NOSCAN
North of Scotland Cancer Network

NHS SCOTLAND

NORTH OF SCOTLAND PLANNING GROUP

Breast Cancer
Managed Clinical Network

Audit Report

Breast Cancer
Quality Performance Indicators

Patients diagnosed during 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.

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EXECUTIVE SUMMARY

This publication reports the fourth year of performance of breast cancer services in the six NHS Boards in the North of Scotland (NOS) against the Breast Cancer Quality Performance Indicators (QPIs) for patients diagnosed during 2015 (January to December).

In 2016, following the first three years of reporting, the QPIs for breast cancer were nationally reviewed to ensure that they continued to be clinically relevant and to enhance data interpretation.

As part of this national process, some of the QPI definitions were updated, either to ensure enhanced data meaningfulness, or to raise the required performance threshold.

Where data availability has permitted, the new definitions have been used to report performance during 2015. Results are also compared with those from previous years where appropriate.

Key points during the period audited (1st January to 31st December 2015)

- 1241 patients diagnosed with breast cancer were audited in the North of Scotland. This is, an increase of around 12% from 2014 (1110 patients).
- Overall case ascertainment was high at 100% and results were considered to be representative of breast cancer services in the region.
- NOSCAN boards have performed well against the required standards, exceeding the target for 7 of the 11 measured.
- As in previous years, the main sources of referral were via a Primary Care Clinician (53%) and Screening Services (37%).

Summary of QPI Results

QPI	QPI Target	Performance[a]				
		NOSCAN	Grampian	Highland	Shetland	Tayside
QPI 1: Multidisciplinary Team Meeting (MDT) – Proportion of patients with breast cancer who are discussed at MDT meeting before definitive treatment.	95%	**99%** n=1222	99% n=479	99% n=293	100% n=8	99% n=441
QPI 2: Non-Operative Diagnosis – Proportion of patients with invasive or in-situ breast cancer who have a non-operative diagnosis (core biopsy / large volume biopsy).	95%	**97%** n=1224	94% n=479	99% n=293	88% n=8	99% n=443
QPI 3: Pre-Operative Assessment of Axilla – Proportion of patients with invasive breast cancer who undergo assessment of the axilla.						
i. All patients with invasive breast cancer should undergo ultrasound assessment of the axilla	95%	**95%** n=951	92% n=369	100% n=235	-	95% n=342

ii. If findings of ultrasound are suspicious of cancer spread to nodes all patients should undergo FNA/core biopsy.	85%	**95%** n=312	97% n=77	88% n=92	-	97% n=142
QPI 4: Conservation Rate – Proportion of surgically treated patients with breast cancer less than 20mm whole tumour size on histology who achieve breast conservation.	85%	**94%** n=276	96% n=148	91% n=81	-	93% n=45
QPI 5: Surgical Margins – Proportion of surgically treated patients with breast cancer (invasive or ductal carcinoma in situ) with final radial excision margins of less than 1mm.	< 5%	**4%** n=678	3% n=280	5% n=152	-	4% n=243
QPI 6: Immediate Reconstruction Rate – Proportion of patients who undergo immediate breast reconstruction at the time of mastectomy for breast cancer.	> 25%	**25%** n=361	36% n=125	15% n=96	-	23% n=139
QPI 8: Minimising Hospital Stay – Day Case Surgery - Proportion of patients undergoing wide excision and/or an axillary sampling procedure for breast cancer as day case surgery.	60%	**31%** n=720	11% n=282	74% n=174	-	24% n=263
QPI 9: HER2 Status for Decision Making - Proportion of patients with invasive breast cancer for whom the HER2 status (as detected by immunohistochemistry (IHC) and/or FISH analysis) is reported within 2 weeks of core biopsy.	80%	**80%**[b] n=1102	69% n=422	74% n=272	100% n=7	95% n=400
QPI 10: Radiotherapy for Breast Conservation - Proportion of patients with breast cancer who receive radiotherapy to the breast after conservation for invasive cancer.	95%	**96%** n=589	96% n=238	96% n=137	-	96% n=212
QPI 15: 30 Day Mortality following Chemotherapy - Proportion of patients with breast cancer who die within 30 days of chemotherapy.						
Neoadjuvant Chemotherapy	<1%	**1%** n=81	0% n=29	0% n=14	-	3% n=37
Adjuvant Chemotherapy	<1%	**0%** n=258	0% n=106	0% n=104	-	0% n=47
Palliative Chemotherapy	<5%	**10%** n=20	0% n=13	17% n=6	-	-
Clinical Trials Access - Proportion of patients with colorectal cancer who are enrolled in an interventional clinical trial or translational research.						
Interventional clinical trials	7.5%	**6%** n=1238				
Translational research	15%	**6%** n=1238				

Performance shaded pink where QPI target has not been met at regional level.
[a] Excluding Boards with less than 5 patients.
[b] Results rounded up to 80% therefore does not actually meet target.

QPI's 1, 3, 4, 5, 10 and 15 meet the standard required and need no further action.

Results for QPI 2, non operative histological diagnosis of patients with invasive cancer, continue to improve. NHS Grampian remains just below the standard but as with other Boards the figure has improved and should meet the standard by next year with continued current practice.

The target for QPI 6 has been increased considerable this year from 10% to 25% and this increased target has been difficult to attain. Comparison with WOSCAN and SCAN data will determine whether the new standard is appropriate or too high. It should be recognised that most patients are offered immediate reconstruction although many will choose not to proceed. This standard needs to be monitored at a national level to establish whether regional action is required.

QPI 8 definition has changed to day case surgery rather than 23 hour surgery. Both NHS Grampian and NHS Tayside fail to meet this target. Both NHS Boards should consider their arrangements around surgical admissions, and in particular, NHS Tayside should explore the option of admitting sentinel node patients on the day of surgery.

For QPI 9 the target was met at a regional level but there was some variation between NHS Boards. NHS Highland probably miss the target due to FISH testing for HER2 being undertaken in Tayside and should look to improve the efficiency of this pathway. NHS Grampian miss the target due to delays in routine pathological reporting prior to HER2 testing and need to review the pathway for routine pathological reporting of specimens.

It was recognised at a national level last year that the definition for QPI 11 required to be changed to keep pace with current best practice. The new definition will be based on the PREDICT prognostic indicator. However, the data required to report the revised QPI was not collected for patients diagnosed in 2015 and therefore results cannot be presented in this report. All Boards are aware of the new definition and should now be offering adjuvant chemotherapy in line with this new standard.

QPI's 13 and 14 are new and will be reported for patients diagnosed from the 1st January 2016.

QPI 15 was not met but the data relates to the death of a single patient and as such reflects the extremely low target of less than 1% for 30 day mortality following adjuvant chemotherapy. No action is required.

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

- **NHS Grampian to continue with the increased use of core biopsy for non operative diagnosis**.

- **MCN to monitor national results to ascertain whether the revised target for QPI 6 is appropriate.**

- **NHS Tayside to pursue option of admitting sentinel node patients on day of surgery.**

- **NHS Grampian to consider increasing numbers of patients admitted for day case surgery.**

- **NHS Highland to review the pathway for FISH testing by NHS Tayside.**

- **NHS Grampian to review the pathology reporting pathway for breast cancer patients.**

Contents

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 Breast Cancer QPIs are available from the ISD website[1].

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) breast cancer services, as measured against version 3.0 of the Breast Cancer Quality Performance Indicators (QPIs)[6] which were implemented for patients diagnosed on or after 1st January 2015, where data are available, using clinical audit data for patients diagnosed with breast cancer in the twelve months from 1st January 2015 to 31st December 2015. As part of the formal review of Breast Cancer QPIs in 2016 some of the new or amended indicators require the collection of data items not previously recorded; these indicators will not be reported for patients diagnosed in 2015 but will be reported in subsequent years. Comparison with the results from both 2012, 2013 and 2014, as reported in the ISD Breast Cancer QPI report[7] and NOSCAN Breast Cancer Audit Reports[8], are also provided where appropriate to illustrate trends in performance.

2. Background

Six NHS Boards across the NoS serve the 1.38 million population[9]. There were 1241 patients diagnosed with breast cancer in the North of Scotland between 1st January and 31st December 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 breast 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

Breast cancer is the most common cancer in women (and second most common cancer in both men and women combined) with over 4300 cases diagnosed in Scotland each year since 2008[10].

Over the last decade the incidence rate has increased by 7%; this is partly due to:

- increased detection by the Scottish Breast Screening Programme, which has seen a rise in attendance over the same time period,

and

- an extension in the age range invited for screening (which previously excluded women between 65 - 70 years), which was phased in over the 3-year period beginning 1st April 2003[11].

Relative survival for breast cancer is also increasing[12]. The table below shows the percentage change in one-year and five-year age-standardised survival rates for female patients diagnosed in 1987-1981 compared to those diagnosed in 2007-2011. The improvement in survival for breast cancer is likely to reflect the introduction and increasing use of systemic adjuvant therapy[13] as well as the national breast-screening programme.

Relative age-standardised survival for breast cancer in Scotland at 1 year and 5 years showing percentage change from 1987-1981 to 2007-2011[12].

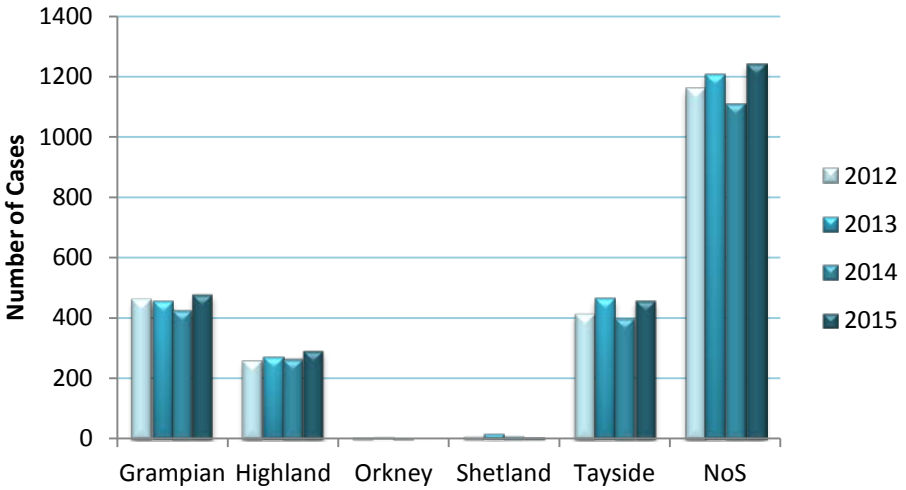
	Relative survival at 1 year (%)		Relative survival at 5 years (%)	
	2007-2011	% change	2007-2011	% change
Breast Cancer	94.6 %	+ 6.9 %	82.8 %	+ 16.6 %

2.2 North of Scotland Context

A total of 1241 cases of breast cancer were recorded through audit as diagnosed in the NoS between 1st January 2015 and 31st December 2015, which is an 11.8% increase when compared with 2014 (1110 patients). The number of patients diagnosed within each Board is presented below.

	Grampian	Highland[a]	Orkney	Shetland	Tayside	NoS
Number of Patients	479	294	1	8	459	**1241**
% of NoS total	38.6 %	23.7%	0.1%	0.6%	37.0%	**100%**

[a] Highland results include patients from the Western Isles.



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 definitions[1]. 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 January 2015 and 31st December 2015 and any comments on QPI results were then signed-off at individual NHS Board level to ensure that the data were 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 cases meeting the denominator criteria for any indicator is between one and four, the results have 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

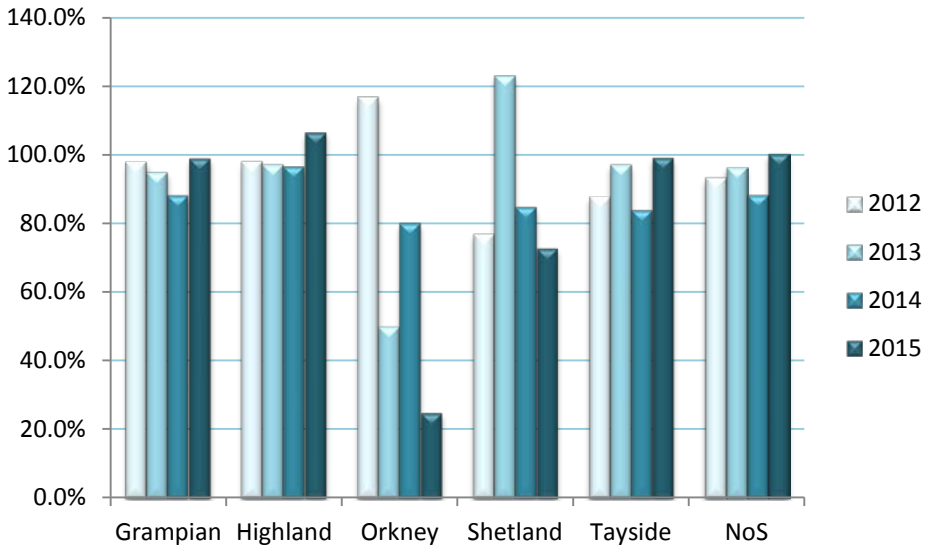
4.1 Case Ascertainment

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 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 2015.

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 high at 100.2%. This is an increase from the 2014 figure of 88.1%. 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. Case ascertainment for each Board across the North of Scotland is illustrated below. There is variation in percentage case ascertainment across the mainland Boards ranging from 99% to 107%.

The wider variation in Orkney and Shetland will reflect both the small numbers of patients in these Boards and the screening cycle in that area: the mobile screening unit visited Orkney in 2015 but not NHS Shetland, therefore lower levels of diagnosis would be expected for this year in Shetland, however the anticipated spike in case ascertainment for Orkney as a result of the screening programme was not observed. In previous year's spikes in case ascertainment coincided with the mobile breast screening unit visiting the islands in those years, in NHS Shetland in 2013 and NHS Orkney in 2012.



Case ascertainment by NHS Board for patients diagnosed with breast cancer 2012 - 2015.

	Grampian	Highland[a]	Orkney	Shetland	Tayside	NoS
Cases from audit 2015	479	294	1	8	459	**1241**
ISD Cases annual average (2010-2014)	484	276	4	11	463	**1238**
Case ascertainment	99.0%	106.5%	25.0%	72.7%	99.1%	**100.2%**

[a] Highland results include patients from the Western Isles

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, with the only notable gap

across the region being for the exclusions to QPI 10 in NHS Tayside; where there was inadequate information to ascertain whether 15% of patients should have been excluded from QPI, largely due to the lack of information on whether they had been entered into a clinical trial.

4.2 Source of referral

As in previous years reported, the majority of patient referrals in Scotland were from Primary Care Clinicians (52.8%) and the Screening Service (37.0%), and were similar across boards. In NHS Orkney and NHS Shetland there were no referrals from the screening service even though the mobile breast screening service visited NHS Orkney in 2015.

Source of referral (%)	Grampian	Highland[a]	Orkney	Shetland	Tayside	NoS
Primary Care Clinician	47.0%	54.4%	100%	100%	56.9%	**52.8%**
Screening Service	42.0%	37.1%	0%	0%	32.5%	**37.0%**
Secondary Care	4.6%	6.5%	0%	0%	2.2%	**4.1%**
Review Clinic	3.1%	1.7%	0%	0%	2.8%	**2.7%**
Referral from private healthcare	1.7%	0%	0%	0%	0%	**0.6%**
Increased Risk Clinic	1.0%	0.3%	0%	0%	0.4%	**0.6%**
Other	0.6%	0 %	0%	0%	5.2%	**2.2%**

[a] Highland results include patients from the Western Isles

4.3 Performance against Quality Performance Indicators (QPIs)

Results of the analysis of Breast 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 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.

Following completion of the first three years of reporting, and as part of an agreed national process, the Breast Cancer QPIs were formally reviewed during 2016 and some of the QPI definitions were amended, either to make them more clinically relevant or to raise the required performance threshold. Some of the new and amended indictors for Breast Cancer require the collection of data that was not recorded for patients diagnosed in 2015; in these instances it is not possible to report the QPIs for this cohort. This will be highlighted in the commentary and the QPIs will be reported in subsequent years.

QPI 1: Multidisciplinary Team Meeting (MDT)

QPI 1: Multidisciplinary Team Meeting (MDT): Patients with newly diagnosed breast cancer should be discussed by a multidisciplinary team prior to definitive treatment.

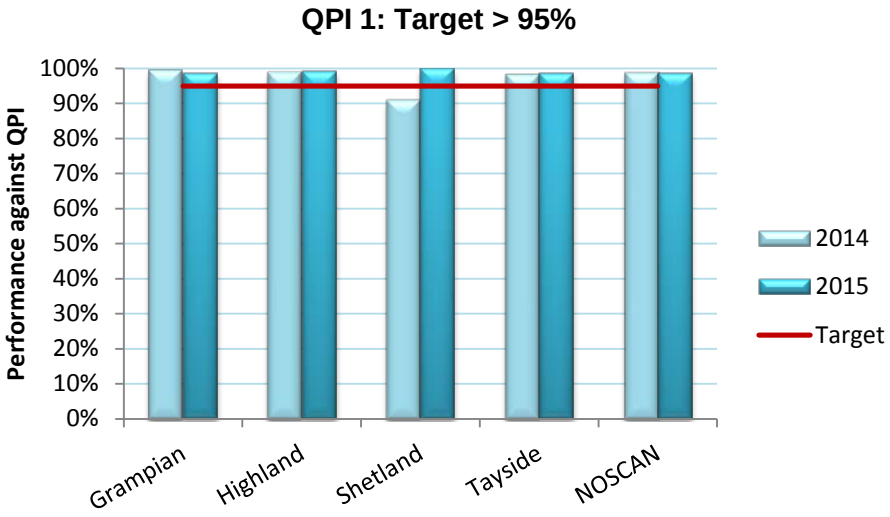
Evidence suggests that patients with cancer managed by a multidisciplinary team have a better outcome. There is also evidence that the multidisciplinary management of patients increases their overall satisfaction with their care.

Numerator:	Number of patients with breast cancer discussed at the MDT before definitive treatment.
Denominator:	All patients with breast cancer.
Exclusions:	Patients who died before first treatment.
Target:	95%

QPI 1 Performance against target

Of the 1222 breast cancer patients diagnosed in the North of Scotland in 2015, 1208 were discussed at the MDT before definitive treatment; this equates to a rate of 98.9% and is above the target rate of 95%. This is similar to the 2014 figure of 98.7%.

All mainland NHS Boards in the North of Scotland met this QPI. While NHS Orkney did not meet the QPI target it is acknowledging that very small numbers of patients are involved, with only one patient not meeting the QPI 1 requirement. The reasons for which have been locally investigated and found to be entirely justified.



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator	Difference from 2014
Grampian	**98.7%**	473	479	1	0.2%	0	0%	0	-0.8%
Highland[a]	**99.3%**	291	293	0	0%	0	0%	0	0.4%
Orkney*	**-**	-	-	-	-	-	-	-	-
Shetland	**100%**	8	8	0	0%	0	0%	0	9.1%
Tayside	**98.9%**	436	441	0	0%	0	0%	0	0.6%
NoS	**98.9%**	**1208**	**1222**	1	0.1%	0	0%	0	0.1%

Once again it is good to note that Boards continue to report performance that is consistently in excess of the required target. It is also noted that there may be occasions when patients chose not to pursue further investigation and treatment, and their wishes should be respected.

Actions Required: No new actions were identified, all NHS Boards to continue with current practice.

QPI 2: Non Operative Diagnosis

QPI 2: Non Operative Diagnosis: Patients with breast cancer should have a non-operative histological diagnosis.

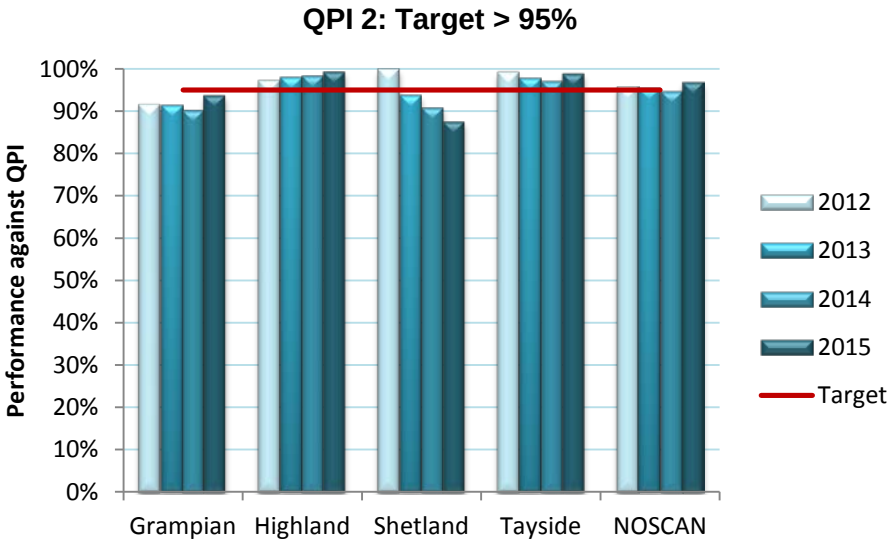
Diagnosis of patients non-operatively allows them, where possible, to have only one definitive procedure. However, it may not always be technically possible to undertake a biopsy and patient choice may also be a factor.

Numerator:	Number of patients with a non-operative diagnosis of breast cancer (core biopsy / large volume biopsy).
Denominator:	All patients with invasive or in-situ breast cancer.
Exclusions:	All breast cancer patients with lobular carcinoma in situ (LCIS).
Target:	95%

QPI 2 Performance against target

Of the 1224 invasive or in-situ breast cancer patients diagnosed in the North of Scotland in 2015, 1185 were given a non operative diagnosis; this equates to a rate of 96.8% which is above the target rate of 95%, and slightly higher than the 94.8% recorded in 2014.

At NHS Board level NHS Highland and NHS Tayside met the QPI target while NHS Grampian did not, which mirrors results reported in previous years. Overall, however, improvements in performance were noted across the three mainland Boards during 2015.



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator	Difference from 2014
Grampian	**93.7%**	449	479	0	0%	0	0%	0	3.4%
Highland[a]	**99.3%**	291	293	0	0%	0	0%	0	0.8%
Orkney*	**-**	-	-	-	-	-	-	-	-
Shetland	**87.5%**	7	8	0	0%	0	0%	0	-3.4%
Tayside	**98.9%**	438	443	0	0%	0	0%	0	1.7%
NoS	**96.8%**	**1185**	**1224**	**0**	**0%**	**0**	**0%**	**0**	**2.0%**

NHS Orkney and NHS Shetland figures relate to a single patient in each centre. The Orkney patient refused to leave the island for further investigation or treatment. The Shetland patient was elderly, commenced on endocrine treatment and died within 2 months.

In NHS Grampian 12 patients that did not meet this QPI had unclear biopsy results and some other patients had biopsy of metastatic deposits rather than the primary tumour. There was a further group of patients where it was considered appropriate for diagnosis to be made on cytology rather than core biopsy; these were largely patients on anticoagulants or with dementia.

While NHS Grampian remains below the 95% standard, the 93.8% figure does represent a continued improvement over all previous years and is now only just below the standard.

Actions Required:

- **NHS Grampian to continue with the increased use of core biopsy for non operative diagnosis**.

QPI 3: Pre-Operative Assessment of Axilla

QPI3: Pre-Operative Assessment of Axilla (i): patients with breast cancer should have pre-operative ultrasound assessment of the axilla.

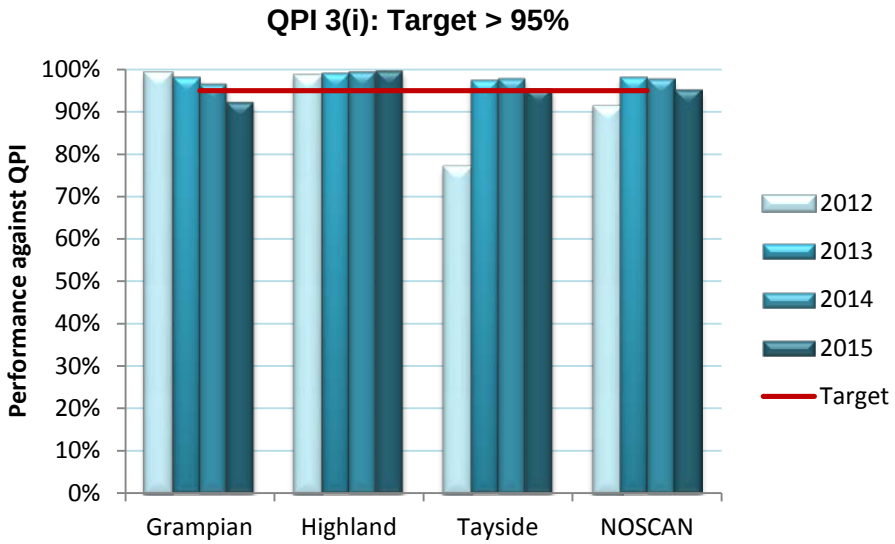
A pre-operative diagnosis of nodal disease enables definitive treatment of axilla at the time of initial breast surgery. However, some patients may refuse investigation and/or treatment.

Numerator:	Number of patients with invasive breast cancer who undergo assessment of the axilla by ultrasound before surgery.
Denominator:	All patients with invasive breast cancer undergoing surgery.
Exclusions:	No exclusions.
Target:	95%

QPI 3(i) Performance against target

The regional average rate for pre-operative assessment of axilla (i) was 95.1%; this is above the target rate of 95% but slightly lower that the 2014 result of 97.8%.

This QPI was not met by NHS Grampian or NHS Orkney, unlike the previous year when the target was met by all NHS Boards.



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator	Difference from 2014
Grampian	**92.1%**	340	369	3	0.8%	0	0%	0	-4.4%
Highland[a]	**99.6%**	234	235	0	0%	0	0%	0	0.1%
Orkney*	**-**	-	-	-	-	-	-	-	-
Shetland*	**-**	-	-	0	0%	0	0%	0	-
Tayside	**95.3%**	326	342	0	0%	0	0%	0	-2.6%
NoS	**95.1%**	**904**	**951**	3	0.3%	0	0%	0	-2.7%

QPI3: Pre-Operative Assessment of Axilla (ii): patients with breast cancer whose pre-operative ultrasound assessment of the axilla found suspicious morphology should undergo FNA/core biopsy.

Patients with invasive breast cancer should undergo pre-treatment ultrasound assessment of the axilla and if morphologically suspicious nodes are identified these should be sampled using FNA or core biopsy. However, FNA/core biopsy of the axilla is not always technically possible.

Numerator: Number of patients with invasive breast cancer with suspicious morphology on ultrasound who undergo an FNA/core biopsy.

Denominator: All patients with invasive breast cancer undergoing surgery with suspicious morphology reported on ultrasound.

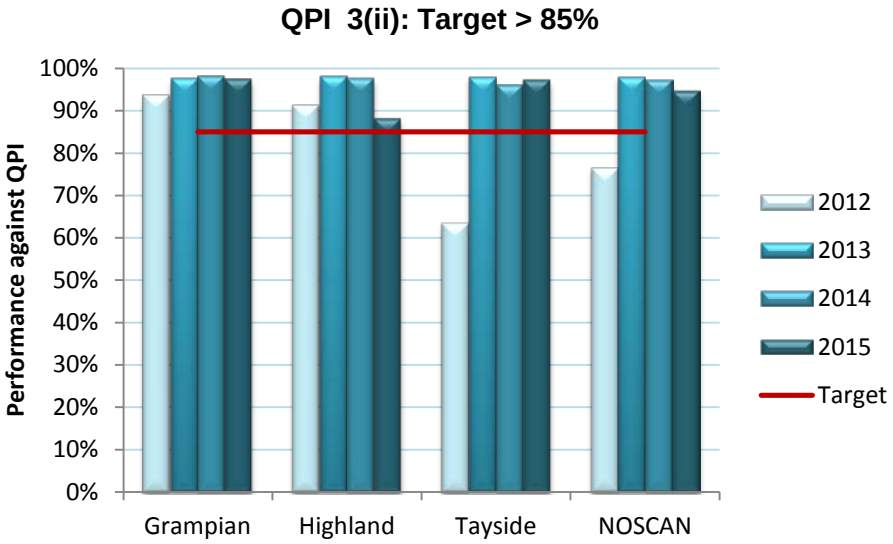
Exclusions: No exclusions.

Target: 85%

QPI 3 (ii) Performance against target

A total of 312 breast cancer patients in the North of Scotland were found to have morphologically suspicious nodes after ultrasound assessment of the axilla. Of these, 295 (94.6%) underwent FNA/core biopsy; this means that at a regional level, the target of 85% was met. This is a slight decrease compared with the 2014 result of 97.1 %.

As in 2014, all NHS Boards in the North of Scotland exceeded the required performance level.



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator	Difference from 2014
Grampian	**97.4%**	75	77	0	0%	0	0%	3	-0.7%
Highland[a]	**88.0%**	81	92	0	0%	0	0%	0	-9.5%
Orkney	**-**	0	0	0	-	0	-	0	-
Shetland*	**-**	-	-	-	-	-	-	-	-
Tayside	**97.2%**	138	142	0	0%	0	0%	0	1.2%
NoS	**94.6%**	**295**	**312**	**0**	**0%**	**0**	**0%**	**3**	**-2.5%**

NHS Orkney relates to a single patient and the decision to not proceed to biopsy was patient choice.

Actions Required: No actions were identified.

QPI 4: Conservation Rate

Please note that while this QPI was amended in version 3 of the QPI definitions in 2016, it is not possible to report the amended definition for patients diagnosed in 2015 as not all data required were collected. As such QPI 4 is reported using the version 2 definition as specified below.

QPI 4: Conservation rate: patients with small breast cancers should undergo breast conservation whenever appropriate.

Breast conservation is appropriate for small breast cancers. Randomised trials have shown no difference in survival for tumours treated by conservation surgery followed by radiotherapy to mastectomy.

Breast conservation may not be appropriate for all patients for a variety of reasons including patient choice and genetic risk.

Numerator: Number of surgically treated patients with breast cancer less than 20mm whole tumour size on histology (invasive plus in situ disease) treated by breast conservation surgery.

Denominator: All surgically treated patients with breast cancer less than 20mm whole tumour size on histology (invasive plus in situ disease).

Exclusions:

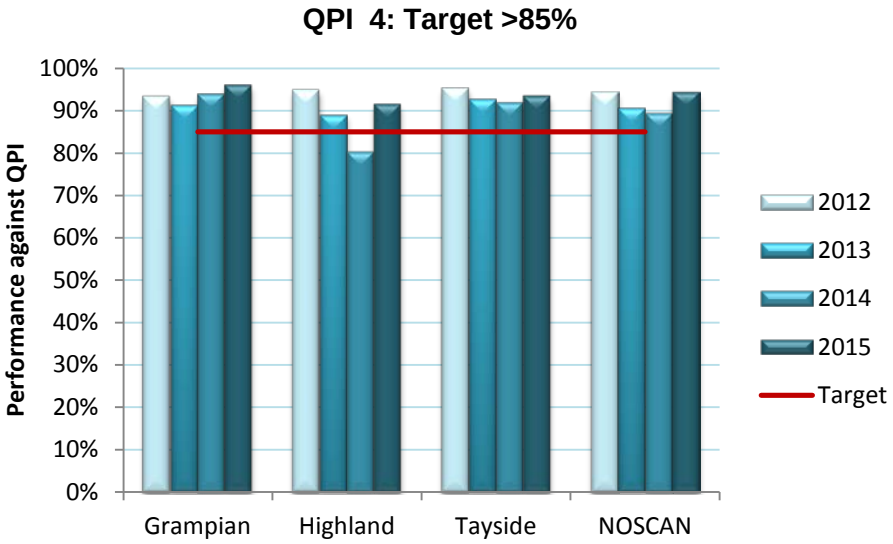
- All patients with multifocal breast cancer.
- All patients with breast cancer who have received neoadjuvant systemic therapy for ≥6 weeks (hormonal therapy or chemotherapy).
- All male patients.

Target: 85%

QPI 4 Performance against target

The breast conservation rate in the North of Scotland was 94.2% in 2015, above the target rate of 85% and the 2014 result of 89.2%.

All NHS Boards in the North of Scotland met this QPI target in 2015 with improvement in results across the region.



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator	Difference from 2014
Grampian	**95.9%**	142	148	0	0%	0	0%	0	2.1%
Highland[a]	**91.4%**	74	81	0	0%	0	0%	0	11.1%
Orkney	**-**	0	0	0	-	0	-	0	-
Shetland*	**-**	-	-	-	-	-	-	-	-
Tayside	**93.3%**	42	45	0	0%	0	0%	0	1.5%
NoS	**94.2%**	**260**	**276**	**0**	**0%**	**0**	**0%**	**0**	**5.0%**

It should be noted that some patients may opt not to proceed with optimal recommended treatment due to personal choice and patient choice in such circumstances should be respected.

Actions Required: No actions were identified.

QPI 5: Surgical Margins

QPI 5: Surgical margins: Breast cancers which are surgically treated should be adequately excised.

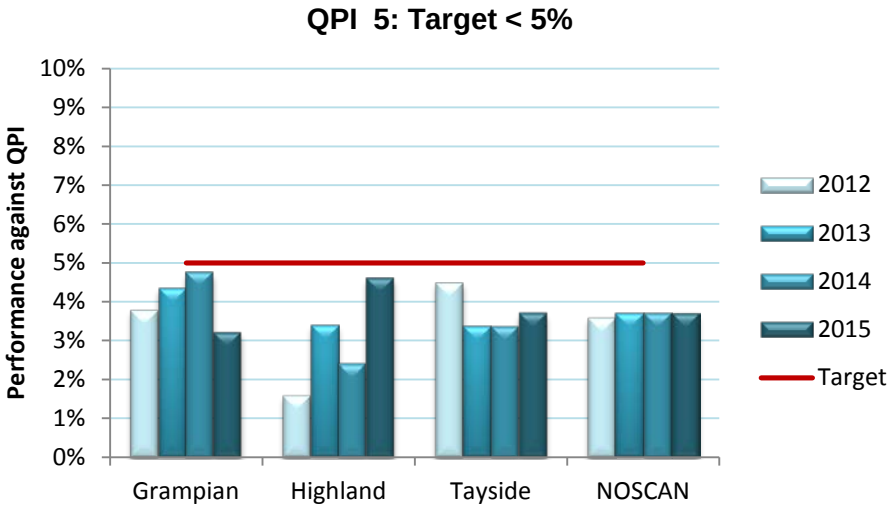
There is an increased risk of local recurrence if radial surgical excision margins are less than 1mm after breast cancer surgery.

Numerator:	Number of patients with breast cancer (invasive or ductal carcinoma in situ) having breast conservation surgery with final radial (i.e. superior, inferior, medial or lateral) excision margins less than 1mm (on pathology report).
Denominator:	All patients with breast (invasive or ductal carcinoma in situ) cancer having breast conservation surgery.
Exclusions:	LCIS alone.
Target:	< 5%

QPI 5 Performance against target

Overall in 2015, 25 out of 678 surgically treated breast cancer patients in the region had final radial excision margins of less than 1mm. At a rate of 3.7%, this meets the target set at less than 5% of patients. This is very similar to results from 2014 when the rate was also 3.7%.

As in previous years, all NHS Boards in the North of Scotland me the target for this QPI.



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator	Difference from 2014
Grampian	**3.2%**	9	280	0	0%	0	0%	0	-1.5%
Highland[a]	**4.6%**	7	152	0	0%	0	0%	0	2.2%
Orkney	**0**	0	0	0	-	0	-	0	-
Shetland*	**-**	-	-	-	-	-	-	-	-
Tayside	**3.7%**	9	243	0	0%	0	0%	0	0.4%
NoS	**3.7%**	**25**	**678**	0	0%	0	0%	0	0.0%

[a] Highland results include patients from the Western Isles

All NHS Boards continue to meet this standard.

Actions Required: No actions identified.

QPI 6: Immediate Reconstruction Rate

QPI 6: Immediate Reconstruction Rate: Patients undergoing mastectomy for breast cancer should have access to immediate breast reconstruction.

Evidence suggests that breast reconstruction is not associated with an increase in the rate of local recurrence, nor does it affect the ability to detect recurrence and it can yield psychological benefit. Access to immediate breast reconstruction is difficult to measure so uptake is used as a proxy. Patient choice is a key factor in the number who undergo immediate breast reconstruction. Age and co-morbidity factors (associated with deprivation category) should be taken into account when reviewing data for this QPI.

Numerator: Number of patients with breast cancer undergoing immediate breast reconstruction at the time of mastectomy.

Denominator: All patients with breast cancer undergoing mastectomy.

Exclusions:

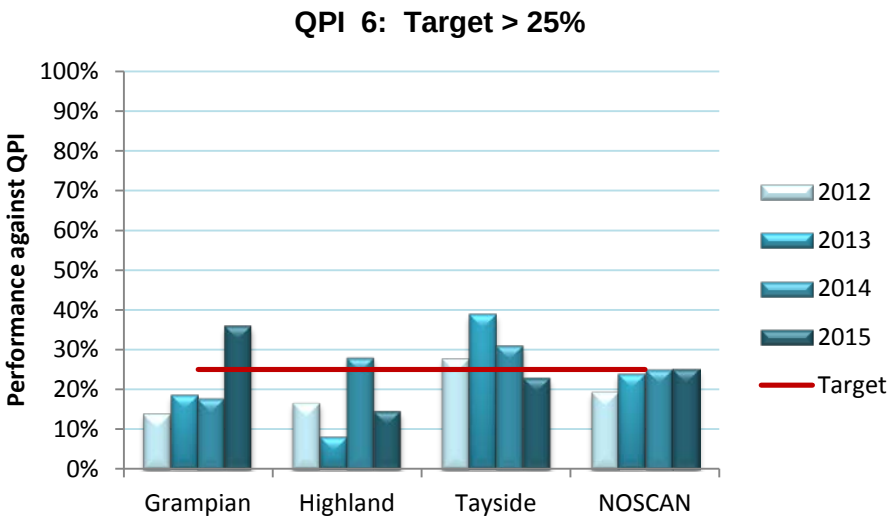
- All patients with M1 disease.
- All male patients.

Target: 25%

QPI 6 Performance against target

In 2015, 91 patients diagnosed with breast cancer in the North of Scotland underwent immediate breast reconstruction at the time of mastectomy, which is a rate of 25.2%. This is very similar to the 2014 rate of 25.0% and just meant target of 25%.

Following national review, the target for this QPI was increased in 2016 from 10% to 25%. With performance varying between Boards, and with only one of the NHS Boards in the North of Scotland (NHS Grampian) meeting this revised target during 2015, this particular QPI may present a performance challenge in future.



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator	Difference from 2014
Grampian	**36.0%**	45	125	0	0%	0	0%	0	18.2%
Highland[a]	**14.6%**	14	96	0	0%	0	0%	0	-13.4%
Orkney	**-**	0	0	0	-	0	-	0	-
Shetland*	**-**	-	-	-	-	-	-	-	-
Tayside	**23.0%**	32	139	0	0%	3	2.1%	0	-8.0%
NoS	**25.2%**	**91**	**361**	**0**	**0%**	**3**	**0.8%**	**0**	**0.2%**

[a] Highland results include patients from the Western Isles

The new target for this QPI is significantly higher than previously, increasing from 10% to 25%. Comparison with WOSCAN and SCAN data will determine whether the revised target is appropriate or too high.

It should be noted that patients from Shetland who receive immediate reconstruction in NHS Grampian are included in NHS Grampian data.

NHS Highland discuss immediate reconstruction with all patients undergoing mastectomy, while NHS Tayside discuss immediate reconstruction with all patients except those with a BMI above 35. There has been a fall in the immediate reconstruction rate in NHS Tayside from last year (from 31% to 23%) which may partly reflect the increased use of conservation surgery with oncoplastic techniques.

Actions Required:

- **MCN to monitor national results to ascertain whether the revised target for QPI 6 is appropriate.**

QPI 8: Minimising Hospital Stay – Day Case Surgery

QPI 8: Minimising Hospital Stay – Day Case Surgery: Patients should have the opportunity for day case surgery wherever appropriate.

It is safe to perform wide excision and axillary staging as a short stay procedure in the majority of patients and clinical quality has been shown to be improved utilising this model, resulting in better patient outcomes. Benefits of short stay include reduction in readmissions, reduction in complications, improved patient mobility and enhanced recovery.

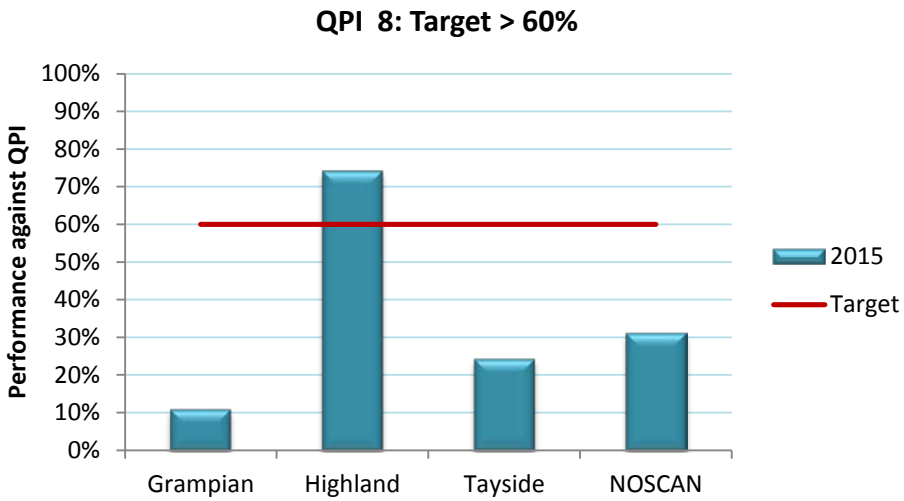
However, it is not always appropriate for all patients due to social circumstances, co-morbidities and/or geographical residence.

Numerator:	Number of patients with breast cancer undergoing wide excision and/or axillary sampling procedure (sentinel node biopsy or 4 node sample) as day case surgery.
Denominator:	All patients with breast cancer undergoing wide excision and/or axillary sampling procedure (sentinel node biopsy or 4 node sample).
Exclusions:	All patients with breast cancer undergoing partial breast reconstruction.
Target:	60%

QPI 8 Performance against target

In the North of Scotland during 2015, out of a possible 720 total procedures identified, there were 225 operations conducted as a day case surgery which at 31.3%, is well below the QPI target level of 60%. Due to changes in the way this QPI is calculated (i.e. to look at day case surgery rather than the proportion of patients that are discharged within 24 hours of surgery) there are no comparable data from previous years.

Across the region only NHS Highland met this target during 2015.



	Performance (%)	Numerator	Denominator
Grampian	**11.0%**	31	282
Highland[a]	**74.1%**	129	174
Orkney	**-**	0	0
Shetland*	**-**	-	-
Tayside	**24.3%**	64	263
NoS	**31.3%**	**225**	**720**

In both NHS Grampian and NHS Tayside most patients are not admitted for day case surgery and arrangements around surgical admissions should be reviewed. NHS Tayside patients undergoing sentinel node biopsy are admitted the day before surgery for an isotope injection. Many of these patients go home that day and return the following day for surgery but are not by definition day cases.

Actions Required:

- **NHS Tayside to pursue option of admitting sentinel node patients on day of surgery.**

- **NHS Grampian to consider increasing numbers of patients admitted for day case surgery.**

QPI 9: HER2 Status for Decision Making

QPI9: HER2 Status for Decision Making: HER2 status should be available to inform treatment decision making.

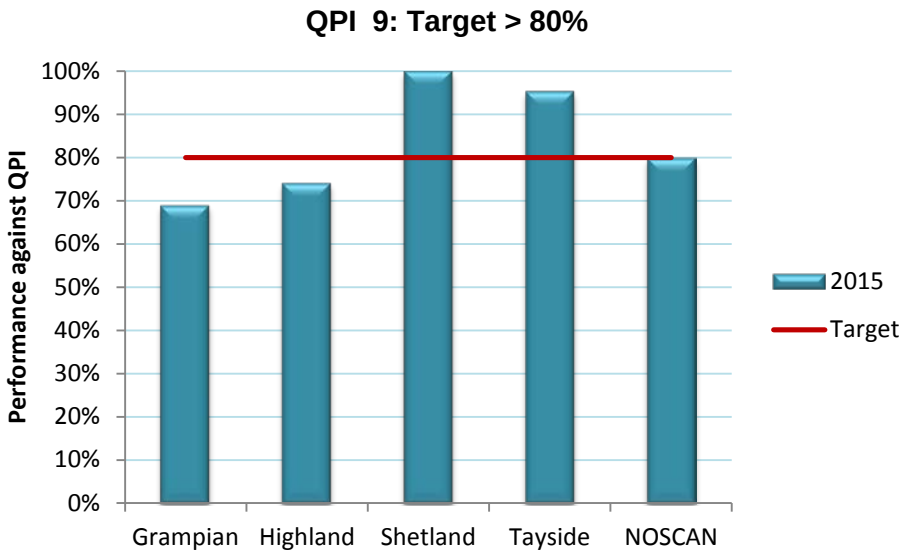
HER2 status has a significant impact on survival and so has a significant influence on decisions on neoadjuvant and adjuvant treatment. Delay in the availability of a HER2 result may lead to a delay in appropriate neoadjuvant or adjuvant therapy and make communication of a clear plan to the patient more difficult.

Numerator:	Number of patients with invasive breast cancer for whom the HER2 status (as defined by immunohistochemistry (IHC) and/or FISH analysis) is reported within 2 weeks of core biopsy.
Denominator:	All patients with invasive breast cancer.
Exclusions:	No exclusions.
Target:	80%

QPI 9 Performance against target

From a total of 1102 patients diagnosed with invasive breast cancer in the North of Scotland during 2015, 879 patients had their HER2 status reported within 2 weeks of core biopsy. This equates to 79.8% which is just below the target figure of over 80%. Due to changes to how this QPI is defined, comparisons with results from previous years are not possible.

Only two Board, NHS Tayside and NHS Shetland, met this QPI target during 2015.



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator
Grampian	**69.0%**	291	422	0	0%	0	0%	0
Highland[a]	**73.5%**	200	272	0	0%	0	0%	0
Orkney*	**-**	-	-	-	-	-	-	-
Shetland	**100%**	7	7	0	0%	0	0%	0
Tayside	**95.3%**	381	400	0	0%	0	0%	0
NoS	**79.8%**	**879**	**1102**	0	0%	0	0%	0

[a] Highland results include patients from the Western Isles

Across the North of Scotland the target was only just missed at 79.8%, however there was considerable variation between NHS Boards. Immunohistochemistry confirms the HER2 status in most cases, however, indeterminate cases require confirmation by FISH. NHS Highland missed the target (73.5%); for NHS Highland patients FISH testing is performed by NHS Tayside which can lead in delays that are likely to contribute to the Boards failure to meet the target.

NHS Grampian missed the target for this QPI (69%) due to delays in routine pathological reporting prior to HER2 testing.

Actions Required:

- **NHS Highland to review the pathway for FISH testing by NHS Tayside.**
- **NHS Grampian to review the pathology reporting pathway for breast cancer patients.**

QPI 10: Radiotherapy for Breast Conservation

QPI 10: Radiotherapy for Breast Conservation: After wide local excision patients with breast cancer should receive radiotherapy

Trials have demonstrated a significant reduction in local recurrence with the use of radiotherapy after breast conservation. Patient choice and fitness for treatment will have an effect on uptake.

Numerator: Number of patients with invasive breast cancer having conservation surgery receiving radiotherapy to the breast.

Denominator: All patients with invasive breast cancer having conservation surgery.

Exclusions:

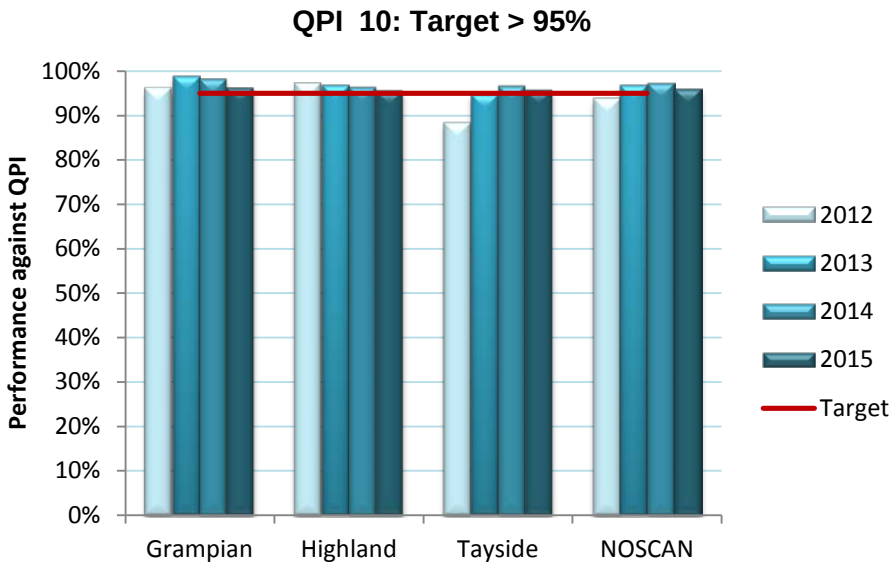
- All patients with breast cancer taking part in clinical trials of radiotherapy treatment.
- All patients with M1 disease.

Target: 95%

QPI 10 Performance against target

Overall, in 2015, 565 out of 589 (95.9%) of patients diagnosed with breast cancer in the North of Scotland received radiotherapy after wide local excision. This level of performance exceeds the required target of 95%, and which is very similar to the 2014 result of 97.0%.

All NHS Boards with patients included within calculations for this QPI met the target of 95%.



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator	Difference from 2014
Grampian	**96.2%**	229	238	0	0%	0	0%	0	-1.8%
Highland[a]	**95.6%**	131	137	0	0%	0	0%	0	-0.6%
Orkney	**-**	0	0	0	-	0	-	0	-
Shetland*	**-**	-	-	-	-	-	-	-	-
Tayside	**95.8%**	203	212	0	0%	32	15.1%	0	-0.7%
NoS	**95.9%**	**565**	**589**	0	0%	32	5.4%	0	-1.1%

[a] Highland results include patients from the Western Isles

Actions Required:

Performance was considered to be satisfactory and no actions were identified.

QPI 11: Adjuvant Chemotherapy

QPI11: Adjuvant chemotherapy: patients with breast cancer should receive chemotherapy post operatively where it will provide a survival benefit for patients.

Clinical trials have demonstrated that adjuvant drug treatments substantially reduce 5-year recurrence rates and 15-year mortality rates.

Success of treatment is based on a number of different factors including tumour size, grade and involvement of lymph nodes. Prognostic tools such as PREDICT assist clinicians and patients to make informed decisions on appropriate treatment by predicting survival and determining those patients likely to benefit from adjuvant treatment.

Numerator: Number of patients with invasive breast cancer who have a ≥5% overall survival benefit of chemotherapy treatment predicted at 10 years that undergo adjuvant chemotherapy.

Denominator: All patients with invasive breast cancer who have a ≥5% overall survival benefit of chemotherapy treatment predicted at 10 years.

Exclusions:

- All patients with breast cancer taking part in trials of chemotherapy treatment.
- All patients with breast cancer who have had neo-adjuvant chemotherapy.
- All patients with M1 disease.

Target: 85%

This QPI has been radically amended at formal review in 2016; however it is not possible to report the revised standard as the necessary data are not available for patients diagnosed in 2015. This revised QPI will be reported for patients diagnosed in 2016.

QPI 13: Re-excision Rates

QPI13: Re-excision Rates: Patients undergoing surgery for breast cancer should only undergo one definitive operation where possible.

It is important to minimise treatment related morbidity. Patients undergoing additional surgical procedures can be subject to unnecessary stress, as well as potential complications and delays in recovery. Re-operation is also a factor related to poorer cosmetic outcomes for patients.

Numerator:	Number of patients with breast cancer (invasive or in situ) having breast conservation surgery who undergo re-excision or mastectomy following initial breast surgery.
Denominator:	All patients with breast (invasive or in situ) cancer having breast conservation surgery as their initial or only breast surgery.
Exclusions:	LCIS alone
Target:	< 20%

This QPI was developed through the Breast Cancer formal review in 2016. Data required to report this standard were not collected for patients diagnosed in 2015 and therefore it is not possible to report performance against this target here. Results will be reported for patients diagnosed in 2016.

QPI 14: Referral for Genetics Testing

QPI 14: Referral for Genetics Testing: Patients with breast cancer should be offered referral to a specialist genetics clinic where appropriate.

Where patients have breast cancer, genetic testing should be offered if their combined BRCA1 and BRCA2 mutation carrier probability is ≥10%.

Specification (i)

Numerator: Number of patients with breast cancer under 30 years of age referred to a specialist clinic for genetic testing.

Denominator: All patients with breast cancer who are under 30 years of age.

Exclusions: No Exclusions

Specification (ii)

Numerator: Number of patients with triple negative breast cancer under 40 years of age referred to a specialist clinic for genetic testing.

Denominator: Number of patients with triple negative breast cancer under 40 years of age referred to a specialist clinic for genetic testing.

Exclusions: No Exclusions

Target: 90%

This QPI was developed through the Breast Cancer formal review in 2016. Data required to report this standard were not collected for patients diagnosed in 2015 and therefore it is not possible to report performance against this target here. Results will be reported for patients diagnosed in 2016.

QPI 15: 30 Day Mortality following Chemotherapy

QPI 15:* 30 Day Mortality following Chemotherapy*: 30 day mortality following chemotherapy treatment for breast 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. Treatment should only be undertaken in individuals that may benefit from that treatment. This QPI is intended to ensure treatment is given appropriately, and the outcome reported on and reviewed.

Numerator: Number of patients with breast cancer who undergo chemotherapy that die within 30 days of treatment.

Denominator: All patients with breast cancer who undergo chemotherapy.

Exclusions: No exclusions

Target: Neoadjuvant and adjuvant treatment <1%
Palliative treatment < 5%

QPI 15 Performance against target

Neoadjuvant chemotherapy

In 2015 a single patient died within the North of Scotland within 30 days of receiving neoadjuvant chemotherapy and as this constitutes 1.2% of all patients receiving this treatment, the target of less than 1% was therefore not met. This is the first year of reporting of this standard and as such there is no previous information with which to compare these figures. Due to the small numbers involved, comparisons of mortality between NHS Boards have not been made.

Neoadjuvant Chemotherapy	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator
Grampian	**0%**	0	29	0	0%	0	0%	0
Highland[a]	**0%**	0	14	0	0%	0	0%	0
Orkney	**-**	0	0	0	-	0	-	0
Shetland*	**-**	-	-	-	-	-	-	-
Tayside	**2.7%**	1	37	0	0%	0	0%	0
NoS	**1.2%**	**1**	**81**	0	0%	0	0%	0

[a] Highland results include patients from the Western Isles

Adjuvant chemotherapy

Of the 258 patients diagnosed with breast cancer in 2015 and undergoing adjuvant chemotherapy, none (0%) died within 30 days of treatment and therefore the target of <1% was met both at a regional level and by all NHS Boards in the North of Scotland. As this is a new QPI figures from previous years are not available for comparison.

Adjuvant Chemotherapy	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator
Grampian	**0%**	0	106	2	1.9%	0	0%	0
Highland[a]	**0%**	0	104	0	0%	0	0%	0
Orkney	**-**	0	0	0	-	0	-	0
Shetland*	**-**	-	-	-	-	-	-	-
Tayside	**0%**	0	47	0	0%	0	0%	0
NoS	**0%**	**0**	**258**	**2**	**0.8%**	**0**	**0%**	**0**

Palliative chemotherapy

Of the 20 patients diagnosed with breast cancer in 2015 and undergoing palliative chemotherapy, two (10.0%) died within 30 days of treatment, therefore the target of less that 5% was not met at a regional level. Due to the small numbers involved comparison of results between Boards is not considered to be appropriate.

Palliative Chemotherapy	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator
Grampian	**0%**	0	13	0	0%	0	0%	0
Highland[a]	**16.7%**	1	6	0	0%	0	0%	0
Orkney	**-**	0	0	0	-	0	-	0
Shetland	**-**	0	0	0	-	0	-	0
Tayside*	**-**	-	-	-	-	-	-	-
NoS	**10.0%**	**2**	**20**	0	0%	0	0%	0

This is a new QPI for which there is no previous data. Target may be too low as the death of a single patient can result in the target not being met.

Actions Required: No actions identified.

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 of cancer quality improvement. 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 breast cancer enrolled in an interventional clinical trial of translational research.

Denominator: All patients with breast cancer.

Exclusions: No Exclusions

Target: Interventional clinical trials – 7.5%

Translational research - 15%

Key points during the period audited:

- 6.2% of patients with breast cancer in the North of Scotland were recruited into interventional clinical trials in one of the three cancer centres in the region in 2015; this is just below the required target of 7.5%.
- Though a similar level of recruitment into translational research was attained in 2015, 6.2%, it fell well below the more challenging target which is set at 15%.

	Number of patients recruited	ISD Cases annual average (2009-2013)	Percentage of patients recruited
Interventional Clinical Trials	77	1238	**6.2%**
Translational Research	77	1238	**6.2%**

With the move towards more targeted trials, it should be noted that the QPI targets for clinical trials (at 7.5% for interventional trials and 15% for translational trials) are particularly ambitious.

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 breast 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 breast cancer.

During 2015 in NOSCAN, there were 10 interventional trials and 5 translational trials open and recruiting patients in the North of Scotland. All the breast 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 breast cancer in the North of Scotland during 2015, 84 (6.8%) were screened for interventional trials and 130 (10.5%) were screened for translational trials during the reporting period. The numbers screened and recruited for breast cancer have increase from the previous year. The number of patients screened for clinical trials is often higher than the number recruited as not all patients will pass the screening stage, however the screening phase can be a involve a considerable amount of time and resource.

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 such 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.

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 third regional Breast 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.

Overall, results from the fourth year of Breast Cancer QPI reporting are encouraging; case ascertainment and data capture is of a high standard overall, with significant improvements having been reported in some boards over the last year. Further, QPI definitions have been reviewed nationally during 2016 to provide an improved set of indicators, some of which are reported in here.

The audit report indicated that during 2015, the QPI targets for breast cancer were met over the North of Scotland for seven of the 11 QPIs.

QPI's 1, 3, 4, 5, 10 and 15 meet the standard required and need no further action.

Results for QPI 2, non operative histological diagnosis of patients with invasive cancer, continue to improve. NHS Grampian remains just below the standard but as with other Boards the figure has improved and should meet the standard by next year with continued current practice.

The target for QPI 6 has been increased considerable this year from 10% to 25% and this increased target has been difficult to attain. Comparison with WOSCAN and SCAN data will determine whether the new standard is appropriate or too high. It should be recognised that most patients are offered immediate reconstruction although many will choose not to proceed. This standard needs to be monitored at a national level to establish whether regional action is required.

QPI 8 definition has changed to day case surgery rather than 23 hour surgery. Both NHS Grampian and NHS Tayside fail to meet this target. Both NHS Boards should consider their arrangements around surgical admissions, and in particular, NHS Tayside should explore the option of admitting sentinel node patients on the day of surgery.

For QPI 9 the target was met at a regional level but there was some variation between NHS Boards. NHS Highland probably miss the target due to FISH testing for HER2 being undertaken in Tayside and should look to improve the efficiency of this pathway. NHS Grampian miss the target due to delays in routine pathological reporting prior to HER2 testing and need to review the pathway for routine pathological reporting of specimens.

It was recognised at a national level last year that the definition for QPI 11 required to be changed to keep pace with current best practice. The new definition will be based on the PREDICT prognostic indicator. However, the data required to report the revised QPI were not collected for patients diagnosed in 2015 and therefore results cannot be presented. All Boards are aware of the new definition and should now be offering adjuvant chemotherapy in line with this new standard.

QPI's 13 and 14 are new and will be reported for patients diagnosed from the 1st January 2016.

QPI 15 was not met but the data relates to the death of a single patient and as such reflects the extremely low target of less than 1% 30 day mortality for adjuvant chemotherapy. No action is required.

Some actions to improve services have been identified. These are

- **NHS Grampian to continue with the increased use of core biopsy for non operative diagnosis**.
- **MCN to monitor national results to ascertain whether the revised target for QPI 6 is appropriate.**
- **NHS Tayside to pursue option of admitting sentinel node patients on day of surgery.**
- **NHS Grampian to consider increasing numbers of patients admitted for day case surgery.**
- **NHS Highland to review the pathway for FISH testing by NHS Tayside.**
- **NHS Grampian to review the pathology reporting pathway for breast cancer patients.**

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 Breast Cancer Clinical Lead as part of the regional audit governance process to enable RCAF to review and monitor regional improvement.

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Appendix 1: Open clinical trials for breast cancer that recruited in 2015.

Trial	Principle Investigator	Trial Type
Digital breast tomosynthesis in younger symptomatic women.	Andrew Evans (Tayside)	Interventional
FEMME	Graeme Houston (Tayside)	Interventional
OPPORTUNE	Jane Macaskill (Tayside)	Interventional
Add-Aspirin	Russell Mullen (Highland)	Interventional
LORIS	Jane Macaskill (Tayside)	Interventional
OlympiAD	Trevor McGoldrick (Grampian)	Interventional
KATHERINE	Jayaram Mohanamurali (Tayside)	Interventional
Persephone	Trevor McGoldrick (Grampian) Carol MacGregor (Highland)	Interventional
POSNOC	Ravi Sharma (Grampian) Beatrix Elsberger (Tayside)	Interventional
MAMMO-50	Andrew Evans (Tayside)	Interventional
Artemis Sub-Study:SCARF	Ravi Sharma (Grampian)	Translational
MIMIC	Andrew Evans (Tayside)	Translational
Clinical data collections for SPECIALS	Andrew Evans (Tayside)	Translational
Poetic (Version 6) Sub Study	Ravi Sharma (Grampian)	Translational
The MUNROS project: the questionnaires (Work Packages 4,5 and 6)	Highland	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.

NOSCAN
North of Scotland Cancer Network

Action Plan: Breast Cancer

Based in patients diagnosed in 2015

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			
	Ensure actions mirror those detailed in Audit Report	*Detail specific actions that will be taken by the NHS Board*	*Insert date*	*Insert date*	*Insert name of responsible lead for each action.*	*Detail actions in progress, changes in practice, problems encountered of reasons why no action has been taken.*	*Insert no. from key*