

# NOSCAN

North of Scotland  
Cancer Network



**NORTH OF SCOTLAND  
PLANNING GROUP**

**Gynaecological Cancer Managed Clinical Network**

## **Audit Report**

### **Ovarian Cancer Quality Performance Indicators**

Patients diagnosed October 2014 – September 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](http://www.noscan.scot.nhs.uk)

## EXECUTIVE SUMMARY

This publication reports the performance of ovarian cancer services in the six NHS Boards in the North of Scotland (NoS) against the Ovarian Cancer Quality Performance Indicators (QPIs) for patients diagnosed between October 2014 and September 2015. This is the second year in which QPIs results for ovarian cancer have been collected and results are compared with those from 2013-2014.

In the North of Scotland during the 2014-2015 period audited:

- 115 patients diagnosed with ovarian cancer were audited.
- Overall case ascertainment was fairly low at 78.0%, however this is not a true indication of audit completeness as the number of patients diagnosed with epithelial ovarian cancer through cancer audit are compared with the average number of patients diagnosed annually with all ovarian cancers by cancer registry. Indeed, the case ascertainment figure for the North of Scotland in 2014-15 is higher than achieved by any of the cancer networks in 2013-14, suggesting that data capture through audit was high.
- The results reported were considered to be indicative of ovarian cancer services in the region.

### Summary of QPI Results

QPI	QPI Target	Performance <sup>a</sup>			
		NOSCAN	Grampian	Highland	Tayside
<b>QPI 1: Risk of Malignancy Index recorded in patient notes</b> - Proportion of patients with Stage 1 epithelial ovarian cancer having RMI assessed and recorded in their notes prior to any definitive surgical intervention	90%	<b>72%</b> n=18	44% n=9	-	100% n=6
<b>QPI 2: Extent of disease assessed by Computer Tomography (CT) or Magnetic Resonance Imaging (MRI) prior to treatment</b> - Proportion of patients with epithelial ovarian cancer having a CT scan or MRI of the abdomen and pelvis performed to exclude the presence of metastatic disease prior to starting definitive treatment	90%	<b>97%</b> n=116	97% n=58	100% n=21	97% n=34
<b>QPI 3: Treatment planned and reviewed at a multi-disciplinary team meeting</b> - Proportion of patients with epithelial ovarian cancer who are discussed at a MDT meeting before definitive treatment	95%	<b>92%</b> n=113	95% n=56	95% n=20	88% n=34

<b>QPI 4: Patients with early stage disease have an adequate staging operation</b> - Proportion of patients with early stage epithelial ovarian cancer (FIGO Stage 1) undergoing primary surgery for ovarian cancer, having their stage of disease adequately assessed (TAH, BSO, Omentectomy and washings), to determine suitability for adjuvant therapies					
i. All patients undergoing primary surgery	95%	<b>100%</b> n=11	100% n=7	-	-
ii. Patients operated on by a gynaecological oncologist	95%	<b>100%</b> n=6	100% n=6	-	-
<b>QPI 5: No macroscopic residual disease following surgery for advanced disease</b> - Proportion of patients with advanced epithelial ovarian cancer (FIGO Stage 2 or higher) who have < 1cm residual disease and those who have no macroscopic residual disease following surgery					
i. Proportion of patients with no microscopic residual disease following surgery	30%	<b>74%</b> n=19	71% n=14	-	80% n=5
ii. Proportion of patients with macroscopic residual disease < 1cm	60%	<b>79%</b> n=19	79% n=14	-	80% n=5
<b>QPI 6: Histopathology reports are complete and support clinical decision-making</b> - Proportion of patients with epithelial ovarian cancer undergoing pelvic clearance surgery having a complete pathology report as defined by the Royal College of Pathologists	90%	<b>95%</b> n=44	94% n=31	-	100% n=12
<b>QPI 7: Histo/cytological diagnosis prior to starting neo-adjuvant chemotherapy</b>					
i. Proportion of patients with epithelial ovarian cancer having a histo/cytological diagnosis prior to starting neo-adjuvant chemotherapy	100%	<b>100%</b> n=25	100% n=14	100% n=6	-
ii. Proportion of these with histological confirmation obtained by percutaneous image-guided biopsy or laparoscopy	80%	<b>77%</b> n=26	73% n=15	67% n=6	-
<b>QPI 8: Delayed primary surgery</b> - Proportion of patients with advanced epithelial ovarian cancer (FIGO Stage 3c or 4) having delayed primary surgery following neo-adjuvant chemotherapy and where optimal cytoreduction is achieved					
i. Proportion of patients with advanced epithelial ovarian cancer (FIGO Stage 3c or 4) having delayed primary surgery following neo-adjuvant chemotherapy	75%	<b>60%</b> n=10	100% n=5	20% n=5	-
ii. Proportion of patients with advanced epithelial ovarian cancer (FIGO Stage 3c or 4) undergoing delayed primary surgery with residual disease <1cm	65%	<b>67%</b> n=6	60% n=5	-	-

<b>QPI 9: First-line Chemotherapy</b> - Proportion of epithelial ovarian cancer patients who receive platinum-based chemotherapy, either in combination or as a single agent	90%	<b>73%</b> n=110	77% n=52	73% n=22	65% n=34
<b>Clinical Trials Access</b> - Proportion of patients with colorectal cancer who are enrolled in an interventional clinical trial or translational research.					
Interventional clinical trials	7.5%	<b>7%</b> n=147			
Translational research	15%	<b>11%</b> n=147			

Performance shaded pink where QPI target has not been met by NOSCAN.

<sup>a</sup> Excluding Boards with less than 5 patients.

During this second year of QPI reporting for patients with ovarian cancer, four out of the 10 quality performance targets set were achieved at regional level in the North of Scotland. There were a further two QPIs (3 and 7) where the target was narrowly missed. The number of women with advanced disease being offered delayed surgery has improved from the previous report (QPI 8) and high rates of optimal debulking have been maintained. Multidisciplinary team working is excellent within NOSCAN.

The number of women receiving first line chemotherapy is essentially unchanged and it may be this target needs to be reviewed at the Formal Review of the Ovarian Cancer QPIs after the third year of QPI reporting (2017).

Results from the second year of QPI reporting have helped to identify the following actions to improve on the quality of clinical services for patients with ovarian cancer in the North of Scotland:

- **All NHS Boards to ensure that RMI is documented at MDT.**
- **All NHS Boards to continue assessment of patients for delayed primary surgery. Within NOSCAN this consists of mid way CT, image review and MDT discussion, laparoscopy and careful patient selection to ensure high complete cytoreduction rates.**

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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 Ovarian Cancer QPIs are available from the ISD website<sup>1</sup>.

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

This report assesses the performance of the North of Scotland (NoS) ovarian cancer services using clinical audit data relating to patients diagnosed with ovarian cancer in the twelve months from 1<sup>st</sup> October 2014 to 30<sup>th</sup> September 2015. Results are measured against the Ovarian Cancer Quality Performance Indicators (QPIs)<sup>6</sup> which were implemented for patients diagnosed on or after 1<sup>st</sup> October 2013. In addition, the generic Clinical Trials Access QPI is also reported for patients with ovarian cancer.

## 2. Background

Six NHS Boards across the North of Scotland serve the 1.38 million population<sup>7</sup>. There were 115 patients diagnosed with ovarian cancer in the North of Scotland between 1<sup>st</sup> October 2014 and 30<sup>th</sup> September 2015. The configuration of the Multidisciplinary Teams (MDTs) in the North of Scotland for the management of cancer of the genital system (or 'Gynaecological Cancer'), which includes ovarian cancer, is set out below.

MDT	Constituent Hospitals
Grampian	Aberdeen Royal Infirmary, Balfour Hospital, Kirkwall, Gilbert Bain Hospital, Lerwick
Highland	Raigmore Hospital, Inverness
Tayside	Ninewells Hospital, Dundee

Best practice recommends that patients diagnosed with cancer should have all aspects of their clinical management multidisciplinary considered thereby ensuring consistency and enhanced quality of patient care and clinical outcomes.

In the North of Scotland, some patients diagnosed with an ovarian cancer are discussed at a single (NHS Tayside) or dual Board (NHS Grampian and NHS Highland) MDT level. However all of the more clinically complex patients diagnosed with ovarian cancer have their care planned and discussed at regional MDT level (which is convened on a weekly basis), and their surgical care delivered by a Gynaecology oncologist either alone or with other specialist or sub-speciality clinicians.

It should be noted however, that whilst patients residing in the administrative regions of NHS Eileanan Siar (W. Isles) and Bute come under the jurisdiction of NOSCAN, nonetheless in the event that they present for investigation or with a diagnosis of ovarian cancer,

consequent to long-established service delivery arrangements, they are clinically managed by services co-ordinated by the West of Scotland Cancer Network (WoSCAN).

## 2.1 National Context

Latest available cancer registration figures indicate that with 595 cases recorded during 2014, ovarian cancer ranks as the sixth most common cancer type in women in Scotland. However, incidence have decreased by around by 12.9% since 2004, which is thought to be partly due to increased use of the oral contraceptive pill from the 1960s onwards, which is understood to protect against the development of ovarian cancer<sup>8</sup>.

Relative survival from ovarian cancer is increasing<sup>9</sup>. The table below details the percentage change in 1 and 5 year relative survival for patients diagnosed 1987-1991 to 2007-2011.

**Relative age-standardised survival for ovarian cancer in Scotland at 1 year and 5 years showing percentage change from 1987-1991 to 2007-2011<sup>9</sup>.**

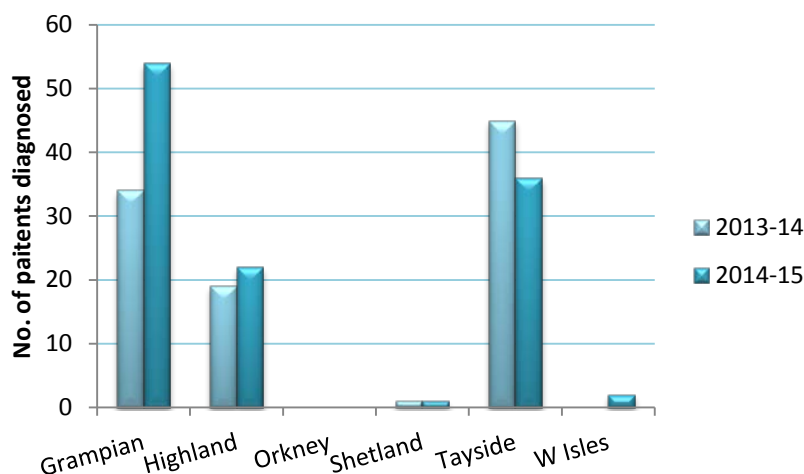
Relative survival at 1 year (%)		Relative survival at 5 years (%)	
2007-2011	% change	2007-2011	% change
65.8%	+ 15.2%	38.7%	+ 11.6%

## 2.2 North of Scotland Context

Between 1<sup>st</sup> October 2014 and 30<sup>th</sup> September 2015, a total of 115 cases of ovarian cancer were diagnosed in the North of Scotland and recorded through audit. The number of patients diagnosed within each Board is presented below.

	Grampian	Highland	Orkney	Shetland	Tayside	W Isles	NoS
Number of Patients	54	22	0	1	36	2	115
% of NoS total	47%	19%	0%	1%	31%	2%	100%





**Number of patients diagnosed with ovarian cancer by Board of diagnosis, October 2014 – September 2015.**

### 3. Methodology

The clinical audit data presented in this report was collected in accordance with an agreed dataset and definitions<sup>1</sup>. The data was entered locally into the electronic Cancer Audit Support Environment (eCASE): a secure centralised web-based database.

Data for patients diagnosed between 1<sup>st</sup> October 2014 and 30<sup>th</sup> September 2015 were collated by cancer audit staff within individual NHS Boards. These data and any comments on QPI results were then signed-off at 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.

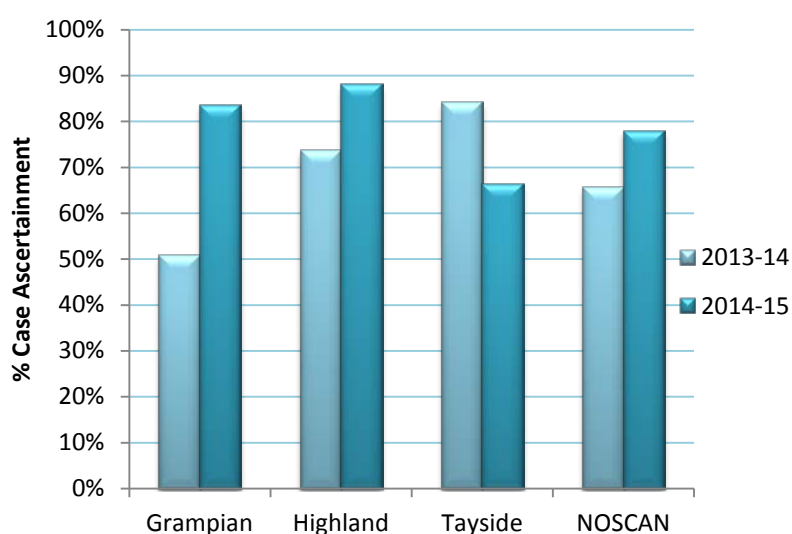
Where the number of cases meeting the denominator criteria for any indicator is between one and four, the results have not been shown in any associated charts or tables. This is to avoid any unwarranted variation associated with small numbers and to minimise the risk of disclosure. Any charts or tables 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, the proportion of expected patients that have been identified through audit. Case ascertainment is calculated by comparing the number of new cases identified by cancer audit with the numbers recorded by the National Cancer Registry, by NHS Board of diagnosis. Cancer Registry figures were extracted from ACaDMe (Acute Cancer Deaths and Mental Health), a system provided by NHS Information Services Division (ISD). Due to the timescale of data collection and verification processes, National Cancer Registry data are not available for 2014-2015. 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 78.0% in 2014-15. Although this may appear low, cancer audit and Cancer Registry are not entirely comparable for ovarian cancers as cancer audit includes only patients diagnosed with epithelial ovarian cancer, while Cancer Registry records all patients with an ovarian cancer diagnosis. As such, case ascertainment is expected to be low. The 2014-15 case ascertainment figures for the North of Scotland are higher than the 2013-14 figure of 65.7% and also above levels for other regions in Scotland in 2013-14, suggesting that in reality capture of patients by cancer audit was high in the North of Scotland in 2014-15. As such, QPI calculations based on data captured are considered to be representative of all patients diagnosed with ovarian cancer during the audit period. Case ascertainment for each Board across the North of Scotland is illustrated below.



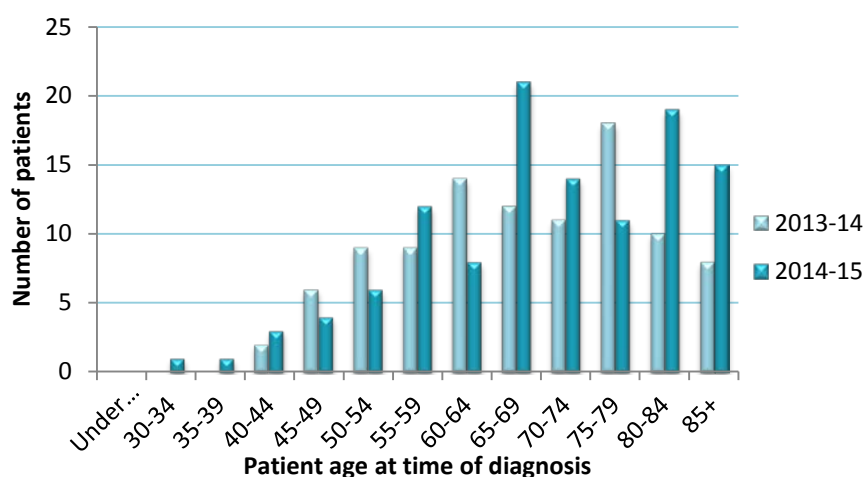
**Case ascertainment by NHS Board for patients diagnosed with ovarian cancer in 2013-2015.**

	Grampian	Highland	Orkney	Shetland	Tayside	W Isles	NoS
<b>Cases from audit</b>	54	22	0	1	36	2	<b>115</b>
<b>ISD Cases (2010-2014)</b>	64.6	25.0	0.8	0.8	54.2	2.0	<b>147.4</b>
<b>% Case ascertainment 2014-15</b>	83.6%	88.0%	0%	125%	66.4%	100%	<b>78.0%</b>

For patients included within the audit, data collection was near complete. There has been a significant improvement in the recording of information on the Risk of Malignancy index (RMI), most notably in NHS Tayside. However, this information was not captured for some patients in NHS Grampian, resulting in the failure to meet the QPI target for QPI 1 at both a Board and regional level and also affecting the results of other reportable standards (such as QPI 4), which depend on this information.

## 4.2 Age Distribution

The figure below shows the age distribution of women diagnosed with ovarian cancer in the North of Scotland in 2013-14 and 2014-15.



Age distribution of patients diagnosed with ovarian cancer in NOSCAN 2013-2015.

Age	Grampian	Highland	Orkney	Shetland	Tayside	W Isles	NOSCAN
Under 30	0	0	0	0	0	0	0
30-34	0	1	0	0	0	0	1
335-39	1	0	0	0	0	0	1
40-44	3	0	0	0	0	0	3
45-49	2	1	0	0	1	0	4
50-54	3	1	0	0	2	0	6
55-59	7	1	0	0	4	0	12
60-64	5	1	0	0	2	0	8
65-69	12	2	0	0	6	1	21
70-74	5	4	0	0	5	0	14
75-79	4	4	0	0	2	1	11
80-84	8	2	0	1	8	0	19
85+	4	5	0	0	6	0	15
<b>Total</b>	<b>54</b>	<b>22</b>	<b>0</b>	<b>1</b>	<b>36</b>	<b>2</b>	<b>115</b>

## 4.3 Performance against Quality Performance Indicators (QPIs)

Results of the analysis of Ovarian 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 for most QPIs are presented by NHS board of diagnosis, however surgical QPIs (QPIs 4, 5 and 6) are presented by Board of surgery. 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 where appropriate.

## QPI 1: Risk of Malignancy Index recorded in the patient notes

**QPI 1: Risk of Malignancy Index recorded in the patient notes: Patients with stage 1 epithelial ovarian cancer should have Risk of Malignancy Index (RMI) assessed and recorded in their notes prior to any definitive surgical intervention.**

Proportion of patients with Stage 1 epithelial ovarian cancer having RMI assessed and recorded in their notes prior to any definitive surgical intervention.

**Numerator:** Number of patients with FIGO Stage 1 epithelial ovarian cancer having RMI score recorded in their notes prior to any definitive surgical intervention.

**Denominator:** All patients with FIGO Stage I epithelial ovarian cancer undergoing definitive surgical intervention.

**Exclusions:**

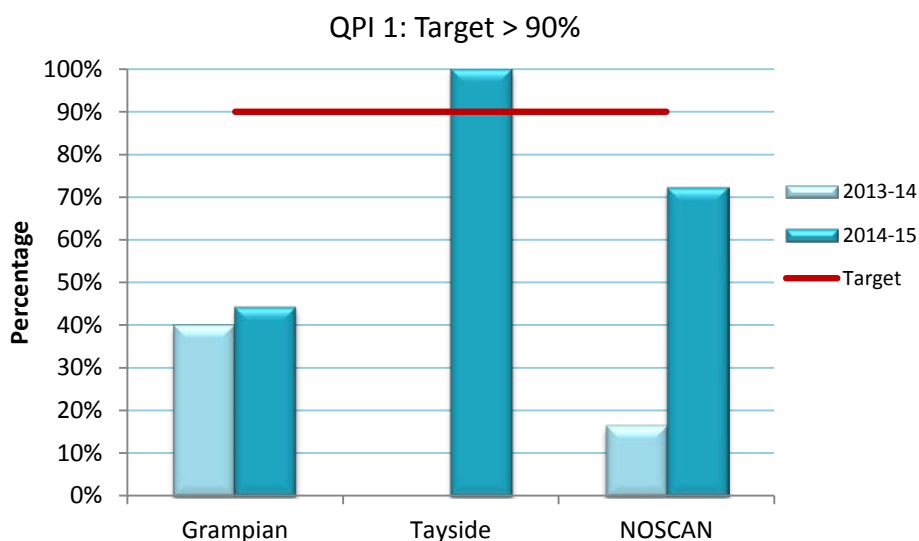
- Patients presenting for surgery as an emergency.
- Patients who do not undergo ultrasound scan.

**Target:** 90%

### QPI 1 Performance against target

Of the 18 patients with FIGO Stage I epithelial ovarian cancer undergoing definitive surgical intervention in North of Scotland in 2014-15, 13 had their Risk of Malignancy Index (RMI) score recorded in their notes prior to definitive surgical intervention. This equates to a rate of 72.2%, which is a considerable increase from the 2013-14 figure of 16.7%, although still below the target rate of 90%.

NHS Grampian was the only NHS Board which did not meet the target for QPI 1 in 2014-15. Numbers of patients included within this QPI are small, however it is clear that recording of RMI has improved considerably in NHS Tayside since 2013-14, while results for NHS Grampian were very similar to the previous year.



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator	% Change from 2013-14
Grampian	44.4%	4	9	0	0%	0	0%	1	+4.4%
Highland*	-	-	-	-	-	-	-	-	-
Shetland	-	0	0	0	-	0	-	0	-
Tayside	100%	6	6	0	0%	0	0%	0	+100%
W Isles	-	0	0	0	-	0	-	0	-
NoS	72.2%	13	18	0	0%	0	0%	1	+55.6%

New MDT forms in NHS Grampian were introduced approximately half way during the time period of this report. Therefore further improvement in the figures is expected in subsequent years.

**Actions Required:**

- **All NHS Boards to ensure that RMI is documented at MDT.**

## QPI 2: Extent of disease assessed by Computed Tomography (CT) or Magnetic Resonance Imaging (MRI) prior to treatment

**QPI 2: Extent of disease assessed by Computed Tomography (CT) or Magnetic Resonance Imaging (MRI) prior to treatment: Patients with epithelial ovarian cancer should have their stage of disease assessed by CT or MRI prior to treatment.**

Proportion of patients with epithelial ovarian cancer having a CT scan or MRI of the abdomen and pelvis performed to exclude the presence of metastatic disease prior to starting definitive treatment.

**Numerator:** Number of patients with epithelial ovarian cancer having a CT scan or MRI of the abdomen and pelvis carried out prior to starting treatment.

**Denominator:** All patients with epithelial ovarian cancer.

**Exclusions:**

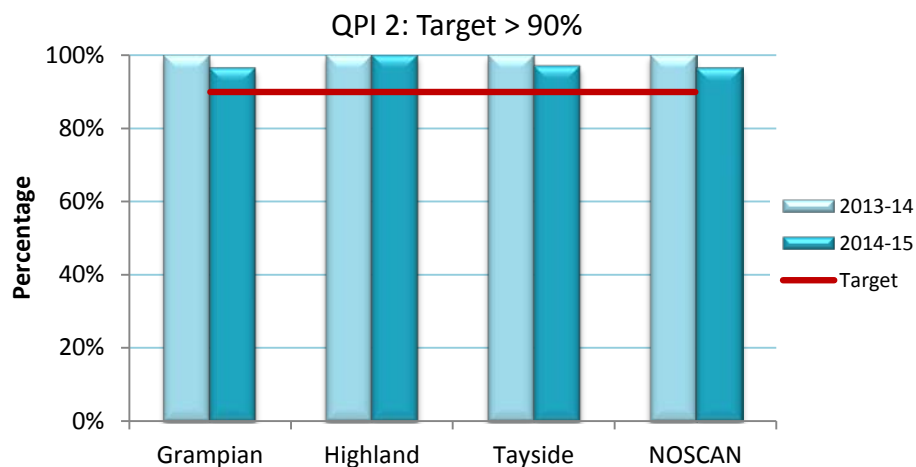
- Patients who decline to undergo investigation.
- Patients presenting for surgery as an emergency.

**Target:** 90%

### QPI 2 Performance against target

Across the North of Scotland, 112 out of the 116 patients included within the QPI (96.6%) had the extent of disease assessed by Computed Tomography (CT) or Magnetic Resonance Imaging (MRI) prior to treatment, meeting the target rate of 90% and only slightly lower than the 2013-14 figure of 100%.

As in 2013-14, 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	% Change from 2013-14
<b>Grampian</b>	<b>96.6%</b>	<b>56</b>	<b>58</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>-3.4%</b>
<b>Highland</b>	<b>100%</b>	<b>21</b>	<b>21</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>
<b>Shetland*</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Tayside</b>	<b>97.1%</b>	<b>33</b>	<b>34</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>-2.9%</b>
<b>W Isles*</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>NoS</b>	<b>96.6%</b>	<b>112</b>	<b>116</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>-3.4%</b>

**Actions Required:**

No actions were identified.

### QPI 3: Treatment planned and reviewed at a multi-disciplinary team meeting

**QPI3: Treatment planned and reviewed at a multi-disciplinary team meeting: Patients with epithelial ovarian cancer should be discussed by a multidisciplinary team (MDT) prior to definitive treatment.**

Proportion of patients with epithelial ovarian cancer who are discussed at a MDT meeting before definitive treatment.

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

Denominator: All patients with epithelial ovarian cancer.

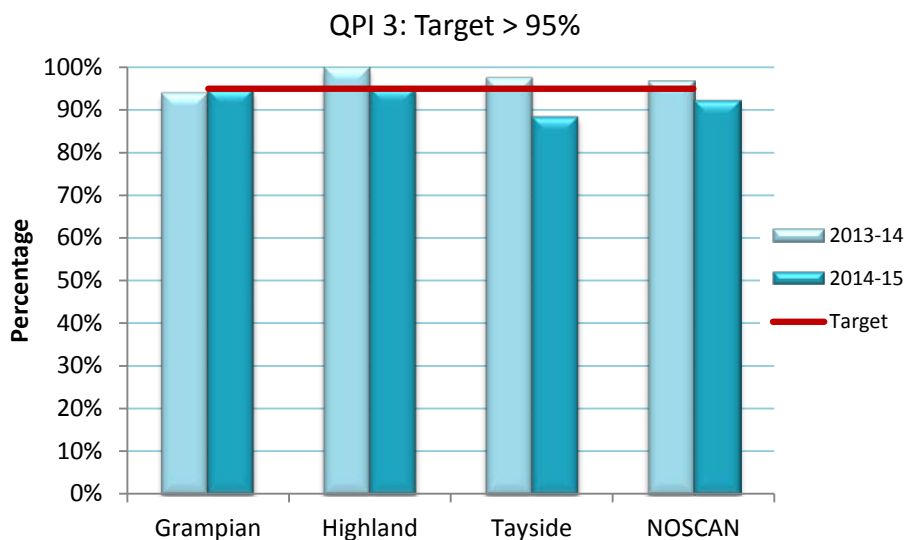
Exclusions: Patients who died before first treatment.

Target: 95%

### QPI 3 Performance against target

In the North of Scotland, 92.0% of patients with epithelial ovarian cancer were discussed at a MDT meeting prior to definitive treatment; this means that at a regional level, the target of 95% was not met. This was less than the 2013-14 performance figure of 96.7%.

Two NHS Boards in the North of Scotland, NHS Grampian and NHS Tayside, did not meet this QPI.





	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator	% Change from 2013-14
<b>Grampian</b>	<b>94.6%</b>	53	56	0	0%	0	0%	0	+0.7%
<b>Highland</b>	<b>95.0%</b>	19	20	0	0%	0	0%	0	-5.0%
<b>Shetland*</b>	-	-	-	-	-	-	-	-	-
<b>Tayside</b>	<b>88.2%</b>	30	34	0	0%	0	0%	0	-9.2%
<b>W Isles*</b>	-	-	-	-	-	-	-	-	-
<b>NoS</b>	<b>92.0%</b>	<b>104</b>	<b>113</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>-4.7%</b>

The figures show a very close 'miss' of the QPI target which was met last year. On analysis of the small number of cases that were not discussed at the MDT there was a genuine reason for this (e.g. death before discussion or low RMI) and do not highlight any issues with NHS board processes.

**Actions Required:**

No actions were identified.

#### **QPI 4: Patients with early stage disease have an adequate staging operation**

***QPI 4: Patients with early stage disease have an adequate staging operation: Patients undergoing surgery for early stage epithelial ovarian cancer (FIGO Stage 1) have an adequate staging operation which includes Total Abdominal Hysterectomy (TAH), Bilateral Salpingo-Oophorectomy (BSO), omentectomy and washings.***

Patients undergoing surgery for early stage epithelial ovarian cancer (FIGO Stage 1) have an adequate staging operation which includes Total Abdominal Hysterectomy (TAH), Bilateral Salpingo-Oophorectomy (BSO), omentectomy and washings.

##### **Specification (i)**

**Numerator:** Number of early stage (FIGO Stage 1) epithelial ovarian cancer patients having primary surgery involving TAH, BSO, omentectomy and washings

**Denominator:** All early stage (FIGO Stage 1) epithelial ovarian cancer patients undergoing primary surgery.

**Exclusions:**

- Patients having fertility conserving surgery.
- Patients with risk of malignancy index <200.
- Patients presenting for emergency surgery

**Target:** 95%

##### **Specification (ii)**

**Numerator:** Number of early stage (FIGO Stage 1) epithelial ovarian cancer patients having primary surgery involving TAH, BSO, omentectomy and washings.

**Denominator:** All early stage (FIGO Stage 1) epithelial ovarian cancer patients operated on by a gynaecological oncologist.

**Exclusions:**

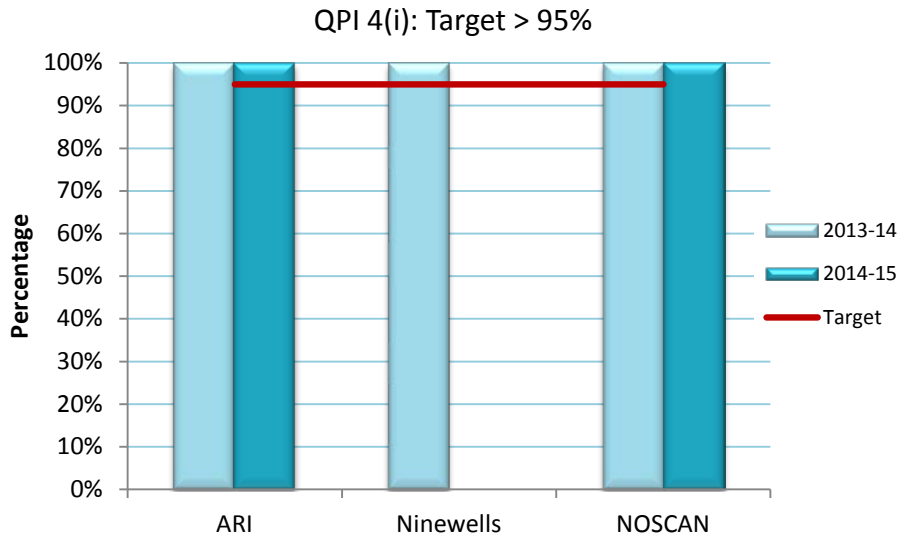
- Patients having fertility conserving surgery.
- Patients with risk of malignancy index <200.
- Patients presenting for emergency surgery

**Target:** 95%

#### **QPI 4 Performance against target**

Of the 11 patients with early stage epithelial ovarian cancer who underwent primary surgery in the North of Scotland all (100%) had surgery involving TAH, BSO, omentectomy and washings. This included 6 patients operated on by a gynaecological oncologist, all of which were undertaken in Aberdeen Royal Infirmary, NHS Grampian.

Consequently the target rate of 95% was met for both specification (i) and (ii) both for the region and for all hospitals undertaking this surgery, as in 2013-14.



Specification (i) All patients.

	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator	% Change from 2013-14
ARI	100%	7	7	0	0%	4	57.1%	1	0%
Raigmore*	-	-	-	-	-	-	-	-	-
Ninewells*	-	-	-	-	-	-	-	-	-
NoS	100%	11	11	0	0%	4	36.4%	1	0%

Specification (ii) patients operated on by a gynaecological oncologist.

	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator	% Change from 2013-14
ARI	100%	6	6	0	0%	3	50.0%	1	0%
NoS	100%	6	6	0	0%	3	50.0%	1	0%

**Actions Required:**

No actions were identified.

## QPI 5: No macroscopic residual disease following surgery for advanced disease

***QPI 5: No macroscopic residual disease following surgery for advanced disease: Surgery, as first definitive treatment, for patients with advanced epithelial ovarian cancer (FIGO Stage 2 or higher) should achieve no macroscopic residual disease.***

Proportion of patients with advanced epithelial ovarian cancer (FIGO Stage 2 or higher) who have < 1cm residual disease and those who have no macroscopic residual disease following surgery.

### **Specification (i)**

**Numerator:** Number of patients with advanced epithelial ovarian cancer (FIGO Stage 2 or higher) with no macroscopic residual disease following surgery.

**Denominator:** All patients with advanced epithelial ovarian cancer (FIGO Stage 2 or higher) undergoing surgery.

**Exclusions:** Patients with FIGO Stage 4 disease.

**Target:** 30%

### **Specification (ii)**

**Numerator:** Number of patients with advanced epithelial ovarian cancer (FIGO Stage 2 or higher) undergoing surgery with macroscopic residual disease < 1cm.

**Denominator:** All patients with advanced epithelial ovarian cancer (FIGO Stage 2 or higher) undergoing surgery.

**Exclusions:** Patients with FIGO Stage 4 disease.

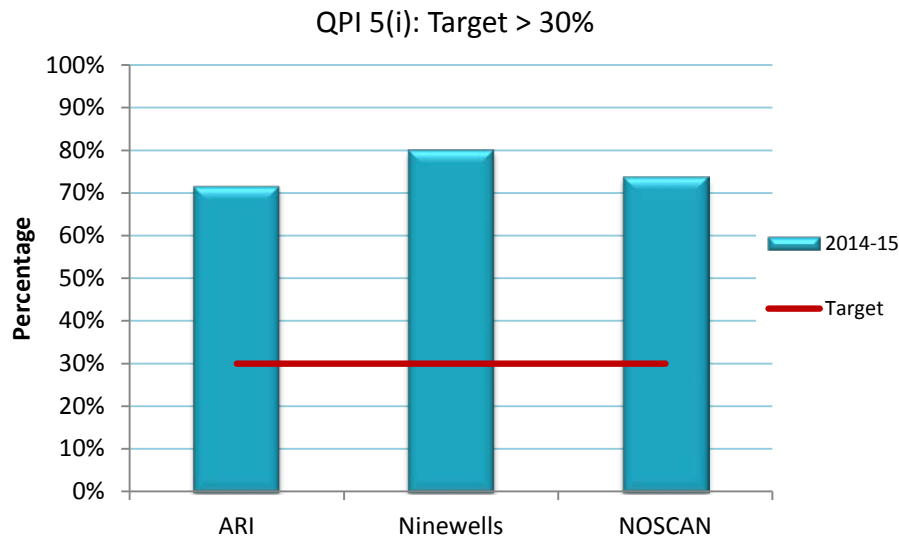
**Target:** 60%

## QPI 5 Performance against target

### **Specification (i) – No macroscopic disease**

Of the 19 patients with advanced epithelial ovarian cancer (FIGO Stage 2 or higher) undergoing surgery in the North of Scotland in 2014-15, 14 (73.7%) had no macroscopic residual disease following surgery. These figures show that the target of 30% was met in the North of Scotland. It is not possible to compare results with those from 2013-14 due to changes in the way that this QPI is calculated.

Surgery was undertaken in both Aberdeen Royal Infirmary (NHS Grampian) and Ninewells Hospital (NHS Tayside) with the QPI target being met by both of these surgical centres.

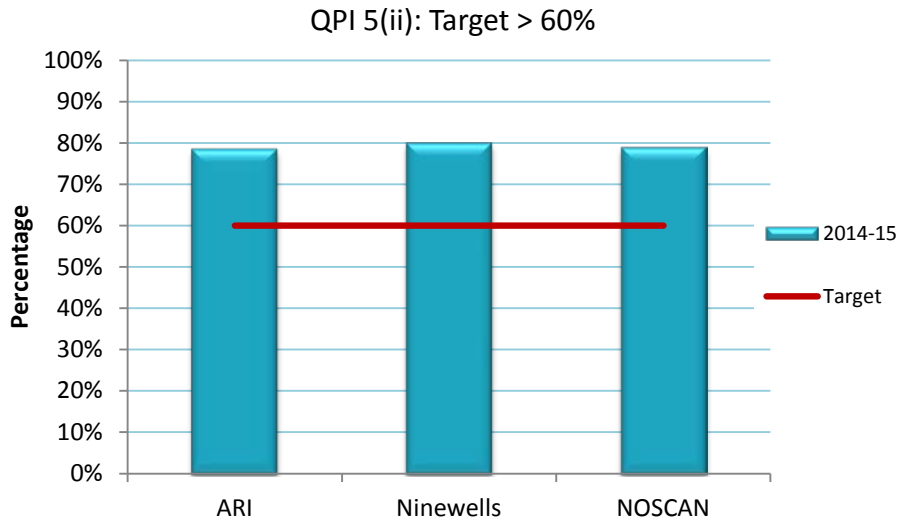


	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator
ARI	71.4%	10	14	2	14.3%	0	0%	1
Ninewells	80.0%	4	5	0	0%	0	0%	0
NoS	73.7%	14	19	2	10.5%	0	0%	1

### Specification (ii) – Macroscopic residual disease < 1cm

Of the 19 patients with advanced epithelial ovarian cancer (FIGO Stage 2 or higher) undergoing surgery in the North of Scotland in 2014-15, 15 (78.9%) had macroscopic residual disease < 1cm following surgery. Consequently, the North of Scotland meets target of 70% for this QPI in 2014-15, with slightly higher results than in 2013-14 when 73.3% of patients met this target. It is not possible to compare results with those from 2013-14 due to changes in the way that this QPI is calculated.

At a hospital level both centres performing surgery in 2014-15 met the QPI target.



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator
<b>ARI</b>	<b>78.6%</b>	11	14	2	14.3%	0	0%	1
<b>Ninewells</b>	<b>80.0%</b>	4	5	0	0%	0	0%	0
<b>NoS</b>	<b>78.9%</b>	15	19	2	10.5%	0	0%	1

**Actions Required:**

No actions were identified.

## QPI 6: Histopathology reports are complete and support clinical decision-making

**QPI 6: Histopathology reports are complete and support clinical decision-making: Histopathology reports relating to pelvic clearance surgery for patients with epithelial ovarian cancer contain all necessary information to inform treatment decision making.**

Proportion of patients with epithelial ovarian cancer undergoing pelvic clearance surgery having a complete pathology report as defined by the Royal College of Pathologists.

**Numerator:** Number of patients with epithelial ovarian cancer undergoing definitive cytoreductive surgery who have a complete pathology report that contains all data items as defined by the Royal College of Pathologists.

**Denominator:** All patients with epithelial ovarian cancer undergoing definitive cytoreductive surgery.

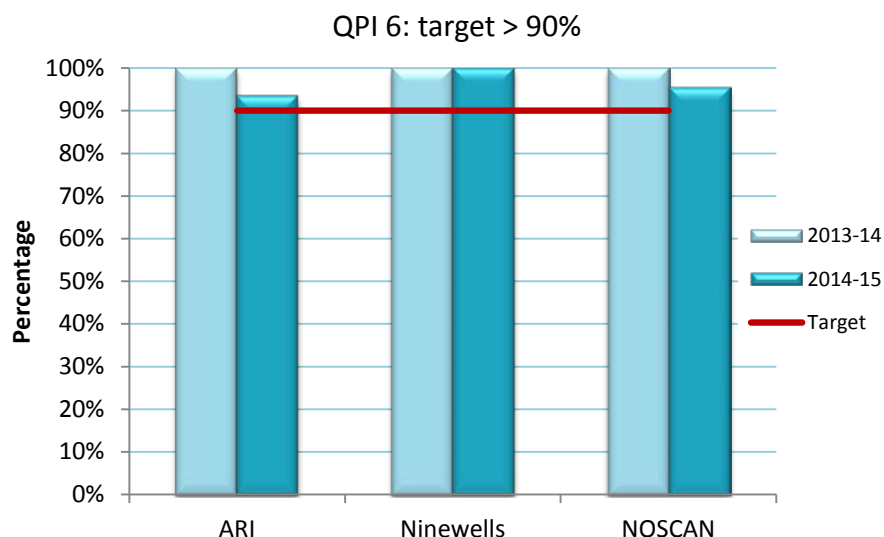
**Exclusions:** No exclusions

**Target:** 90%

### QPI 6 Performance against target

In 2014-15, 42 patients undergoing cytoreductive surgery in the North of Scotland had a complete pathology report that contained all data items, a rate of 95.5%. This is greater than the target rate of 90% and a slight decrease from the 100% figure for 2013-14.

At a Hospital level the QPI was met by all centres undertaking this surgery in the North of Scotland in 2014-15, as in 2013-14.



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator	% Change from 2013-14
ARI	93.5%	29	31	0	0%	0	0%	0	-6.5%
Raigmore*	-	-	-	-	-	-	-	-	-
Ninewells	100%	11	11	0	0%	0	0%	0	0%
PRI*	-	-	-	-	-	-	-	-	-
NoS	95.5%	42	44	0	0%	0	0%	0	-4.5%

**Actions Required:**

No actions were identified.



## QPI 7: Histocytological diagnosis prior to starting neo-adjuvant chemotherapy

***QPI 7: Histo/cytological diagnosis prior to starting neo-adjuvant chemotherapy: Patients with epithelial ovarian cancer should have a histo/cytological diagnosis of their cancer prior to starting neo-adjuvant chemotherapy.***

Proportion of patients with epithelial ovarian cancer having a histo/cytological diagnosis prior to starting neo-adjuvant chemotherapy and the proportion of these with histological confirmation obtained by percutaneous image-guided biopsy or laparoscopy.

### **Specification (i)**

**Numerator:** Number of patients having histo/cytological diagnosis of epithelial ovarian cancer recorded prior to starting chemotherapy.

**Denominator:** All patients with epithelial ovarian cancer undergoing neo-adjuvant chemotherapy.

**Exclusions:** Patients for whom paracentesis, image-guided biopsy or laparoscopy is considered not suitable.

**Target:** 100%

### **Specification (ii)**

**Numerator:** Number of patients who have a diagnosis of epithelial ovarian cancer confirmed by histology prior to starting chemotherapy.

**Denominator:** All patients with epithelial ovarian cancer having histo/cytological diagnosis recorded prior to starting neo-adjuvant chemotherapy.

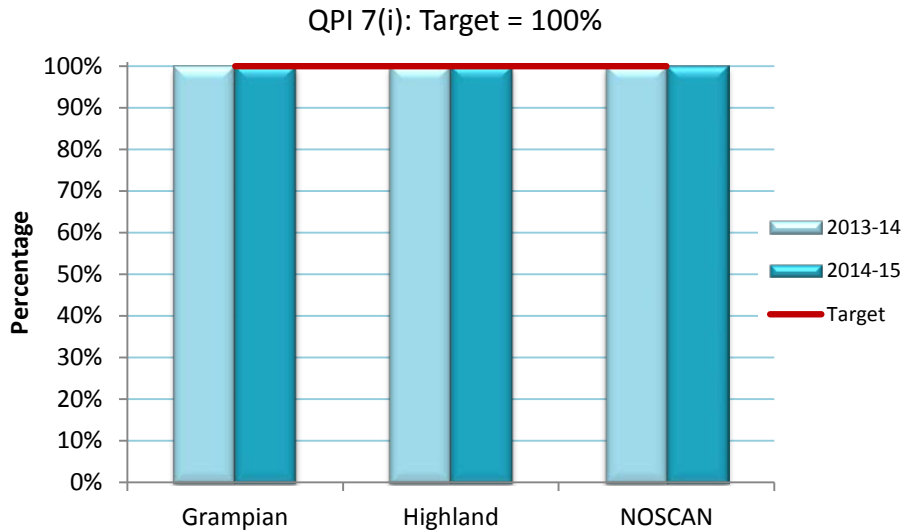
**Exclusions:** No exclusions

**Target:** 80%

## QPI 7 Performance against target

### **(i) Proportion of patients with histo/cytological diagnosis prior to starting neo-adjuvant chemotherapy**

Of the 25 patients diagnosed with epithelial ovarian cancer in 2014-15 undergoing neo-adjuvant chemotherapy in the North of Scotland, all (100%) received a histo-cytological diagnosis of epithelial ovarian cancer prior to starting chemotherapy. This means that all Boards in the North of Scotland with patients measured by this QPI met the required performance target, with the same results as in 2013-14.



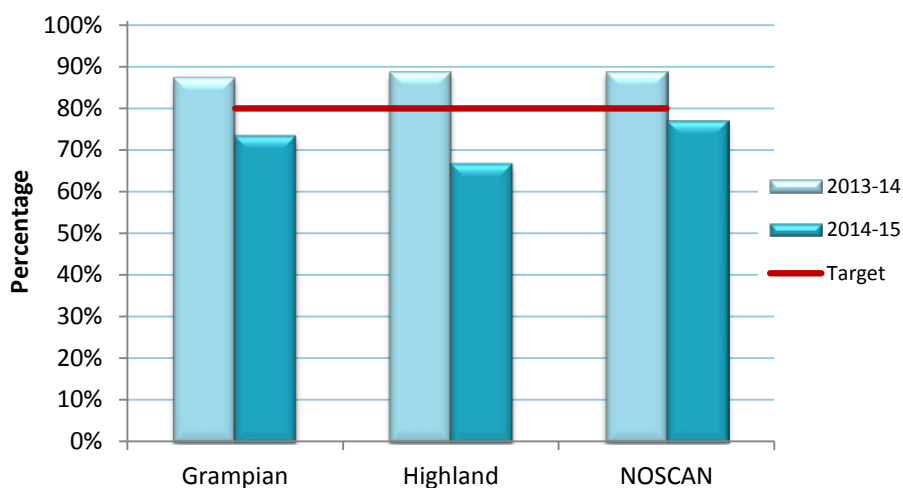
	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator	% Change from 2013-14
Grampian	100%	14	14	0	0%	0	0%	0	0%
Highland	100%	6	6	0	0%	0	0%	0	0%
Shetland	-	0	0	0	-	0	-	0	-
Tayside*	-	-	-	-	-	-	-	-	-
W Isles*	-	-	-	-	-	-	-	-	-
NoS	100%	25	25	0	0%	0	0%	0	0%

**(ii) Proportion of patients with diagnosis confirmed by histology prior to starting neo-adjuvant chemotherapy**

Of the 26 patients diagnosed in 2014-15 with a histo/cytological diagnosis recorded prior to starting chemotherapy, 20 (76.9%) had diagnosis confirmed by histology in the North of Scotland. This is below the target level of 80% and lower than the 2013-14 figure of 88.9%.

This QPI target was not met by either NHS Grampian or NHS Highland in 2014-15; however it should be noted that results are based on small numbers of patients and both NHS Boards did meet the QPI in 2013-14.

QPI 7(ii): Target > 80%



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator	% Change from 2013-14
Grampian	73.3%	11	15	0	0%	0	0%	0	+14.2%
Highland	66.7%	4	6	0	0%	0	0%	0	-22.0%
Shetland	-	0	0	0	-	0	-	0	-
Tayside*	-	-	-	-	-	-	-	-	-
W Isles*	-	-	-	-	-	-	-	-	-
NoS	76.9%	20	26	0	0%	0	0%	0	-12.0%

The QPI target was not met though the patient numbers are small. It is widely recognised and acknowledged within NOSCAN that histological diagnosis is the gold standard prior to starting neo-adjuvant chemotherapy. On review there were cases where the histological was negative or inconclusive but cytological diagnosis adequate, in such cases it was not considered to be in the best interest of patients to repeat biopsy or subject to laparoscopy before treatment.

**Actions Required:**

No actions were identified.

## QPI 8: Delayed primary surgery

**QPI 8: Delayed primary surgery – Delayed primary surgery, after neo-adjuvant chemotherapy for advanced epithelial ovarian cancer (FIGO Stage 3c or 4), should achieve optimal cytoreduction (<1cm).**

Proportion of patients with advanced epithelial ovarian cancer (FIGO Stage 3c or 4) having delayed primary surgery following neo-adjuvant chemotherapy and where optimal cytoreduction is achieved.

### Specification (i)

**Numerator:** Number of patients with advanced epithelial ovarian cancer (FIGO Stage 3c or 4) undergoing delayed primary surgery after neo-adjuvant chemotherapy.

**Denominator:** All patients with advanced epithelial ovarian cancer (FIGO Stage 3c or 4) having neo-adjuvant chemotherapy.

**Exclusions:** No exclusions

**Target:** 75%

### Specification (ii)

**Numerator:** Number of patients with advanced epithelial ovarian cancer (FIGO Stage 3c or 4) undergoing delayed primary surgery with residual disease <1cm.

**Denominator:** All patients with advanced epithelial ovarian cancer (FIGO Stage 3c or 4) undergoing delayed primary surgery after neo-adjuvant chemotherapy.

**Exclusions:** No exclusions

**Target:** 65%

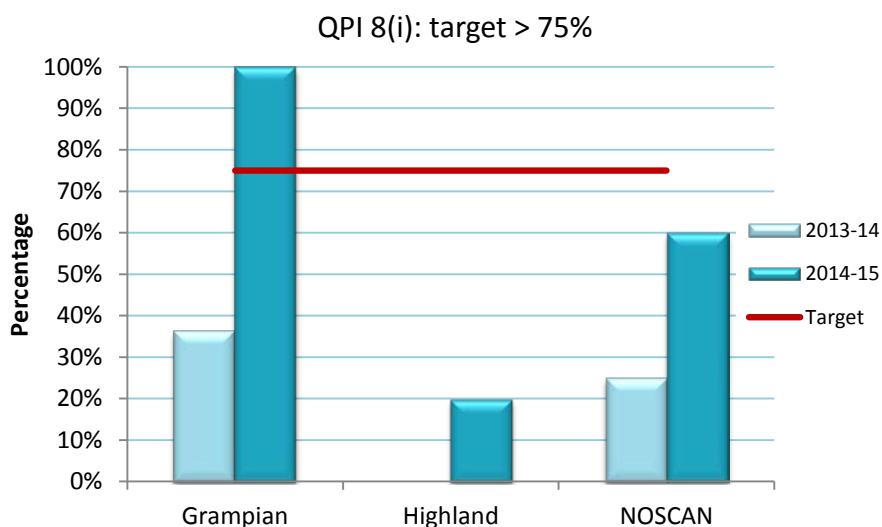
## QPI 8 Performance against target

### (i) Proportion of patients with advanced epithelial ovarian cancer undergoing delayed primary surgery after neo-adjuvant chemotherapy

In 2014-15 six patients diagnosed with advanced epithelial ovarian cancer in the North of Scotland underwent delayed surgery following neo-adjuvant chemotherapy, 60.0% of patients with advanced disease having neo-adjuvant chemotherapy. This is below the target for this QPI of 75% but considerably higher than the 2013-14 figure of 25.0%.

Only two NHS Boards in the North of Scotland had patients included within this QPI in 2014-15, NHS Grampian and NHS Highland. While NHS Grampian met the QPI target, NHS

Highland did not, although it should be noted that the QPI results are based on very small numbers of patients.



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator	% Change from 2013-14
<b>Grampian</b>	<b>100%</b>	5	5	0	0%	0	0%	2	+63.6%
<b>Highland</b>	<b>20.0%</b>	1	5	0	0%	0	0%	0	+20.0%
<b>Shetland</b>	-	0	0	0	-	0	-	0	-
<b>Tayside</b>	-	0	0	0	-	0	-	0	-
<b>W Isles</b>	-	0	0	0	-	0	-	0	-
<b>NoS</b>	<b>60.0%</b>	6	10	0	0%	0	0%	2	+35.0%

**(ii) Proportion of patients having delayed primary surgery after neo-adjuvant chemotherapy with residual disease < 1cm**

Of the six patients with advanced epithelial ovarian cancer having delayed primary surgery after neo-adjuvant chemotherapy in the North of Scotland in 2014-15, four (66.7%) had residual disease < 1cm. This is above the target for this QPI of 65% and similar to the 2013-14 figure of 75%.

Due to the small numbers of patients used to calculate this QPI meaningful comparisons between NHS Boards cannot be made and data are not shown in a graph.

	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator	% Change from 2013-14
Grampian	60%	3	5	0	0%	0	0%	0	-
Highland*	-	-	-	-	-	-	-	-	-
Shetland	-	0	0	0	-	0	-	0	-
Tayside	-	0	0	0	-	0	-	0	-
W Isles	-	0	0	0	-	0	-	0	-
NoS	66.7%	4	6	0	0%	0	0%	0	-8.3%

There has been improvement in the number of women with advanced epithelial cancer undergoing delayed surgery. The rates of optimal debulking are consistently high indicating good patient selection. The surgical multidisciplinary team is in place and these patients will have input from colorectal, hepatopancreobiliary and urological surgeons when needed.

Patients with significant co-morbidities or progressive disease would not be deemed suitable for such surgery.

#### **Actions Required:**

- **All NHS Boards to continue assessment of patients for delayed primary surgery. Within NOSCAN this consists of mid way CT, image review and MDT discussion, laparoscopy and careful patient selection to ensure high complete cytoreduction rates.**

## QPI 9: First-line Chemotherapy

### **QPI 9: First-line Chemotherapy: Chemotherapy treatment of epithelial ovarian cancer should include a platinum agent.**

Proportion of epithelial ovarian cancer patients who receive platinum-based chemotherapy, either in combination or as a single agent.

**Numerator:** Number of epithelial ovarian cancer patients who receive chemotherapy treatment involving either paclitaxel in combination with a platinum-based compound or carboplatin only.

**Denominator:** All epithelial ovarian cancer patients

**Exclusions:**

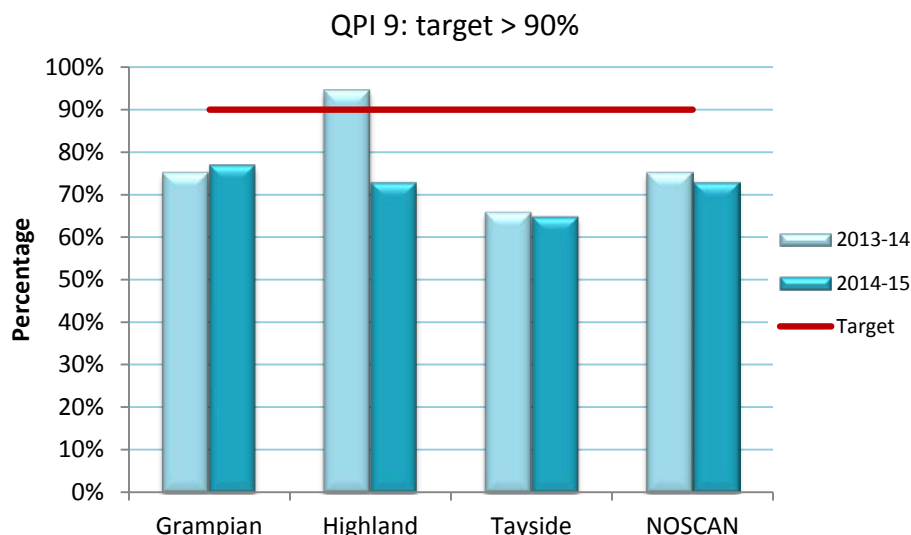
- Patients with low-grade serous disease.
- Patients with FIGO stage 1a or 1b, low grade (G1) disease.
- Patients with Stage 1a clear cell tumours.
- Patients who decline chemotherapy treatment.

**Target:** 90%

### QPI 9 Performance against target

In 2014-15 in the North of Scotland, 72.7% of epithelial ovarian cancer patients received chemotherapy treatment which included a platinum agent (either paclitaxel in combination with a platinum-based compound or carboplatin only). This falls short of the target of 90% and is slightly lower than the 2013-14 figure of 75.0%.

In 2014-15 no NHS Boards met this target.



	Performance (%)	Numerator	Denominator	Not recorded - Numerator	% not recorded - Numerator	Not recorded - Exclusions	% not recorded - Exclusions	Not recorded - Denominator	% Change from 2013-14
Grampian	76.9%	40	52	0	0%	4	7.7%	0	+1.9%
Highland	72.7%	16	22	0	0%	0	0%	0	-21.7%
Shetland	-	0	0	0	-	0	-	0	-
Tayside	64.7%	22	34	0	0%	0	0%	0	-1.1%
W Isles*	-	-	-	-	-	-	-	-	-
NoS	72.7%	80	110	0	0%	4	3.6%	0	-2.3%

The QPI figures are very similar to last year and it needs to be recognised that all patients are considered for first line chemotherapy. Some patients died before treatment and others were offered hormone treatment due to advanced age or co-morbidities. Performance status is formally assessed.

**Actions Required:**

No actions were 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.

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

Key points during the period audited:

Approximately 6.8% of patients with ovarian 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 approaching the required target of 7.5% and higher than the 2014 figure of 3.3%.

Recruitment into translational research was 10.9% in 2015, lower than the 2014 figure of 15.9% and below the target of 15%.

	Number of patients recruited	ISD Cases annual average (2010-2014)	Percentage of patients recruited
<b>Interventional Clinical Trials</b>	10	147	<b>6.8%</b>
<b>Translational Research</b>	16	147	<b>10.9%</b>

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 particularly 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 ovarian 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 ovarian cancer.

During 2015 in NOSCAN, there were 2 interventional trials and 2 translational trials open and recruiting patients, thereby offering patients with an ovarian cancer diagnosis the opportunity to participate in a range of different ovarian cancer trials. Furthermore, all the ovarian 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 ovarian cancer in the North of Scotland during 2015, 9 (6.12%) patients were screened for interventional trials and 16 (10.88%) 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 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 second time the results of the Ovarian Cancer QPIs have been reported in the North of Scotland, providing a clearer measure of performance across the region and a more formal structure around which improvements will be made.

Overall, results of Ovarian Cancer QPI reporting for patients diagnosed in 2014-2015 are considered to be good. Case ascertainment and data capture was of an overall high standard and QPI results considered to be representative of the ovarian cancer services in the North of Scotland, although it should be noted that some QPIs are based on very small numbers of patients and results may therefore be a less precise in indicator the quality of service over a longer time period.

The QPI target was met for four of the ten QPIs performance measured. There were a further two QPIs (3 and 7) where the target was narrowly missed. The number of women with advanced disease being offered delayed surgery has improved from the previous report (QPI 8) and high rates of optimal debulking have been maintained. Multidisciplinary team working is excellent within NOSCAN.

The number of women receiving first line chemotherapy is essentially unchanged and it may be this target needs to be reviewed at the Formal Review of the Ovarian Cancer QPIs after the third year of QPI reporting (2017).

The actions identified in this report to improve ovarian cancer services in the North of Scotland based on QPI results for 2014-15 include;

- All NHS Boards to ensure that RMI is documented at MDT.
- All NHS Boards to continue assessment of patients for delayed primary surgery. Within NOSCAN this consists of mid way CT, image review and MDT discussion, laparoscopy and careful patient selection to ensure high complete cytoreduction rates.

The North of Scotland Gynaecology Cancer 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 to this report.

**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 North of Scotland Gynaecology Cancer 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 Gynaecology 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: List of clinical trials for patients with ovarian cancer into which patients were recruited in 2015.**

<b>Trial</b>	<b>Principle Investigator</b>	<b>Trial Type</b>
OvPSYCH 2	Michelle Ferguson (Tayside)	Interventional
LOGS	Michelle Ferguson (Tayside)	Interventional
DOCS	Michelle Ferguson (Tayside)	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.



North of Scotland  
Cancer Network

## Action Plan: Ovarian Cancer

Based on patients diagnosed October 2014 – September 2015

<b>Board:</b>	
<b>Action Plan Lead:</b>	
<b>Date:</b>	

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 of reasons why no action has been taken.</i>	<i>Insert no. from key</i>