0.6%
Orkney*	-	-	-	-	-	-	-	-	-
Shetland	100%	7	7	0	0%	0	0%	0	0%
Highland	97.0%	96	99	0	0%	0	0%	1	+10.9%
Tayside	91.0%	162	178	0	0%	0	0%	0	+0.8%
W Isles	100%	9	9	0	0%	0	0%	0	+8.3%
NoS	85.5%	401	469	0	0%	0	0%	2	+2.4%

The MCN is encouraged to note that performance during 2014-2015 has improved. All Boards are encouraged to ensure that patients are appropriately imaged, with NHS Grampian being specifically requested to identify the issues underlying this poor performance and urgently identify the actions required for improvement.

Actions Required:

- **NHS Grampian to develop an Action Plan to address the low levels of performance for QPI 2 and ensure that patients have their whole colon visualised before elective colorectal resection.**

QPI 3: Multi-Disciplinary Team (MDT) Meeting

QPI3: Multi-Disciplinary Team (MDT) Meeting: Patients should be discussed by a multidisciplinary team prior to definitive treatment.

Evidence suggests that patients with cancer managed by a multi-disciplinary team have a better outcome. There is also evidence that the multidisciplinary management of patients increases their overall satisfaction with their care.

Numerator: Number of patients with colorectal cancer discussed at the MDT before definitive treatment.

Denominator: All patients with colorectal cancer.

Exclusions:

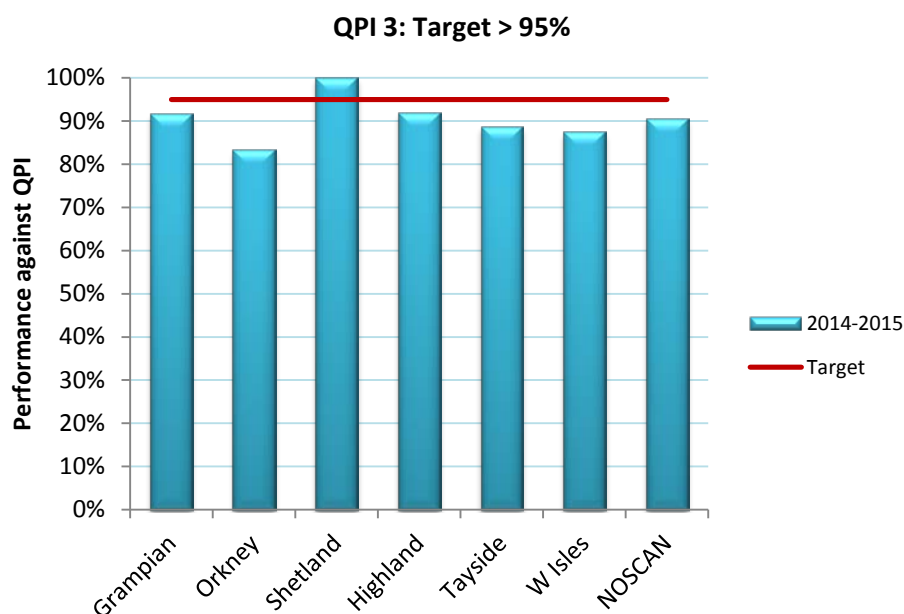
- Patients who died before first treatment.
- Patients undergoing emergency surgery.
- Patients undergoing treatment with endoscopic polypectomy only.

Target: 95%

QPI 3 Performance against target

601 out of the 664 patients included with this QPI were discussed at the MDT before definitive treatment. At 90.5% this is below the target rate of 95%. As this is a new QPI for 2014-2015 there are no data available for previous years.

Only one Board, NHS Shetland, met this QPI, with results from other Boards being at a similar level.



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator
Grampian	91.6%	229	250	0	0%	0	0%	0
Orkney	83.3%	5	6	0	0%	0	0%	0
Shetland	100%	11	11	0	0%	0	0%	0
Highland	91.8%	123	134	0	0%	1	0.8%	0
Tayside	88.7%	219	247	0	0%	0	0%	0
W Isles	87.5%	14	16	1	6.3%	0	0%	0
NoS	90.5%	601	664	1	0.2%	1	0.2%	0

The MCN is encouraged to note that across the network during 2014-2015, a significant majority of patients are being discussed prior to treatment commencement at MDT. It also acknowledges that for a small number of patients requiring emergency treatment, treatment should not be delayed by waiting for an MDT.

This is a new QPI and it will be interesting to see the results from other cancer networks. The QPI may need revision to include only elective patients or a more realistic 90% target.

Actions Required:

- **NOSCAN MCN to compare results for QPI 3 with those from other regions and, in light of these, consider recommending revision of this QPI at the Formal Review of Colorectal Cancer QPIs to include elective patients only.**

QPI 4: Stoma Care

QPI 4: Stoma Care - Patients with colorectal cancer who require a stoma are assessed and have their stoma site marked pre-operatively by a nurse with expertise in stoma care.

Access to a nurse with expertise in stoma care increases patient satisfaction and optimal independent functioning. Furthermore, there is significant evidence to suggest that patients not marked preoperatively can have significant problems with their stoma post operatively and this can affect their recovery and rehabilitation.

Numerator: Number of patients with colorectal cancer who undergo elective surgical resection which involves stoma creation who are seen by and have their stoma site marked preoperatively by a nurse with expertise in stoma care.

Denominator: All patients with colorectal cancer who undergo elective surgical resection which involves stoma creation.

Exclusions:

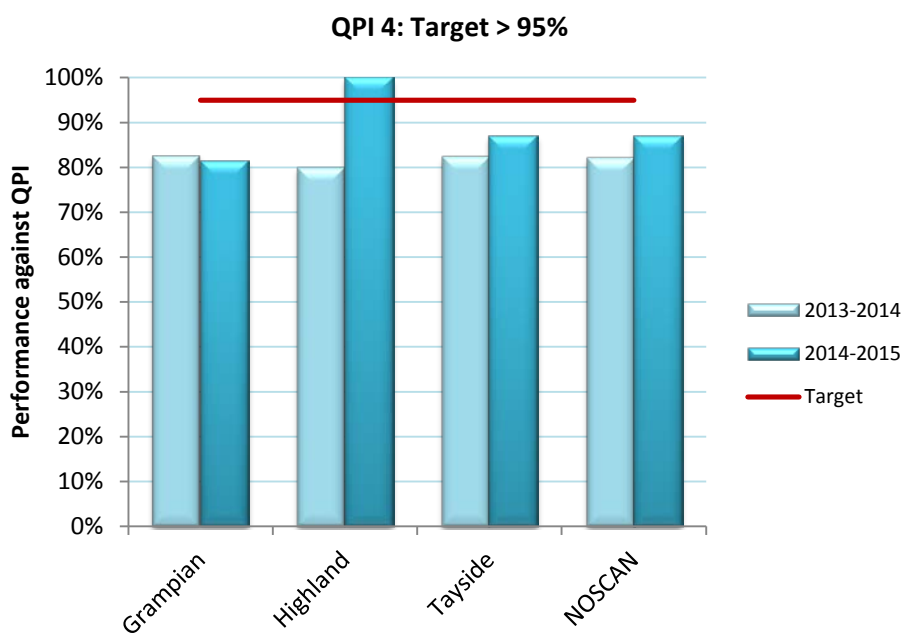
- Patients who refuse to be seen by a nurse with expertise in stoma care.

Target: 95%

QPI 4 Performance against target

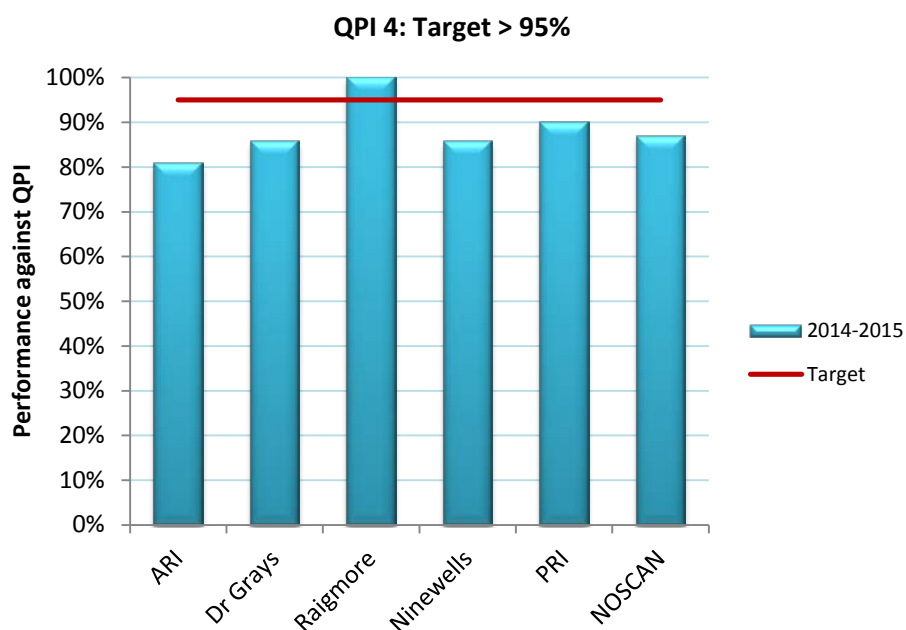
A total of 131 colorectal cancer patients in the North of Scotland underwent elective surgical resection which involved stoma creation in 2014-2015. Of these, 114 (87.0%) were seen by a nurse with expertise in stoma care preoperatively and had their stoma site marked, therefore the target of 95% was not met. However, results have improved since 2013-2014 when 82.2% of patients met this indicator.

This QPI was not met by two Boards in the North of Scotland, NHS Grampian and NHS Tayside. Results for NHS Grampian, at 81.4%, fell slightly below those of the previous year when 82.6% of patients met this indicator. Conversely results improved in NHS Tayside from 82.5% in 2013-2014 to 87.1% in 2014-2015.



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator	Change in Performance since 2013-2014
Grampian	81.4%	57	70	0	0%	0	0%	0	-1.2%
Orkney	-	0	0	0	-	0	-	0	-
Shetland*	-	-	-	-	-	-	-	-	-
Highland	100%	28	28	0	0%	0	0%	0	+20.0%
Tayside	87.1%	27	31	0	0%	0	0%	0	+4.6%
W Isles	-	0	0	0	-	0	-	0	-
NoS	87.0%	114	131	0	0%	0	0%	0	+4.8%

Results for individual hospitals are shown below. At a hospital level only Raigmore Hospital, in NHS Highland, met the QPI target.



Hospital	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator
ARI	81.0%	51	63	0	0%	0	0%	0
Dr Grays	85.7%	6	7	0	-	0	-	0
Gilbert Bain*	-	-	-	-	-	-	-	-
Raigmore	100%	28	28	0	0%	0	0%	0
Ninewells	85.7%	18	21	0	0%	0	0%	0
PRI	90.0%	9	10	0	0%	0	0%	0
NoS	87.0%	114	131	0	0%	0	0%	0

The MCN acknowledged the underperformance of some NHS Boards within the North of Scotland. It is not currently clear whether these results are significantly affected by the lack of recording of pre-operative arrangements. As such, it would be useful for all NHS Boards not meeting this QPI to review their process for marking stoma sites preoperatively and ensure that appropriate information is adequately captured by cancer audit.

Actions Required:

- **All NHS Boards not meeting QPI 4 to review arrangements around pre-operative stoma siting and ensure that details of pre-operative stoma siting are adequately recorded.**

QPI 5: Lymph Node Yield

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

Maximising the number of lymph nodes resected and analysed enables reliable staging which influences treatment decision making.

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 neoadjuvant short course radiotherapy).

Exclusions:

- Patients with rectal cancer who undergo long course neoadjuvant chemo radiotherapy or radiotherapy.
- Patients who undergo transanal endoscopic microsurgery or transanal resection of tumour.

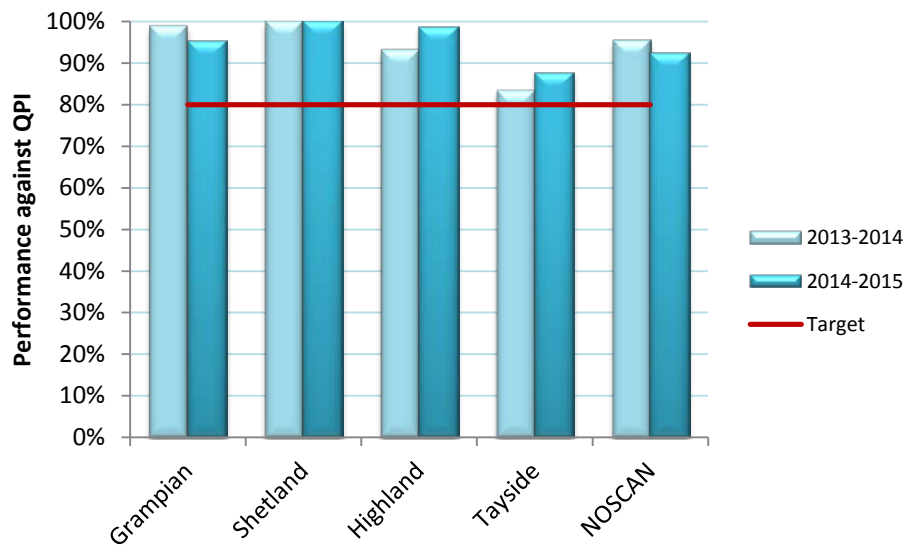
Target: 80%

QPI 5 Performance against target

92.3% of patients in the North of Scotland undergoing curative surgical resection had 12 or more of their lymph nodes pathologically examined. This meets the QPI target, although it is a slight decrease compared with the 2013-2014 result of 95.4%. However it should be noted that 288 patients undergoing surgical resection could not be included within the calculations for this QPI as the 'Intent of Surgery' was not recorded, including 176 patients in NHS Grampian and 94 patients in NHS Tayside. While the lack of recording of this information will not affect patient care it does mean that the QPI results may not be an accurate reflection of the service provided to patients, particularly in NHS Grampian and NHS Tayside where the lack of recording was most acute.

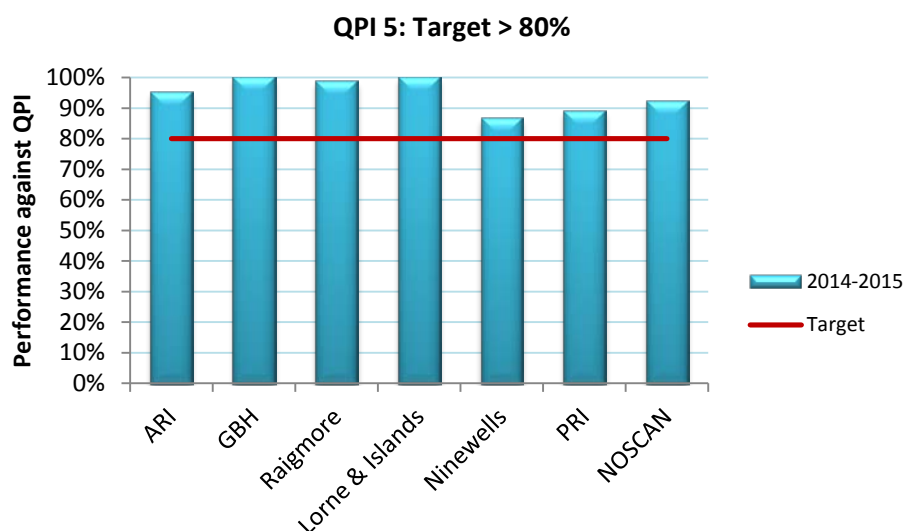
From the data available, QPI results suggest that all Boards in the North of Scotland met this QPI, with the exception of NHS Orkney and NHS Western Isles, where figures were based on very small numbers of patients and only one patient did not meet the required standard in each Board. It should be noted that recording of 'Intent of Surgery' was also incomplete in 2013-2014, however the pattern of this issue has changed. In NHS Tayside there was a considerable improvement in recording of surgical intent, in 2013-2014 this QPI was only based on 6 patients due to a lack of information however in 2014-2015 there was full information for 114 patients. However the opposite can be seen in NHS Grampian, where the level of recording of surgical intent fell. In 2014-2015 the QPI was based on only 22 patients compared with 92 patients in the previous year.

QPI 5: Target > 80%



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator	Change in Performance since 2013-2014
Grampian	95.5%	21	22	0	0%	0	0%	176	-3.5%
Orkney*	-	-	-	-	-	-	-	-	-
Shetland	100%	8	8	0	0%	0	0%	0	0.0%
Highland	98.8%	84	85	0	0%	0	0%	18	+5.7%
Tayside	87.7%	100	114	0	0%	16	14.0%	94	+4.4%
W Isles*	-	-	-	-	-	-	-	-	-
NoS	92.3%	217	235	0	0%	16	6.8%	288	-3.1%

Results for individual hospitals are shown below. At a hospital level only Balfour Hospital in NHS Orkney and the Western Isles Hospital did not meet the required target. As both these hospitals having very small numbers of patients and only fail the QPI due to a single patient at each hospital, these results are not considered to reflect any issues with the service provided.



Hospital	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator
ARI	95.2%	20	21	0	0%	0	0%	139
Dr Grays*	-	-	-	-	-	-	-	-
Balfour*	-	-	-	-	-	-	-	-
Gilbert Bain	100%	8	8	0	0%	0	0%	0
Raigmore	98.7%	77	78	0	0%	0	0%	17
Lorne & Islands	100%	6	6	0	0%	0	0%	1
Belford*	-	-	-	-	-	-	-	-
Ninewells	86.8%	59	68	0	0%	6	8.8%	56
PRI	89.1%	41	46	0	0%	10	21.7%	38
W Isles*	-	-	-	-	-	-	-	-
NoS	92.3%	217	235	0	0%	16	6.8%	288

The MCN is encouraged to note that both as a network, and at individual Board level, the required target was exceeded during 2014-2015. However, it was also noted that this excellent rate of performance would be better measured if the intent of surgery had been more consistently recorded.

Actions Required:

- **As part of the MDT process chairs of all MDTs should ensure that intent of surgery is recorded in the treatment plan for each patient.**

QPI 6: Neoadjuvant Radiotherapy

QPI 6: Neoadjuvant Radiotherapy - Patients with locally advanced rectal cancer should receive neoadjuvant chemoradiotherapy designed to facilitate a margin-negative resection.

Patients with rectal tumours that involve or threaten the mesorectal fascia on preoperative imaging may benefit from preoperative radiotherapy.

Numerator: Number of patients with rectal cancer with a threatened or involved CRM on preoperative MRI undergoing surgery who receive long course neoadjuvant chemoradiotherapy.

Denominator: All patients with rectal cancer with a threatened or involved CRM on preoperative MRI undergoing surgery.

Exclusions:

- Patients who refused radiotherapy.
- Patients in whom radiotherapy is contraindicated.
- Patients who presented as an emergency for surgery.

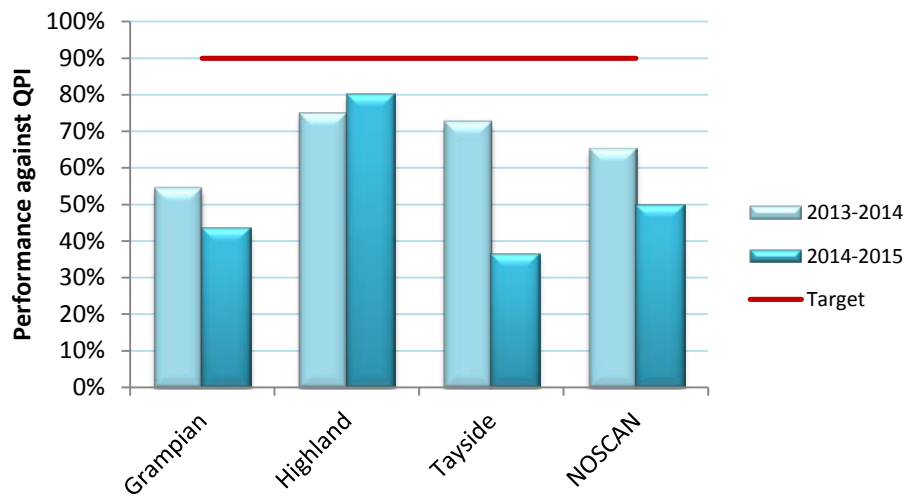
Target: 90%

QPI 6 Performance against target

Overall in 2014-2015, 22 out of 44 patients with locally advanced rectal cancer received neoadjuvant chemoradiotherapy. At a rate of 50.0%, this misses the target of 90% of patients by a considerable margin. This is lower than results from 2013-2014 when the rate was 65.3%.

As in previous years, no NHS Boards in the North of Scotland met the target for this QPI. There was a considerable fall in results for NHS Tayside between the two years, however results were based on small numbers and there were some recording issues in NHS Tayside and NHS Grampian that impacted the results of this QPI.

QPI 6: Target > 90%



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator	Change in Performance since 2013-2014
Grampian	43.5%	10	23	0	0%	0	0%	13	-11.1%
Orkney	-	0	0	0	-	0	-	0	-
Shetland	-	0	0	0	-	0	-	0	-
Highland	80.0%	8	10	0	0%	0	0%	0	+5.0%
Tayside	36.4%	4	11	2	18.2%	0	0%	8	-36.3%
W Isles	-	0	0	0	-	0	-	0	-
NoS	50.0%	22	44	2	4.6%	0	0%	21	-15.3%

The MCN notes that both at a network and at individual Board level, it has failed to achieve the required performance against this QPI. Furthermore, it also notes that performance has deteriorated when compared to that first reported last year.

The key goal is to achieve a clear circumferential resection margin. As long as this is achieved, the type and duration of pre-operative treatment is not relevant. What is more of concern is a high incidence of involved margins particularly where it appears that there is a low use of pre-operative treatment.

Actions Required:

- **MCN to look for any variance in pre-operative neoadjuvant treatment strategies and margin involvement rates between NHS Boards in the North of Scotland (and possibly between cancer networks) for patients with rectal cancer and address any issues highlighted.**

QPI 7: Surgical Margins

QPI 7(i): Surgical Margins - Rectal cancers undergoing surgical resection should be adequately excised. For patients who receive primary surgery, or surgery following neo-adjuvant short course radiotherapy.

The circumferential margin is an independent risk factor for the development of distant metastases and mortality. It is recognised that local recurrence of rectal cancer can be accurately predicted by pathological assessment of circumferential margin involvement in these tumours.

Numerator: Number of patients with rectal cancer who undergo elective primary surgical resection or surgical resection following short course neoadjuvant radiotherapy in which the circumferential margin is clear of tumour.

Denominator: All patients with rectal cancer who undergo elective primary surgical resection or surgical resection following short course neo-adjuvant radiotherapy.

Exclusions:

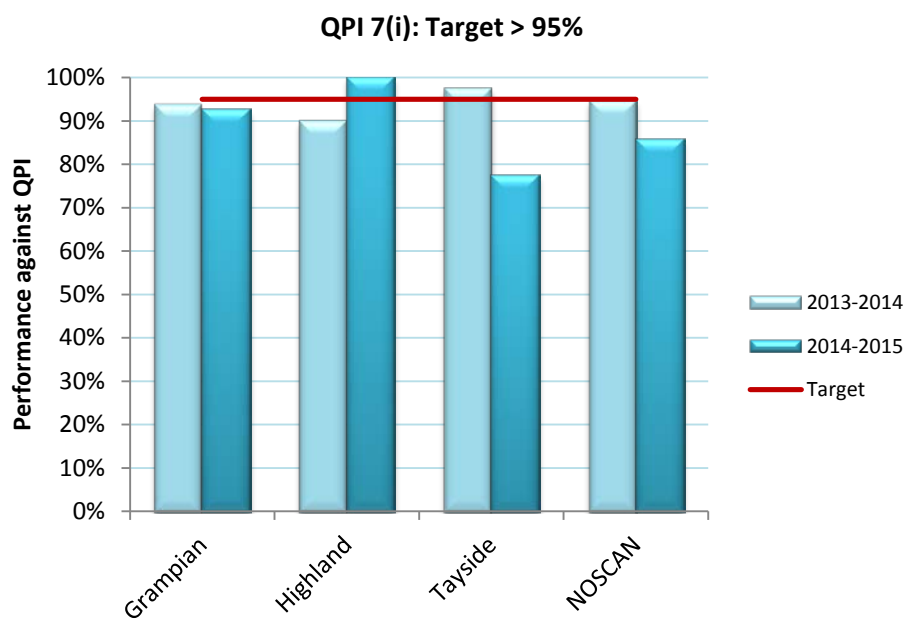
- Patients who undergo transanal endoscopic microsurgery or transanal resection of tumour.

Target: 95%

QPI 7(i) Performance against target

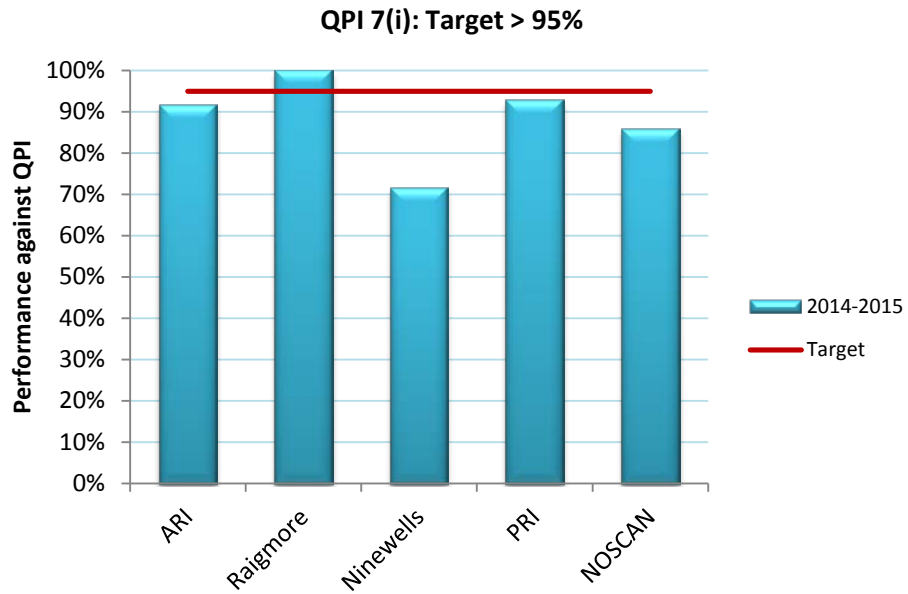
In 2014-2015, in 79 out of the 92 patients included within this QPI the circumferential margin was clear of tumour, which is a rate of 85.9%. This is lower than the 2013-14 rate of 94.6% and below the target rate of 95%.

With variations in trends between individual Boards during the last year, this QPI was met in all Boards in the North of Scotland except NHS Tayside and NHS Grampian.



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator	Change in Performance since 2013-2014
Grampian	92.6%	25	27	0	0%	0	0%	1	-1.2%
Orkney	-	0	0	0	-	0	-	0	-
Shetland*	-	-	-	-	-	-	-	-	-
Highland	100%	14	14	0	0%	0	0%	0	+10.0%
Tayside	77.6%	38	49	0	0%	6	12.2%	2	-19.9%
W Isles	-	0	0	0	-	0	-	0	-
NoS	85.9%	79	92	0	0%	6	6.5%	3	-8.8%

Results for individual hospitals are shown below.



Hospital	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator
ARI	91.7%	22	24	0	0%	0	0%	1
Dr Grays*	-	-	-	-	-	-	-	-
Gilbert Bain*	-	-	-	-	-	-	-	-
Raigmore	100%	14	14	0	0%	0	0%	0
Ninewells	71.4%	25	35	0	0%	4	11.4%	1
PRI	92.9%	13	14	0	0%	2	14.3%	1
NoS	85.9%	79	92	0	0%	6	6.5%	3

QPI 7(ii): Surgical Margins - Rectal cancers undergoing surgical resection should be adequately excised. For patients who receive surgery following neo-adjuvant long course radiotherapy or chemo radiotherapy.

The circumferential margin is an independent risk factor for the development of distant metastases and mortality. It is recognised that local recurrence of rectal cancer can be accurately predicted by pathological assessment of circumferential margin involvement in these tumours.

Numerator: Number of patients with rectal cancer who undergo elective surgical resection following neoadjuvant long course radiotherapy or chemoradiotherapy in which the circumferential margin is clear of tumour.

Denominator: All patients with rectal cancer who undergo elective surgical resection following neo-adjuvant long course radiotherapy or chemoradiotherapy.

Exclusions:

- Patients who undergo transanal endoscopic microsurgery or transanal resection of tumour.

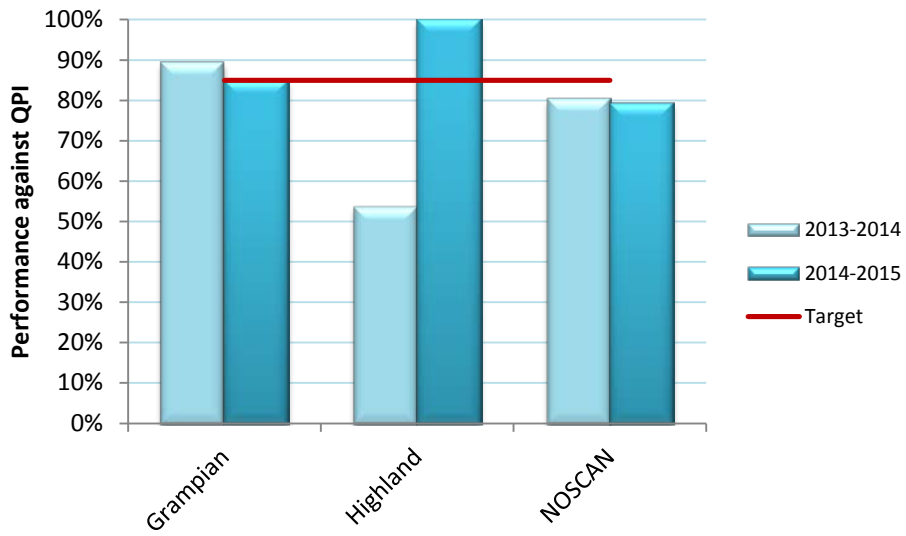
Target: 85%

QPI 7(ii) Performance against target

In 2014-2015, 27 out of the 34 patients included within this QPI the circumferential margin was clear of tumour, which is a rate of 79.4%. This is very similar to the 2013-14 rate of 80.43% and below the target rate of 85%.

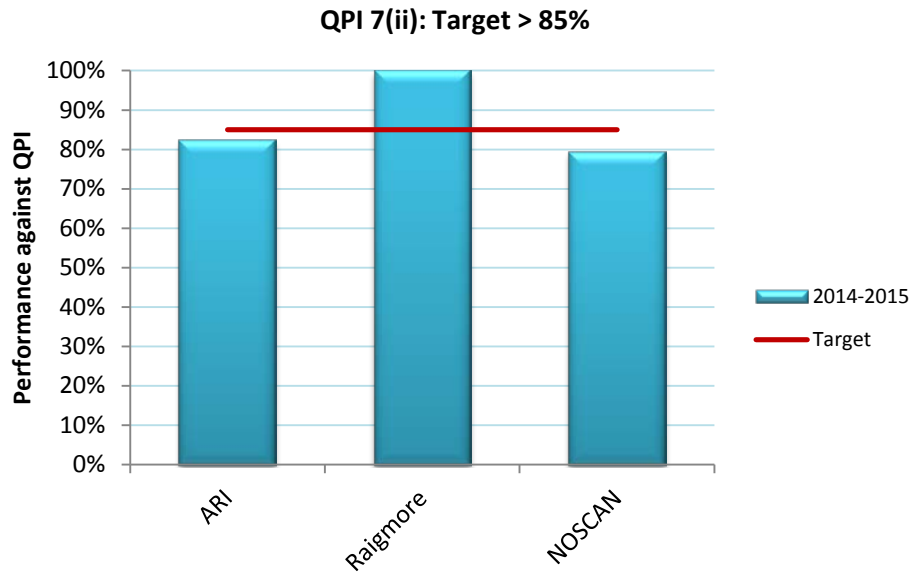
This QPI was met by two Boards in the North of Scotland, NHS Highland and NHS Grampian, with trends in performance varying between Boards. Caution should be exercised in comparing performances between NHS Boards and between years for this QPI as results are based on very small numbers of patients.

QPI 7(ii): Target > 85%



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator	Change in Performance since 2013-2014
Grampian	85.0%	17	20	0	0%	0	0%	0	-4.5%
Orkney	-	0	0	0	-	0	-	0	-
Shetland	-	0	0	0	-	0	-	0	-
Highland	100%	10	10	0	0%	0	0%	0	+46.2%
Tayside*	-	-	-	-	-	-	-	-	-
W Isles	-	0	0	0	-	0	-	0	-
NoS	79.4%	27	34	0	0%	1	2.9%	2	-1.0%

Results for individual hospitals are shown below.



Hospital	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator
ARI	82.4%	14	17	0	0%	0	0%	0
Dr Grays*	-	-	-	-	-	-	-	-
Raigmore	100%	10	10	0	0%	0	0%	0
Ninewells*	-	-	-	-	-	-	-	-
PRI*	-	-	-	-	-	-	-	-
NoS	79.4%	27	34	0	0%	1	2.9%	2

The MCN is encouraged to note that whilst not achieving the target required, nonetheless performance during 2014-2015 has remained good overall. However, it acknowledges that further work is required if the national target is to be universally achieved across the network.

The MCN note that there is variance in practice across the North of Scotland in relation to neo-adjuvant therapies, as outlined in the discussions for QPI 6. The action identified under QPI 6 is relevant for this QPI as well.

Actions Required:

Please see action under QPI 6 above.

QPI 8: Reoperation Rates

QPI 8: Re-operation Rates - For patients undergoing surgery for colorectal cancer, re-operation should be minimised.

It is important to minimise morbidity and mortality related to the treatment of colorectal cancer. Re-operation rates may offer a sensitive and relevant marker of surgical quality.

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.

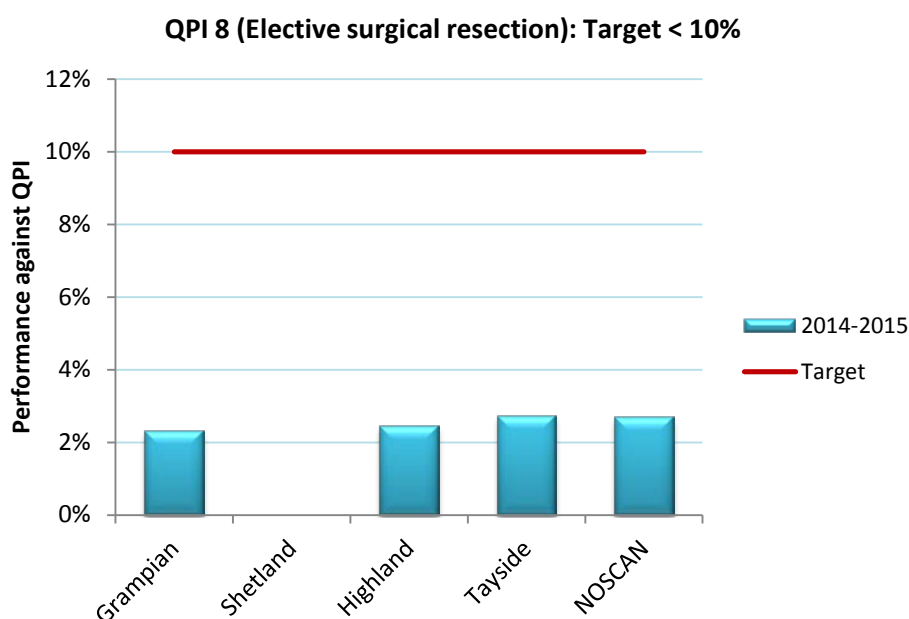
Exclusions: No exclusions

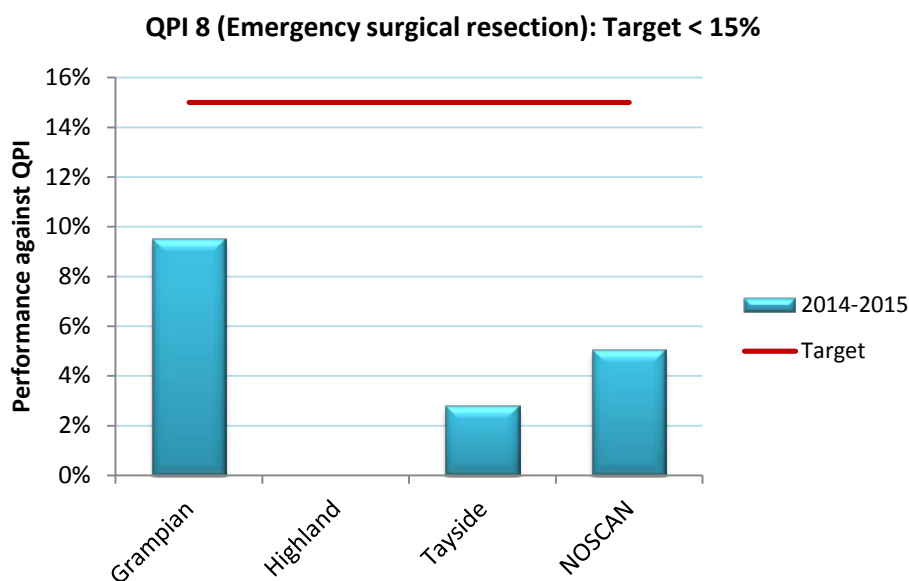
Targets: <10% (Elective surgical resection)
<15% (Emergency surgical resection)

QPI 8 Performance against target

The overall reoperation rate for North of Scotland for 2014-2015 was 2.7% for elective surgical resections and 5.1% for emergency surgical resections, well below the target rates of less than 10% and 15% respectively. This is the first year that these data have been reported and therefore there are no comparisons from previous years.

This QPI was met by all NHS Boards in the North of Scotland for both elective and emergency resections.





	Elective Surgical Resection			Emergency Surgical Resection		
	Performance (%)	Numerator	Denominator	Performance (%)	Numerator	Denominator
Grampian	2.3%	4	173	9.5%	4	42
Orkney*	-	-	-	-	0	0
Shetland*	0%	0	7	-	-	-
Highland	2.4%	2	82	0%	0	19
Tayside	2.7%	5	183	2.8%	1	36
W Isles	-	0	0	-	0	0
NoS	2.7%	12	448	5.1%	5	99

The MCN is encouraged to note that all Boards have achieved a higher than required level of attainment for both parts of this QPI. However, it is noted that these data are derived from SMR01 data rather than cancer audit information and there is some uncertainty about the accuracy of results reported. As such, all NHS Boards are invited to check the results of these data to ensure that they capture all relevant re-operations.

Actions Required:

- **All NHS Boards to check the results of QPI 8 to ascertain whether they are a true reflection of re-operation rates.**
- **MCN to propose that information on re-operations is collected by cancer audit in future years at the forthcoming Colorectal Cancer QPI Formal Review.**

QPI 9: Anastomotic Dehiscence

QPI 9(i): Anastomotic Dehiscence - For patients who undergo surgical resection for colorectal cancer anastomotic dehiscence should be minimised. For patients receiving colonic anastomosis.

Anastomotic dehiscence is a major cause of morbidity and a measure of the quality of surgical care. Anastomotic leakage is an important and potentially fatal complication of colorectal cancer surgery, and measures to minimise it should be taken.

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

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

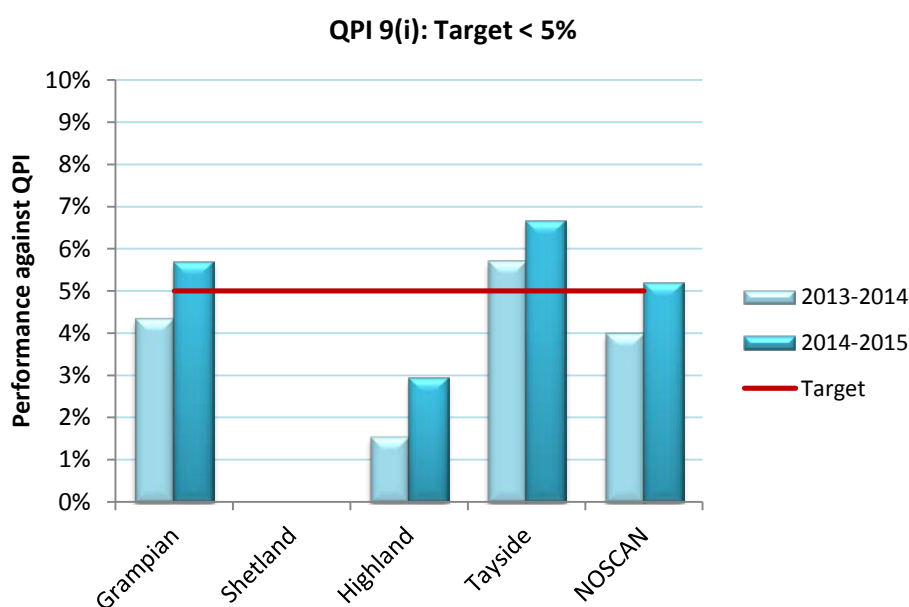
Exclusions: No exclusions

Target: <5%

QPI 9(i) Performance against target

The overall anastomotic dehiscence rate for patients undergoing a surgical procedure involving anastomosis of the colon for North of Scotland for 2014-2015 was 5.2%, marginally missing the target of less than 5%. This is slightly higher than for 2013-2014 when the NoS rate was 4.0%, meeting the QPI target.

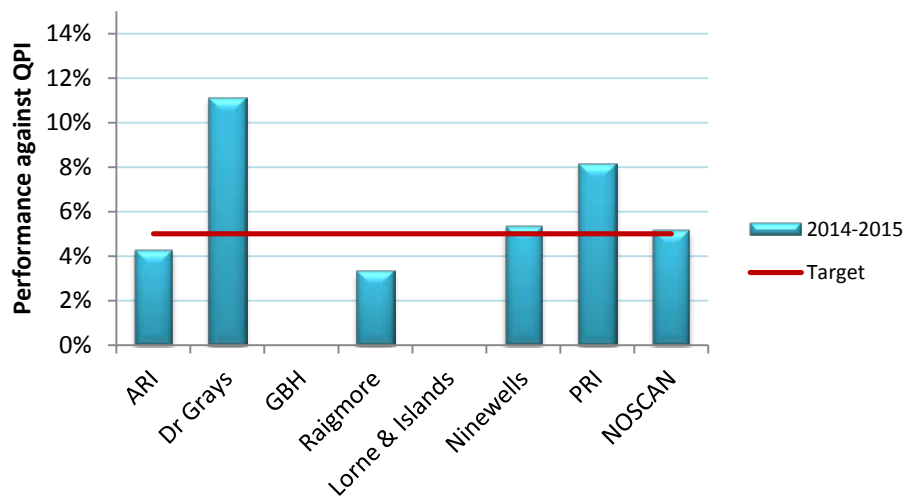
This QPI was met by all NHS Boards in the North of Scotland except for NHS Grampian and NHS Tayside.



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator	Change in Performance since 2013-2014
Grampian	5.7%	5	88	0	0%	0	0%	0	+1.4%
Orkney*	-	-	-	-	-	-	-	-	-
Shetland	0%	0	6	0	0%	0	0%	0	+0.0%
Highland	2.9%	2	68	1	1.5%	0	0%	0	+1.3%
Tayside	6.7%	7	105	0	0%	0	0%	0	+1.0%
W Isles*	-	-	-	-	-	-	-	-	-
NoS	5.2%	14	270	1	0.4%	0	0%	0	+1.2%

Results for individual hospitals are shown below.

QPI 9(i): Target < 5%



Hospital	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator
ARI	4.2%	3	70	0	0%	0	0%	0
Dr Grays	11.1%	2	18	0	0%	0	0%	0
Balfour*	-	-	-	-	-	-	-	-
Gilbert Bain	0%	0	6	0	0%	0	0%	0
Raigmore	3.3%	2	60	0	0%	0	0%	0
Lorne & Islands	0%	0	7	1	14.3%	0	0%	0
Belford*	-	-	-	-	-	-	-	-
Ninewells	5.4%	3	56	0	0%	0	0%	0
PRI	8.2%	4	49	0	0%	0	0%	0
W Isles*	-	-	-	-	-	-	-	-
NoS	5.2%	14	270	1	0.4%	0	0%	0

QPI 9(ii): Anastomotic Dehiscence - For patients who undergo surgical resection for colorectal cancer anastomotic dehiscence should be minimised. For patients receiving rectal anastomosis.

Anastomotic dehiscence is a major cause of morbidity and a measure of the quality of surgical care. Anastomotic leakage is an important and potentially fatal complication of colorectal cancer surgery, and measures to minimise it should be taken.

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 (radiological or surgical).

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

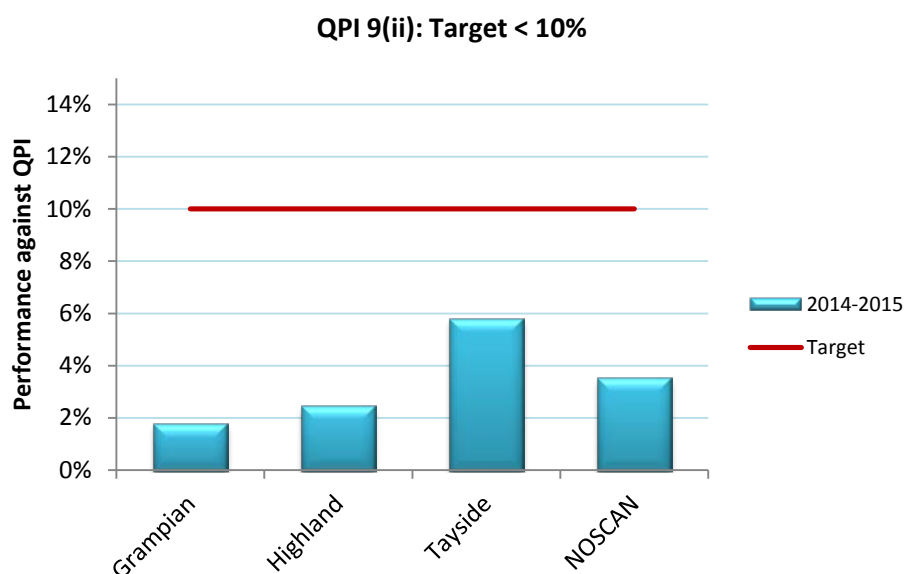
Exclusions: No exclusions.

Target: <10%

QPI 9(ii) Performance against target

The overall anastomotic dehiscence rate for patients undergoing a surgical procedure involving anastomosis of the rectum for 2014-2015 was 3.5%, comfortably within the target of less than 10%. Due to changes to this QPI since the first year of reporting there are no comparable data from previous years.

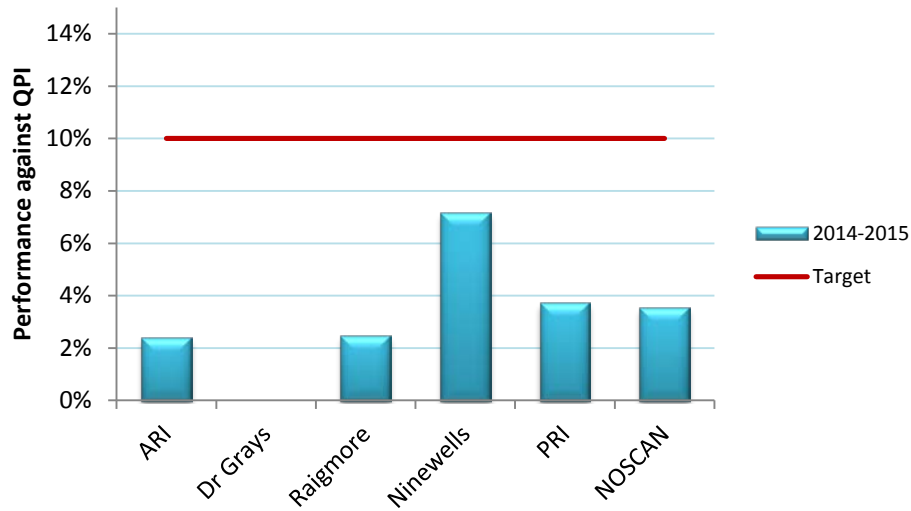
This QPI was met by all NHS Boards in the North of Scotland.



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator
Grampian	2.4%	1	42	0	0%	0	0%	0
Orkney*	-	-	-	-	-	-	-	-
Shetland*	-	-	-	-	-	-	-	-
Highland	2.4%	1	41	0	0%	0	0%	0
Tayside	5.8%	4	69	1	1.4%	0	0%	0
W Isles*	-	-	-	-	-	-	-	-
NoS	3.5%	6	170	1	0.6%	0	0%	0

Results for individual hospitals are shown below; all hospitals within the North of Scotland met this QPI.

QPI 9(ii): Target < 10%



Hospital	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator
ARI	2.4%	1	42	0	0%	0	0%	0
Dr Grays	0%	0	14	0	0%	0	0%	0
Balfour*	-	-	-	-	-	-	-	-
Gilbert Bain*	-	-	-	-	-	-	-	-
Raigmore	2.4%	1	41	0	0%	0	0%	0
Ninewells	7.1%	3	42	1	2.4%	0	0%	0
PRI	3.7%	1	27	0	0%	0	0%	0
W Isles*	-	-	-	-	-	-	-	-
NoS	3.5%	6	170	1	0.6%	0	0%	0

The MCN is encouraged to note that all Boards have achieved a much higher than required level of attainment for the rectal anastomosis and a level that is approaching that required for the patients with colonic anastomosis, which nonetheless still demonstrates a good quality of surgical attainment.

Actions Required:

No specific actions were identified.

QPI 10: 30 and 90 Day Mortality Following Surgical Resection

QPI 10: 30 Day and 90 Day Mortality Following Surgical Resection - Mortality after surgical resection for colorectal cancer.

Treatment related mortality is a marker of the quality and safety of the whole service provided by the Multi Disciplinary Team (MDT). Outcomes of treatment, including treatment-related morbidity and mortality should be regularly assessed.

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

Denominator: All patients with colorectal cancer who undergo emergency or elective surgical resection.

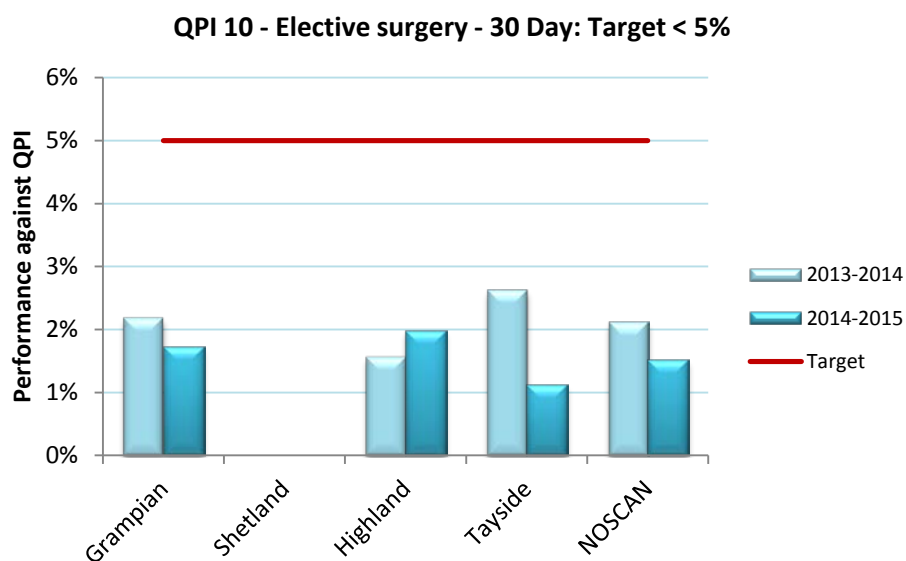
Exclusions: No exclusions

Targets: <5% (Elective surgical resection)
<15% (Emergency surgical resection)

QPI 10 Performance against target – Elective surgical resection – 30 day mortality

From a total of 465 patients diagnosed with colorectal cancer in the North of Scotland during 2014-2015 who underwent elective surgical resection, 7 patients dies within 30 days of surgery. This equates to 1.5% which is well below the target of less than 5% and is a slight decline compared with the 2013-2014 result of 2.1%.

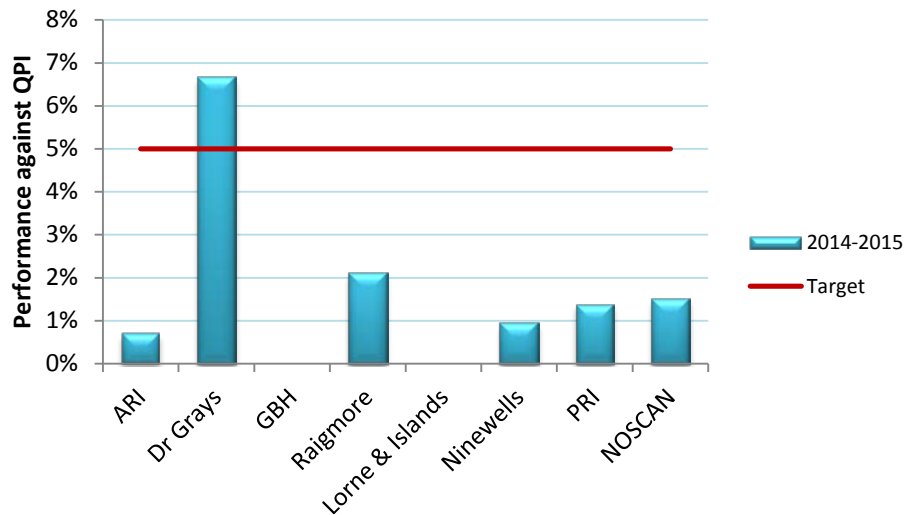
All NHS Boards within the North of Scotland met this QPI.



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator	Change in Performance since 2013-2014
Grampian	1.7%	3	174	0	0%	0	0%	0	-0.4%
Orkney*	-	-	-	-	-	-	-	-	-
Shetland	0%	0	6	0	0%	0	0%	0	0.0%
Highland	2.0%	2	101	0	0%	0	0%	0	+0.4%
Tayside	1.1%	2	179	0	0%	0	0%	0	-1.5%
W Isles*	-	-	-	-	-	-	-	-	-
NoS	1.5%	7	465	0	0%	0	0%	0	-0.6%

Results for individual hospitals are shown below; all hospitals within the North of Scotland met this QPI target except Dr Grays Hospital, NHS Grampian.

QPI 10 - Elective Surgery - 30 Day: Target < 5%



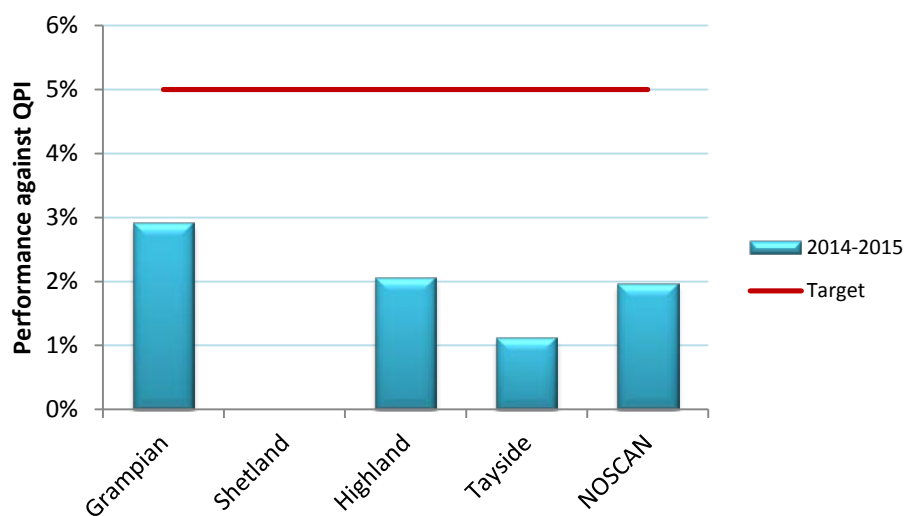
Hospital	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator
ARI	0.7%	1	144	0	0%	0	0%	0
Dr Grays	6.7%	2	30	0	0%	0	0%	0
Balfour*	-	-	-	-	-	-	-	-
Gilbert Bain	0%	0	6	0	0%	0	0%	0
Raigmore	2.1%	2	95	0	0%	0	0%	0
Lorne & Islands	0%	0	5	0	0%	0	0%	0
Belford*	-	-	-	-	-	-	-	-
Ninewells	0.9%	1	106	0	0%	0	0%	0
PRI	1.4%	1	73	0	0%	0	0%	0
W Isles*	-	-	-	-	-	-	-	-
NoS	1.5%	7	465	0	0%	0	0%	0

QPI 10 Performance against target – Elective surgical resection – 90 day mortality

From a total of 459 patients diagnosed with colorectal cancer in the North of Scotland during 2014-2015 who underwent elective surgical resection, 9 patients died within 90 days of surgery. This equates to 2.0% which is well below the target of less than 5%. There are no comparable figures for 2013-2014.

All NHS Boards within the North of Scotland met this QPI.

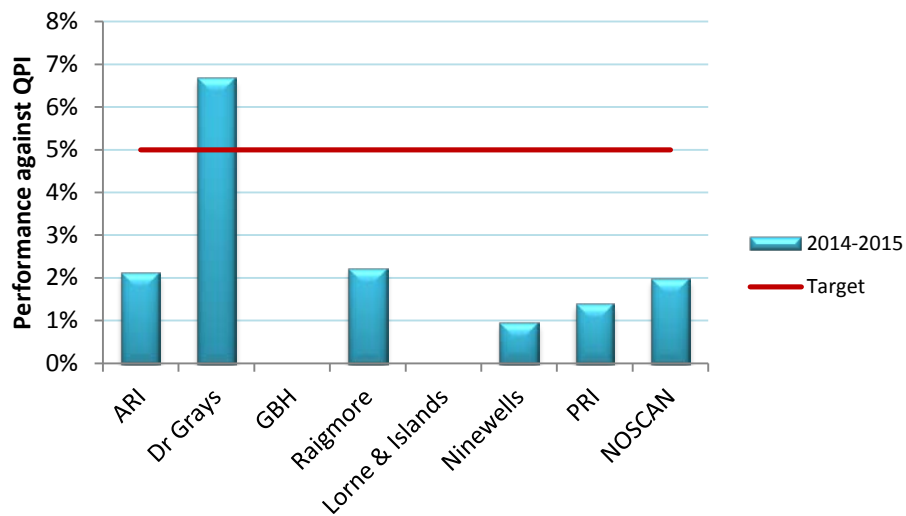
QPI 10 - Elective surgery - 90 Day: Target < 5%



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator
Grampian	2.9%	5	172	0	0%	0	0%	0
Orkney*	-	-	-	-	-	-	-	-
Shetland	0%	0	6	0	0%	0	0%	0
Highland	2.1%	2	97	0	0%	0	0%	0
Tayside	1.1%	2	179	0	0%	0	0%	0
W Isles*	-	-	-	-	-	-	-	-
NoS	2.0%	9	459	0	0%	0	0%	0

Results for individual hospitals are shown below; all hospitals within the North of Scotland met this QPI target except Dr Grays Hospital, NHS Grampian.

QPI 10 - Elective Surgery - 90 Day: Target < 5%

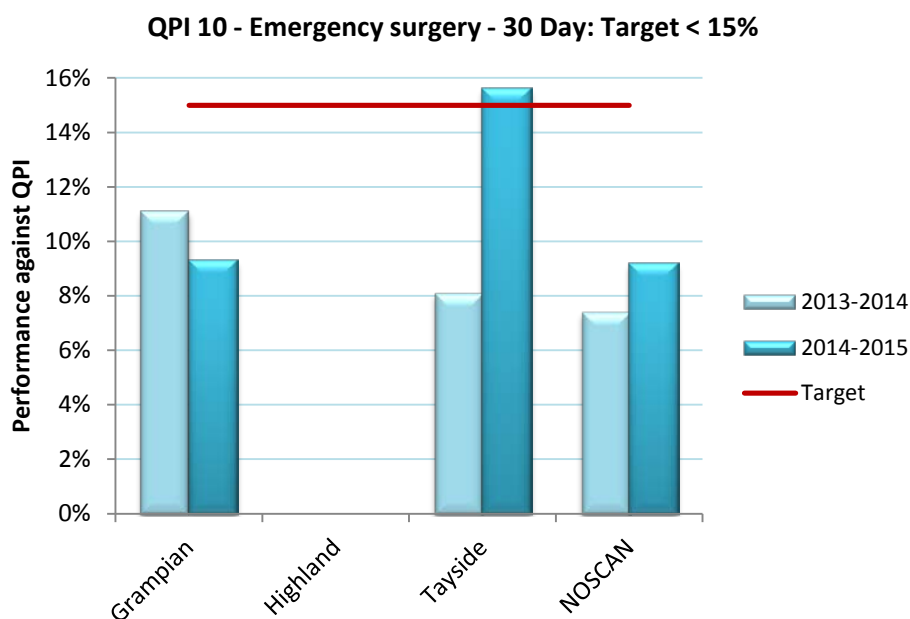


Hospital	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator
ARI	2.1%	3	142	0	0%	0	0%	0
Dr Grays	6.7%	2	30	0	0%	0	0%	0
Balfour*	-	-	-	-	-	-	-	-
Gilbert Bain	0%	0	6	0	0%	0	0%	0
Raigmore	2.2%	2	91	0	0%	0	0%	0
Lorne & Islands	0%	0	5	0	0%	0	0%	0
Belford*	-	-	-	-	-	-	-	-
Ninewells	0.9%	1	106	0	0%	0	0%	0
PRI	1.4%	1	73	0	0%	0	0%	0
W Isles*	-	-	-	-	-	-	-	-
NoS	2.0%	9	459	0	0%	0	0%	0

QPI 10 Performance against target – Emergency surgical resection – 30 day mortality

From a total of 98 patients diagnosed with colorectal cancer in the North of Scotland during 2014-2015 who underwent emergency surgical resection, 9 patients dies within 30 days of surgery. This equates to 9.2% which meets the target of less than 15% but is a slight higher that the 2013-2014 result of 7.4%.

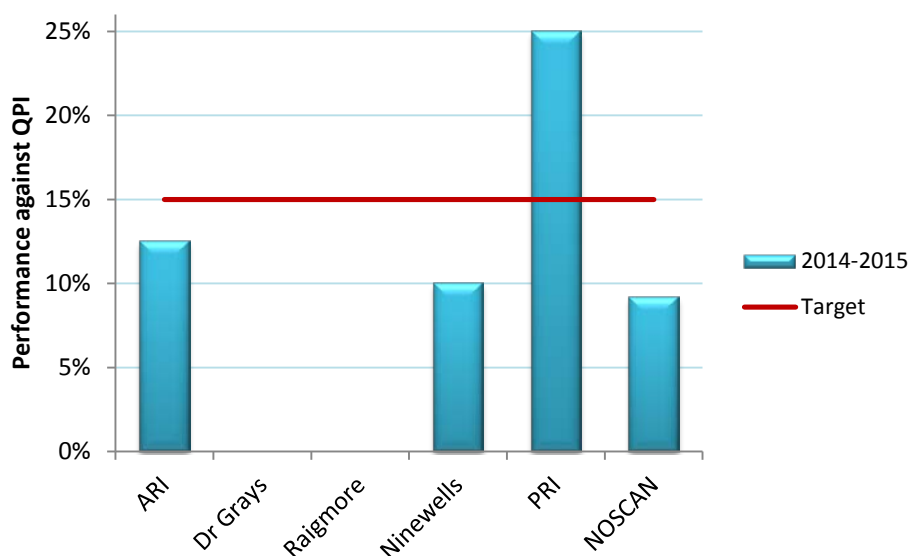
All NHS Boards within the North of Scotland met this QPI except NHS Tayside.



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator	Change in Performance since 2013-2014
Grampian	9.3%	4	43	0	0%	0	0%	0	-1.8%
Orkney	-	0	0	0	-	0	-	0	-
Shetland*	-	-	-	-	-	-	-	-	-
Highland	0%	0	20	0	0%	0	0%	0	0.0%
Tayside	15.6%	5	32	0	0%	0	0%	0	+7.5%
W Isles*	-	-	-	-	-	-	-	-	-
NoS	9.2%	9	98	0	0%	0	0%	0	+1.8%

Results for individual hospitals are shown below; all hospitals within the North of Scotland met this QPI target except Perth Royal Infirmary, NHS Tayside.

QPI 10 - Emergency Surgery - 30 Day: Target < 15%

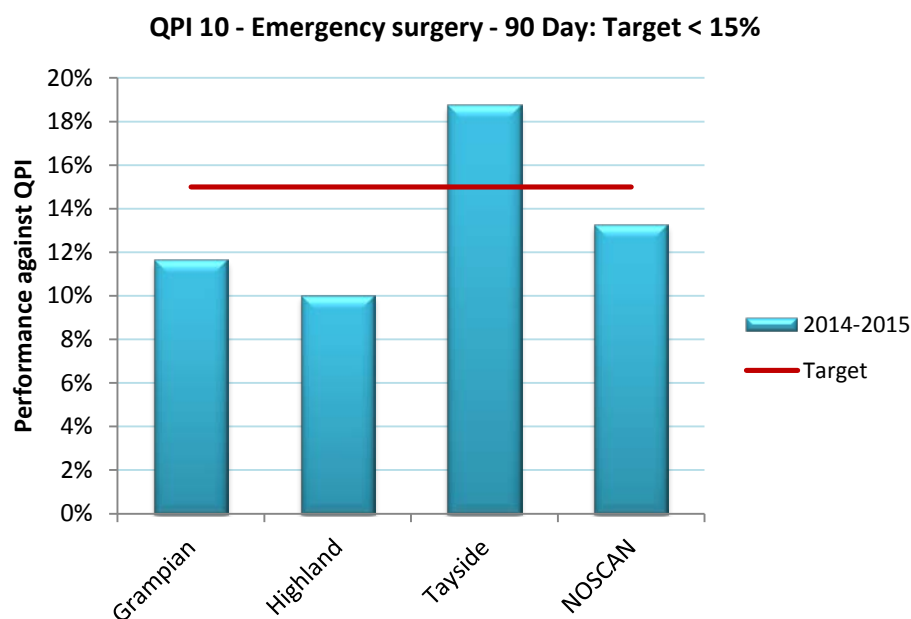


Hospital	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator
ARI	12.5%	4	32	0	0%	0	0%	0
Dr Grays	0%	0	11	0	0%	0	0%	0
Gilbert Bain*	-	-	-	-	-	-	-	-
Raigmore	0%	0	18	0	0%	0	0%	0
Lorne & Islands*	-	-	-	-	-	-	-	-
Ninewells	10.0%	2	20	0	0%	0	0%	0
PRI	25.0%	3	12	0	0%	0	0%	0
W Isles*	-	-	-	-	-	-	-	-
NoS	9.2%	9	98	0	0%	0	0%	0

QPI 10 Performance against target – Emergency surgical resection – 90 day mortality

From a total of 98 patients diagnosed with colorectal cancer in the North of Scotland during 2014-2015 who underwent emergency surgical resection, 13 patients dies within 90 days of surgery. At a rate of 13.3%, results for the North of Scotland meet the target rate of less than 15%. There are no comparable data from 2013-2014 with which this can be compared.

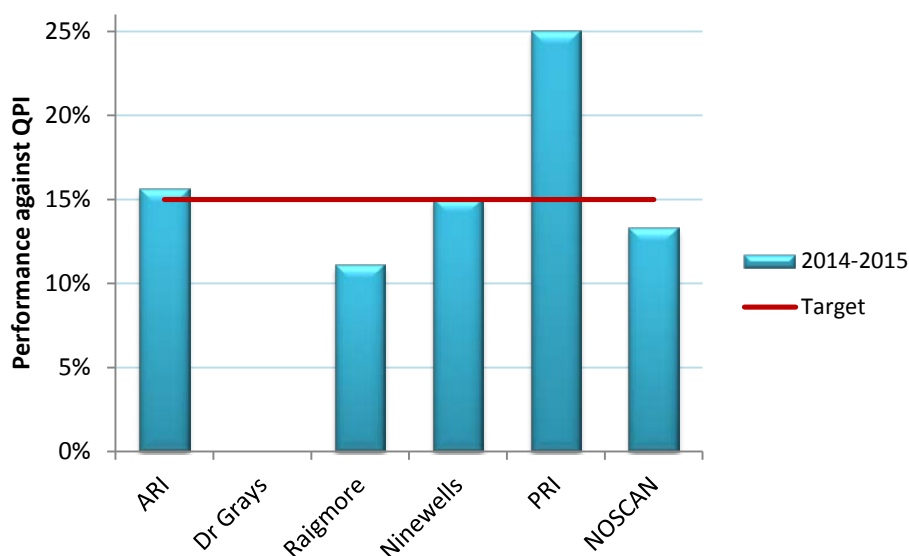
All NHS Boards within the North of Scotland except NHS Tayside met this QPI.



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator
Grampian	11.6%	5	43	0	0%	0	0%	0
Orkney	-	0	0	0	-	0	-	0
Shetland*	-	-	-	-	-	-	-	-
Highland	10.0%	2	20	0	0%	0	0%	0
Tayside	18.8%	6	32	0	0%	0	0%	0
W Isles*	-	-	-	-	-	-	-	-
NoS	13.3%	13	98	0	0%	0	0%	0

Results for individual hospitals are shown below; all hospitals within the North of Scotland met this QPI target except Perth Royal Infirmary in NHS Tayside and Aberdeen Royal Infirmary, NHS Grampian.

QPI 10 - Emergency Surgery - 90 Day: Target < 15%



Hospital	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator
ARI	15.6%	5	32	0	0%	0	0%	0
Dr Grays	0%	0	11	0	0%	0	0%	0
Gilbert Bain*	-	-	-	-	-	-	-	-
Raigmore	11.1%	2	18	0	0%	0	0%	0
Lorne & Islands*	-	-	-	-	-	-	-	-
Ninewells	15.0%	3	20	0	0%	0	0%	0
PRI	25.0%	3	12	0	0%	0	0%	0
W Isles*	-	-	-	-	-	-	-	-
NoS	13.3%	13	98	0	0%	0	0%	0

The MCN is encouraged to note that all Boards have achieved a much higher than required level of attainment for patients undergoing surgical resection for colorectal cancer, both at 30 and 90 days. It is also encouraging that for patients presenting under the 'Emergency' criteria, good levels of attainment have been achieved in most NHS Board. While some variance in mortality rates can be seen, this is likely to reflect the small numbers of patients involved in calculating this QPI. Whilst it is noted that over the two years of audit now available that there have been no Boards consistently underperforming against this particular QPI in the North of Scotland, Boards are encouraged to remain vigilant that any reported underperformance is not in fact due to clinical or other operational factors.

In addition, NHS Boards should ensure that date of death is appropriately captured by cancer audit staff, Quality Assurance of the cancer audit information for 2013-2014 identified accuracy of 94% for this data item in NOSCANA, lower than for most other data items.

It was noted that Boards across the North of Scotland may differ in their approach to surgical intervention in patients presenting as emergency cases. It is possible that enthusiastic attempts at "resection" in the emergency situation may be reflected in an increase in early mortality. It is also possible that patients who may benefit from resection may not always receive this option. NHS Boards in the North of Scotland should collaborate to ensure uniform best practice with respect to this.

Actions Required:

- **MCN to propose a reduction in the QPI target for elective surgical mortality at Formal Review of Colorectal QPIs.**
- **All NHS Boards to ensure that date of death information is appropriately collected prior to QPI analysis.**
- **MCN to facilitate collaboration between NHS Boards in the North of Scotland to ensure uniform best practice in respect to surgical intervention in patients presenting with colorectal cancer as an emergency.**

QPI 11: Adjuvant Chemotherapy

QPI 11: Adjuvant Chemotherapy - Patients with Dukes C and high risk Dukes B colorectal cancer should be considered for adjuvant chemotherapy.

All patients with Dukes C and high risk Dukes B colorectal cancer should be considered for adjuvant chemotherapy to reduce the risk of local and systemic recurrence.

Due to the difficulties associated with accurate measurement of co-morbidities and patient fitness these cannot be utilised as exclusions within this QPI. To ensure focussed measurement and a QPI examining expected outcomes the age range of 50-74 years has been selected. This represents the majority of patients and therefore provides a good proxy for access to adjuvant chemotherapy in the whole patient population.

Numerator: Number of patients between 50 and 74 years of age at diagnosis with Dukes C, or high risk Dukes B, colorectal cancer who undergo surgical resection who receive adjuvant chemotherapy.

Denominator: All patients between 50 and 74 years of age at diagnosis with Dukes C, or high risk Dukes B, colorectal cancer who undergo surgical resection.

Exclusions: Patients who refuse chemotherapy.

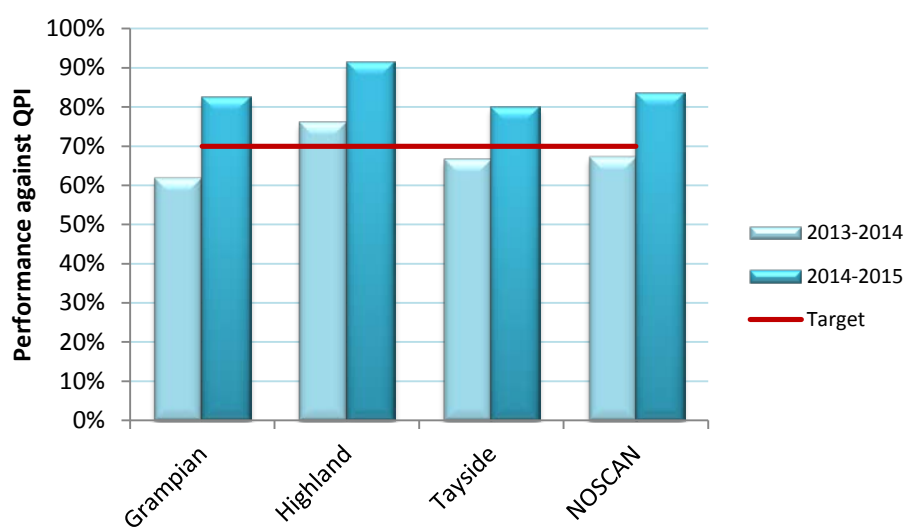
Targets: 70% (Patients with Dukes C colorectal cancer)
50% (Patients with Dukes B colorectal cancer)

QPI 11 Performance against target

Overall, in 2014-2015 91 out of 109 (83.5%) of patients with Dukes C colorectal cancer and included within this QPI received adjuvant chemotherapy, while 11 out of 26 (42.3%) patients with High Risk Dukes B colorectal cancer received this treatment. This means that across the North of Scotland the target of 70% for patients with Dukes C colorectal cancer was met while that for patients with high risk Dukes B was not. There was a considerable increase in results for patients with Dukes C compared with 2013-2014 when results were 67.3%. While there was a slight fall in results for patients with high risk Dukes B from 47.4% in 2013-2014, it should be noted that this QPI indicator was calculated from a relatively small number of patients.

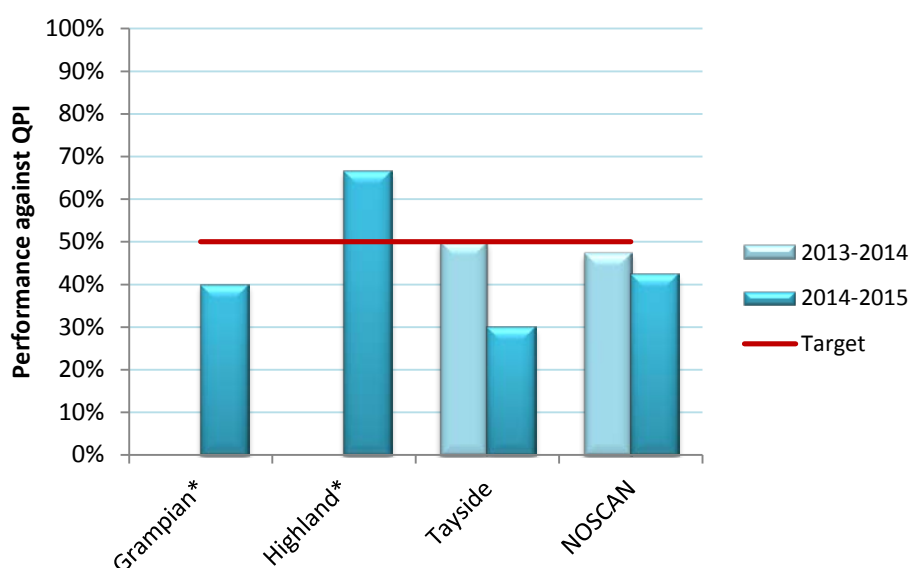
All NHS Boards met this QPI target for patients with Dukes C colorectal cancer with improvements across all Boards from 2013-2014. However, for patients with high risk Dukes B the indicator was only met by NHS Highland.

QPI 11 - Dukes C: Target > 70%



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator	Change in Performance since 2013-2014
Grampian	82.5%	33	40	0	0%	0	0%	0	+20.6%
Orkney	-	0	0	0	-	0	-	0	-
Shetland*	-	-	-	-	-	-	-	-	-
Highland	91.3%	21	23	0	0%	0	0%	0	+15.1%
Tayside	80.0%	36	45	0	0%	0	0%	4	+13.3%
W Isles	-	0	0	0	-	0	-	0	-
NoS	83.5%	91	109	0	0%	0	0.0%	4	+16.2%

QPI 11 - High Risk Dukes B: Target > 50%



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator	Change in Performance since 2013-2014
Grampian	40.0%	4	10	0	0%	0	0%	0	-
Orkney	-	0	0	0	-	0	-	0	-
Shetland	-	0	0	0	-	0	-	0	-
Highland	66.7%	4	6	0	0%	0	0%	0	-
Tayside	30.0%	3	10	0	0%	0	0%	2	-20.0%
W Isles	-	0	0	0	-	0	-	0	-
NoS	42.3%	11	26	0	0%	0	0%	2	-5.1%

The MCN is encouraged to note that all NHS Boards have achieved a much higher than required level of attainment and will continue to promote this practice for patients identified with Dukes C colorectal cancer.

However, the MCN also acknowledges that the clinical benefit of any chemotherapy treatment for those patients identified as having 'high risk Dukes B' disease needs to be assessed on a case-by-case basis. Future attainment of the target levels as presently set is likely to become more challenging in light of the move towards the increasing use of on-line clinical tools such as Predict.

Dukes Stage C disease is now something of a historical oversimplification of staging. There are clear differences in outcome between patients with C1 disease and C2 disease, and recent evidence suggests that it may not be appropriate to treat low risk C1 disease with adjuvant chemotherapy. As such, this QPI may run the risk of treating a target rather than clinically evidenced best practice and consideration should be given to refining the QPI in the light of emerging evidence.

Actions Required:

- **MCN to propose amendment to QPI 11 in light of emerging evidence on the optimum treatment of patients with Dukes C and high risk Dukes B colorectal cancer.**

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

QPI 11: 30 and 90 Day Mortality Following Chemotherapy or Radiotherapy - Mortality after chemotherapy or radiotherapy with curative intent for colorectal cancer.

Treatment related mortality is a marker of the quality and safety of the whole service provided by the Multi Disciplinary Team (MDT).

Numerator: Number of patients with colorectal cancer who undergo neo-adjuvant chemoradiotherapy, radiotherapy or adjuvant chemotherapy with curative intent who die within 30 or 90 days of treatment.

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

Exclusions: No exclusions.

Target: <2%

QPI 12 Performance against target

Neo-adjuvant Chemoradiotherapy

Of the 51 patients with colorectal cancer receiving neo-adjuvant chemoradiotherapy in the North of Scotland none of these (0%) died within either 30 days or 90 days of treatment, clearly meeting the target of less than 2%. This is comparable with results for 30 day mortality for 2013-2014 where 0% of patients died, however there is no comparable data for 90 day mortality. As no patients died across the North of Scotland, all NHS Boards in the region met this QPI.

30 & 90 Day Mortality	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator	Change in Performance since 2013-2014
Grampian	0%	0	24	0	0%	0	0%	0	0%
Orkney*	-	-	-	-	-	-	-	-	-
Shetland	-	0	0	0	-	0	-	0	-
Highland	0%	0	15	0	0%	0	0%	0	0%
Tayside	0%	0	11	0	0%	0	0%	0	0%
W Isles	-	0	0	0	-	0	-	0	
NoS	0%	0	51	0	0%	0	0%	0	0%

Adjuvant Chemotherapy

Of the 171 patients with colorectal cancer receiving adjuvant chemotherapy in the North of Scotland none of these (0%) died within 30 days of treatment, clearly meeting the target of less than 2%. One patient out of 161 died within 90 days of treatment, at a rate of 0.6% this results also meets the QPI target of less than 2%. The 30 day mortality figure are lower than the 0.6% for 2013-2014, however there is no comparable data for 90 day mortality.

All NHS Boards across the North of Scotland met the QPI target for both 30 and 90 day mortality.

30 Day Mortality	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator	Change in Performance since 2013-2014
Grampian	0%	0	72	0	0%	0	0%	0	0%
Orkney*	-	-	-	-	-	-	-	-	-
Shetland	-	0	0	0	-	0	-	-	-
Highland	0%	0	43	6	14.0%	0	0%	1	0%
Tayside	0%	0	52	0	0%	0	0%	0	0%
W Isles*	-	-	-	-	-	-	-	-	-
NoS	0%	0	171	6	3.5%	0	0%	1	-0.6%

90 Day Mortality	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator
Grampian	1.4%	1	71	0	0%	0	0%	0
Orkney*	-	-	-	-	-	-	-	-
Shetland	-	0	0	0	-	0	-	0
Highland	0%	0	37	6	16.2%	0	0%	1
Tayside	0%	0	50	0	0%	0	0%	0
W Isles*	-	-	-	-	-	-	-	-
NoS	0.6%	1	161	6	3.7%	0	0%	1

Radiotherapy

Of the 21 patients with colorectal cancer receiving radiotherapy in the North of Scotland none of these (0%) died within 30 days or 90 days of treatment, clearly meeting the target of less than 2%. The 30 day mortality figure is the same as that for 2013-2014, however there is no comparable data for 90 day mortality.

As no patients died across the North of Scotland, all NHS Boards in the region met this QPI for both 30 day mortality and 90 day mortality.

30 & 90 Day Mortality	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded Denominator	Change in 30 Day Mortality since 2013-2014
Grampian	0%	0	13	0	0%	0	0%	0	0%
Orkney	-	0	0	0	-	0	-	0	-
Shetland*	-	-	-	-	-	-	-	-	-
Highland*	-	-	-	-	-	-	-	-	0%
Tayside*	-	-	-	-	-	-	-	-	0%
W Isles	-	0	0	0	-	0	-	0	-
NoS	0%	0	21	0	0%	0	0%	1	0%

The MCN is encouraged to note that all Boards have achieved a much higher level of attainment than is required and will continue to monitor clinical practice to ensure that this is maintained.

It was suggested that there was value in adding palliative chemotherapy into this QPI. This should be highlighted at the Formal Review of Colorectal Cancer QPIs, which is due in autumn 2016.

Actions Required:

- **MCN to suggest the addition of palliative chemotherapy to this QPI at the Formal Review of Colorectal Cancer QPIs.**

Clinical Trials Access QPI

The ability of patients to readily access a Clinical Trial is a common issue for all cancer types, and in order to further support recruitment through more active comparison and measurement of Board and network performance across the country, a generic QPI was developed as part of the National Programme. Further details on the development and definition of this QPI can be found [here](#).

The QPI is defined as follows.

Clinical Trials Access QPI	
All patients should be considered for participation in available clinical trials, wherever eligible.	
Numerator:	Number of patients with colorectal cancer enrolled in an interventional clinical trial of translational research.
Denominator:	All patients with colorectal cancer.
Exclusions:	No Exclusions
Target:	Interventional clinical trials – 7.5% Translational research - 15%

Clinical Trials Access QPI Performance against target

Key points during the period audited:

- Approximately 2.3% of patients with colorectal cancer in the North of Scotland were recruited into interventional clinical trials in one of the three cancer centres in the region: this is below the target of 7.5%.
- Recruitment into translational research was higher, however at 11.9% it fell below the more challenging target of 15%.

These outcomes are not compared with results from 2013 as considerable changes in the way clinical trials are defined between 2013 and 2014 means that results are not comparable.

	Number of patients recruited	ISD Cases annual average (2009-2013)	Percentage of patients recruited
Interventional Clinical Trials	23	1007	2.3%
Translational Research	120	1007	11.9%

The QPI targets for clinical trials are 7.5% for interventional trials and for translational trials are 15%. It should be noted that these targets are ambitious, particularly with the move towards more targeted trials.

All cancer patients that pass through each of the three cancer centres in NOSCAN are considered for potential participation in the open trials currently available. However, as with other cancer specific studies, consequent to the demise of larger general trials and the advent of genetically selective trials that only target small populations of patients, many of the colorectal cancer trials that are currently open to recruitment in the North of Scotland have very select eligibility criteria. Consequently they will only be available to a small percentage of the total number of people who were diagnosed with colorectal cancer.

During 2014 in NOSCAN, there were 6 interventional trials and 2 translational trials open and recruiting patients, thereby offering patients with a colorectal cancer diagnosis the opportunity to participate in a range of different colorectal cancer tumour types and levels of treatment investigation. Furthermore, all the colorectal cancer patients passing through the cancer centres in NOSCAN will have been assessed for eligibility for clinical trials: further enquiry indicates that of patients diagnosed with colorectal cancer in the North of Scotland during 2014, 28 (2.8%) patients were screened for interventional trials and 135 (13.4%) were screened for translational trials during the reporting period.

Due to the increasing complexity of trials and time burden needed to run them effectively, and a lack of clinical and research support to run further trials, it is not currently possible to open a greater number (and thereby to have a greater scope) of available trials in the North of Scotland. Constraints imposed by the commercial trial sponsors also limit the number of trials it is possible to open in smaller cancer centres such as those in the NOSCAN region. However a large number of feasibility requests for trials are continually being reviewed by all consultants and if an expression of interest is submitted, the chances that the site will be selected for running the trial are high.

Actions Required:

No specific actions were identified.

5. Conclusions

The Quality Performance Indicators programme was developed to drive continuous improvement and ensure equity of care for cancer patients across Scotland. As part of this the North of Scotland has initiated a programme of annual reporting of regional performance against QPIs. This is the first regional Colorectal Cancer QPI comparative performance report to be published and will help to provide a clearer indication of performance and a more formal structure for enabling improvements to be made.

2014-2015 is only the second year of QPI reporting, during which time the performance of NOSCAN boards has once again been mixed: though Boards have individually successfully met (or in some cases well exceeded) many of the required performance levels, collectively as a region NOSCAN has only achieved the required performance target for 4 of the 13 measured outcomes. This is very similar to results from 2013-2014 where only 4 of 11 indicators were met or exceeded.

Whilst the apparent lack of any significant performance improvement being reported this cycle is perhaps disappointing, it should be noted that any amendments to service resulting from the results of the first year of QPI reporting would not have been implemented until 2015, and therefore will not be reflected in this report, which reports on patients diagnosed upto March 2015.

At Board level, it is noted that although they may not have achieved the performance level currently set, nonetheless for many of the QPIs they came very near to achieving the performance level nationally required of them.

Whilst the MCN is encouraged that general overall performance across the NoS, as measured by the QPIs, is either approaching or very near to the quality standards required, it acknowledges that there is still room for improvement.

Variance in treatment of rectal cancers between NHS Boards merits further exploration, to see whether there is significant variation in practice or areas where pre-operative capture of high risk patients could be improved. It appears that a lower use of pre-operative treatment translates, as might be expected, into a greater rate of margin involvement with all that this entails for recurrence risk in rectal cancer.

It is also suggested that surgical intervention for emergency patients require further detailed study and that NHS Boards should collaborate to ensure uniform best practice. It is possible that overzealous attempts at "resection" in the emergency situation may be reflected in an increase in early mortality. It is also possible that patients who may benefit from resection are not receiving this option. Other operative and non-operative strategies may be pursued and clarity around this is important to inform best practice

The following actions have been identified for future years to help monitor and maintain excellent patient care and compliance with the QPI standards:

- **With modern CT scanning technology and rapid acquisition times, all NHS Boards should put local systems in place to ensure that a CT chest is carried**

out pre-operatively.

- **All Boards to review their imaging criteria to ensure all relevant rectal patients are appropriately imaged. It is recommended that if there is doubt about the location of the tumour MRI should be used pre-operatively.**
- **NHS Grampian to develop an Action Plan to address the low levels of performance for QPI 2 and ensure that patients have their whole colon visualised before elective colorectal resection.**

All NHS Boards not meeting QPI 4 to review arrangements around pre-operative stoma siting and ensure that details of pre-operative stoma siting are adequately recorded.

- **As part of the MDT process chairs of all MDTs should ensure that intent of surgery is recorded in the treatment plan for each patient.**
- **MCN to look for any variance in pre-operative neoadjuvant treatment strategies and margin involvement rates between NHS Boards in the North of Scotland (and possibly between cancer networks) for patients with rectal cancer and address any issues highlighted.**
- **All NHS Boards to check the results of QPI 8 to ascertain whether they are a true reflection of re-operation rates.**
- **All NHS Boards to ensure that date of death information is appropriately collected prior to QPI analysis.**
- **MCN to facilitate collaboration between NHS Boards in the North of Scotland to ensure uniform best practice in respect to surgical intervention in patients presenting with colorectal cancer as an emergency.**

These first years of reporting against the Colorectal Cancer QPIs have been a learning process during which the QPIs themselves have been refined and developed. The Colorectal Cancer QPIs are due to be formally reviewed following analysis of the third year of QPI results. In addition to the action point above, this report also highlights some recommendations that the MCN will take to this review.

- **NOSCAN MCN to compare results for QPI 3 with those from other regions and, in light of these, consider recommending revision of this QPI at the Formal Review of Colorectal Cancer QPIs to include elective patients only.**
- **MCN to propose that information on re-operations is collected by cancer audit in future years at the forthcoming Colorectal Cancer QPI Formal Review.**
- **MCN to propose a reduction in the QPI target for elective surgical mortality at Formal Review of Colorectal QPIs.**

- **MCN to propose an amendment to QPI 11 in light of emerging evidence on the optimum treatment of patients with Dukes C and high risk Dukes B colorectal cancer.**
- **MCN to suggest the addition of palliative chemotherapy to this QPI at the Formal Review of Colorectal Cancer QPIs.**

The MCN will actively take forward regional actions identified and NHS Boards are asked to develop local Action / Improvement Plans in response to the findings presented in the report. A blank Action Plan template can be found in the Appendix.

Completed Action Plans should be returned to NOSCAN within two months of publication of this report.

Progress against these plans will be monitored by the MCN and any service or clinical issue which the Advisory Board considers not to have been adequately addressed will be escalated to the NHS Board Lead Cancer Clinician and Regional Lead Cancer Clinician.

Additionally, progress will be reported to the Regional Cancer Advisory Forum (RCAF) annually by the NOSCAN Colorectal Cancer Clinical Lead as part of the regional audit governance process to enable RCAF to review and monitor regional improvement.

6. References

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Appendix 1: Open clinical trials for colorectal cancer into which patients were recruited in the North of Scotland in 2014.

Trial	Principle Investigator	Trial Type
PROSPECT	Ian Zealley (Tayside)	Interventional
MCCAIVE	Leslie Samuel (Grampian)	Interventional
IMPALA	Leslie Samuel (Grampian)	Interventional
ARISTOTLE	Leslie Samuel (Grampian) Leslie Samuel (Highland)	Interventional
CRest	Angus Watson (Highland)	Interventional
FOCUS 4	Leslie Samuel (Grampian) Sharon Armstrong (Tayside)	Interventional
SOCCS3	Zosia Miedzybrodzka (Grampian) Sharon Armstrong (Tayside)	Translational
Bio-repository (colorectal)	(Grampian)	Translational

Appendix 2: NHS Board Action Plans

A blank Action Plan template can be found attached. Completed Action Plans should be returned to NOSCAN within two months of publication of this report.

Action Plan: Colorectal Cancer

Board:	
Action Plan Lead:	
Date:	

Status key	
1	Action Fully Implemented
2	Action agreed but not yet implemented
3	No action taken (please state reason)

QPI	Action Required	NHS Board Action Taken	Date		Lead	Progress	Status
			Start	End			
	<i>Ensure actions mirror those detailed in Audit Report</i>	<i>Detail specific actions that will be taken by the NHS Board</i>	<i>Insert date</i>	<i>Insert date</i>	<i>Insert name of responsible lead for each action.</i>	<i>Detail actions in progress, changes in practice, problems encountered or reasons why no action has been taken.</i>	<i>Insert no. from key</i>