

**West of Scotland Cancer Network  
Gynaecological Cancer  
Managed Clinical Network**



# **Audit Report**

## **Ovarian Cancer Quality Performance Indicators**

**Clinical Audit Data:  
01 October 2019 to 30 September 2020**

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# CONTENTS

<b>1. INTRODUCTION</b>	<b>9</b>
<b>2. BACKGROUND</b>	<b>9</b>
2.1 NATIONAL CONTEXT	9
2.2 WEST OF SCOTLAND CONTEXT	10
<b>3. METHODOLOGY</b>	<b>12</b>
<b>4. PERFORMANCE AGAINST QUALITY PERFORMANCE INDICATORS (QPIS)</b>	<b>13</b>
<b>5. NEXT STEPS</b>	<b>26</b>
<b>ACKNOWLEDGEMENT</b>	<b>27</b>
<b>ABBREVIATIONS</b>	<b>28</b>
<b>REFERENCES</b>	<b>29</b>
<b>APPENDIX 1: META DATA</b>	<b>31</b>
<b>APPENDIX 2: CANCER AUDIT TIMELINE</b>	<b>32</b>
<b>APPENDIX 1: ACTION / IMPROVEMENT PLANS</b>	<b>33</b>

# Ovarian Cancer Quality Performance Indicators

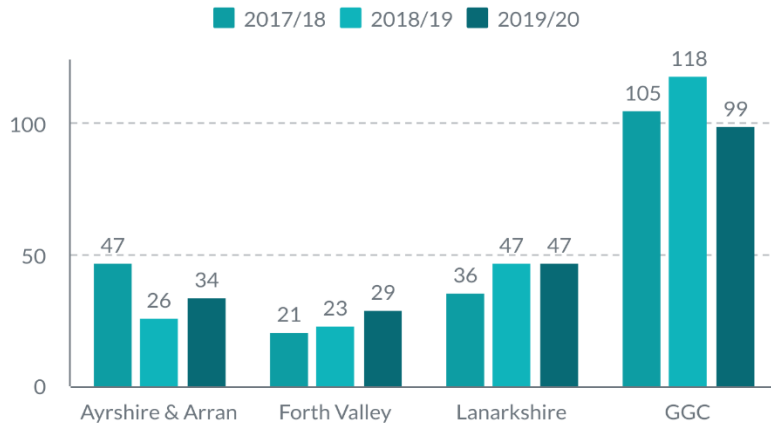
Patients Diagnosed: October 2019 - September 2020

Number Diagnosed: **209**

Case Ascertainment: **75.5%**

Median Age: **67**

No. Patients Diagnosed Between October 2019 and September 2020 by NHS Board



## QPI Performance

QPI Title	QPI Target	WoS Performance	Target Met /Not Met
<b>QPI 2</b> CT/MRI Prior to Treatment	95%	100%	✓
<b>QPI 3</b> Discussed at MDT	95%	95.1%	✓
<b>QPI 4</b> Adequate Staging Operation	90%	97.1%	✓
<b>QPI 6</b> Histopathological reports are complete	95%	96.7%	✓
<b>QPI 7</b> Histological diagnosis prior to starting chemotherapy	90%	96.0%	✓
<b>QPI 10(i)</b> Surgery for advanced disease	65%	63.0%	✗
<b>QPI 10(ii)</b> Primary surgery for advanced disease no residual disease	60%	73.7%	✓
<b>QPI 10(iii)</b> Delayed primary surgery after chemotherapy with no residual disease	60%	65.2%	✓
<b>QPI 11</b> Genetic Testing	90%	87.9%	✗
<b>QPI 12</b> Surgical 30day Mortality	<5%	0.0%	✓
<b>QPI 13</b> Clinical Trials	15%	42.4%	✓

## Key Achievements

The QPI results indicate that overall, the quality of gynaecological cancer services across WoS is excellent with the WoS achieving nine of the 11 QPIs.

## Areas for Improvement

MCN will coordinate further regional analysis to better understand variance in performance.

QPI 10(i) - Proportion of patients with advanced epithelial ovarian cancer (FIGO Stage 2 or higher) undergoing surgery. Three units did not achieve the 65% target for patients with advanced epithelial ovarian cancer undergoing surgery.

QPI 11 – Genetic Testing in Non-Mucinous Epithelial Ovarian Cancer. Only two units achieved the 90% target for patients with epithelial ovarian cancer undergoing genetic testing although improvement was noted in the majority of Boards compared to the previous year.

## **Introduction**

This report presents an assessment of performance of West of Scotland (WoS) Ovarian Cancer Services relating to patients diagnosed in the region between 01 October 2019 and 30 September 2020. Data was measured against v4.0 of the Ovarian Cancer Quality Performance Indicators (QPIs)<sup>1</sup>. This was the seventh consecutive year of analysis following the initial Healthcare Improvement Scotland (HIS) publication of ovarian cancer QPIs in 2013.

In order to ensure success of the National Cancer QPIs in driving quality improvement in cancer care across NHS Scotland it is critical that QPIs continue to be clinically relevant and focus on areas which will result in improvements to the quality of patient care. As part of the national process it was agreed that indicators would be formally reviewed following 3 years of national comparative reporting. The initial formal review of ovarian cancer QPIs took place in December 2017. With 6 years of reporting now completed, a 2<sup>nd</sup> cycle of review was undertaken in January 2021. This clinically led review involved key clinicians from each of the Regional Cancer Networks and focussed on looking at any significant changes that were required to the QPIs due to changes in evidence or clinical practice, as well as making adjustments to the QPIs developed at the initial formal review.

## **Results**

A summary of performance against the ovarian cancer QPIs for patients diagnosed in 2019/20 is presented below, with more detailed analysis of the results set out in the main report. Data are analysed by location of diagnosis with the exception of surgical QPIs, which are reported by the NHS Board within which surgery was undertaken.

In accordance with the regional governance process, specific NHS Board actions are identified to address issues highlighted through data analysis.

Please note actions have been categorised into the following groupings for internal management purposes to allow regional trends to be identified, and co-ordinate regional actions across multiple tumour groups where appropriate; AHP / CNS, Capacity, Clinical documentation, Clinical Trials, Data Capture, MDT, Oncology, Other, Other diagnostic, Pathology, Performance review, Practice, QPI Definition, Radiology, Resource, Surgery, Time to Treatment, Treatment Decision and Workforce.

## Ovarian Cancer QPI Performance Summary Report

Key	
	Above Target Result
	Below Target Result

Quality Performance Indicator (QPI)	Performance by NHS Board								
	Target	Year	AA	FV	Lan	NG	SG	Clyde	WoS
<b>QPI 2</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 treatment.	95%	2019/20	100%	100%	100%	100%	100%	100%	100%
		2018/19	100%	100%	100%	100%	100%	96.6%	99.5%
		2017/18	100%	100%	100%	100%	100%	97.1%	99.5%
<b>QPI 3</b> - Proportion of patients with epithelial ovarian cancer who are discussed at a MDT meeting before definitive treatment.	95%	2019/20	96.9%	96.6%	95.7%	94.6%	93.8%	93.8%	95.1%
		2018/19	75.0%	95.7%	91.5%	97.7%	94.9%	96.4%	92.6%
		2017/18	88.1%	100%	90.6%	100%	97.3%	100%	95.3%
<b>QPI 4</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.	90%	2019/20	100%	66.7%	100%	100%	100%	n/a	97.1%
		2018/19	100%	0.0%	100%	100%	100%	0.0%	93.8%
		2017/18	100%	100%	66.7%	96.5%	100%	66.7%	90.9%
<b>QPI 6:</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%	2019/20	100%	50%	100%	97.1%	100%	100%	96.7%
		2018/19	100%	100%	100%	94.1%	100%	100%	95.1%

		2017/18	83.3%	100%	100%	92.9%	100%	100%	93.0%
Quality Performance Indicator (QPI)	Performance by NHS Board								
	Target	Year	AA	FV	Lan	NG	SG	Clyde	WoS
<b>QPI 7</b> – Proportion of patients with epithelial ovarian cancer having a histological diagnosis obtained by percutaneous image-guided biopsy or laparoscopy prior to starting chemotherapy.	<b>80%</b>	2019/20	100%	93.3%	96.3%	100%	90.9%	92.9%	96.0%
		2018/19	100%	84.6%	90.0%	100%	100%	100%	96.0%
		2017/18	93.8%	88.9%	100%	90.0%	94.4%	60.0%	87.2%
<b>QPI 10(i)</b> - Proportion of patients with advanced epithelial ovarian cancer (FIGO Stage 2 or higher) undergoing surgery.	<b>60%</b>	2019/20	57.1%	70.8%	65.0%	70.4%	52.0%	60.0%	63.0%
		2018/19	85.7%	59.1%	63.0%	63.2%	50.0%	40.0%	58.1%
		2017/18	86.4%	42.1%	77.3%	66.7%	50.0%	59.1%	62.6%
<b>QPI 10(ii)</b> - Proportion of patients with advanced epithelial ovarian cancer (FIGO Stage 2 or higher) undergoing surgery where no residual disease is achieved.	<b>50%</b>	2019/20	n/a	n/a	n/a	73.5%	100%	66.7%	73.7%
		2018/19	n/a	66.7%	100%	75.0%	100%	0.0%	72.5%
		2017/18	100%	n/a	0.0%	78.9%	100%	0.0%	78.5%
<b>QPI 10(iii)</b> - Proportion of patients with advanced epithelial ovarian cancer (FIGO Stage 2 or higher) undergoing delayed primary surgery after chemotherapy where no residual disease is achieved.	<b>50%</b>	2019/20	n/a	n/a	n/a	65.2%	n/a	n/a	65.2%
		2018/19	n/a	n/a	n/a	68.6%	n/a	n/a	68.6%
		2017/18	n/a	n/a	n/a	70.6%	n/a	n/a	70.6%
<b>QPI 11</b> - Proportion of patients with epithelial ovarian cancer who undergo genetic testing.	<b>90%</b>	2019/20	88.9%	88.0%	87.5%	93.9%	76.7%	92.6%	87.9%
		2018/19	80.0%	95.0%	78.6%	81.8%	83.8%	67.9%	80.6%
		2017/18	45.0%	31.6%	67.9%	70.4%	82.1%	45.5%	58.6%

Quality Performance Indicator (QPI)	Performance by NHS Board								
	Target	Year	AA	FV	Lan	NG	SG	Clyde	WoS
<b>QPI 12(i)</b> - Proportion of patients with epithelial ovarian cancer who die within 30 days of surgery.	<5%	2019/20	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		2018/19	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.7%
		2017/18	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.7%
<b>QPI 13:</b> Proportion of patients diagnosed with ovarian cancer who are consented* for a clinical trial / research study.	15%	2020	60.9%	20.0%	76.5%	33.6%		44.6%	
		2019	28.3%	6.7%	21.6%	20.8%		20.7%	
		2018	36.2%	30.3%	75.0%	49.0%		49.8%	

## Conclusions and Action Required

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

The QPI results indicate that overall, the quality of ovarian cancer services across WoS Boards is excellent, particularly in relation to CT or MRI prior to commencing treatment, complete pathology reporting, histological diagnosis prior to starting chemotherapy, achieving no residual disease following surgery (or delayed surgery following chemotherapy) for advanced disease, no 30 day mortality following surgery and equity of access to clinical trials across the region. However, there remains room for further service improvement around surgery for advanced disease and referral for genetic testing.

Where QPI targets were not met, the majority of NHS Boards have provided detailed commentary. In the main these indicate valid clinical reasons or that, in some cases, patient choice or co-morbidities have influenced patient management.

There are a number of actions required as a consequence of this assessment of performance against the agreed criteria.

### **Actions:**

#### *QPI 10 – Surgery for Advanced Disease*

- The MCN will carry out a further more detailed review to establish if any trends are identified and if further action is required.

#### *QPI 11: Genetic Testing in Non-Mucinous Epithelial Ovarian Cancer*

- All Boards to consider whether the Lanarkshire model of offering patients genetic testing when they receive their diagnosis could be adopted to promote improvement in this area.

#### *QPI 13 - Clinical Trial Access*

- MCN to explore in conjunction with FV the reasons for the lower trials recruitment rates and establish if any improvement action is required.

A summary of actions for each NHS Board has been included within the Action Plan templates in the Appendix.

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



## **1. Introduction**

This report presents an assessment of performance of West of Scotland (WoS) Gynaecology Services relating to patients diagnosed with ovarian cancer in the region between 01 October 2019 and 30 September 2020. These audit data underpin much of the regional development/service improvement work of the Managed Clinical Network (MCN) and regular reporting of activity and performance is a fundamental requirement of an MCN to assure the quality of care delivered across the region.

Twelve months of data were measured against v4.0 of the Ovarian Cancer Quality Performance Indicators (QPIs) which were implemented for patients diagnosed on or after 01 October 2020. This was the eighth consecutive year of analysis following the initial Healthcare Improvement Scotland (HIS) publication of Ovarian Cancer QPIs in 2013<sup>1</sup>.

## **2. Background**

The effective management of these patients relies on well co-ordinated delivery of treatment and care, requiring close collaboration of professionals from a range of specialties. Treatment and care for gynaecological cancer patients is delivered by a single regional multi-disciplinary team (MDT) comprising of professionals from a range of clinical specialities across the region. Complex gynaecological malignancy often requires a multi-modality approach and surgery remains a key component of effective curative management.

The standard treatments for ovarian cancer in Scotland are:

- Primary surgery followed by adjuvant chemotherapy.
- Primary chemotherapy followed by delayed primary surgery.
- Primary chemotherapy.

### **2.1 National Context**

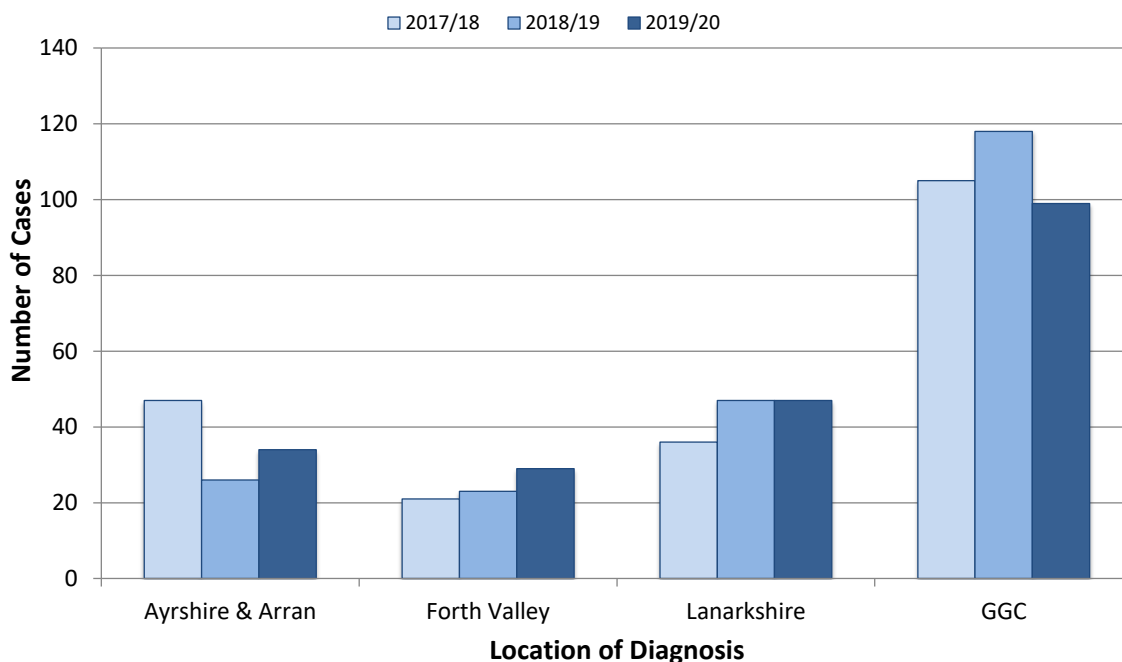
Ovarian cancer is the sixth most commonly diagnosed malignancy in Scottish women with a relative frequency of around 3.4% of all female cancers<sup>3</sup>. There has been an overall decrease in the incidence of ovarian cancer in the past ten years of 15%.

Latest ISD figures show a fall in mortality in ovarian cancer patients of 16% over the last 10 year period, with corresponding improvements in 5 year survival; approximately 46% of patients are now surviving at least five years after diagnosis, compared to around 31% of those diagnosed between 1983-1987<sup>3</sup>.

## 2.2 West of Scotland Context

There were 209 new diagnoses of ovarian cancer captured by audit in the WoS in Year 7. Distribution by location of diagnosis is shown below in Figure 1.

Figure 1: Number of patients diagnosed with ovarian cancer by location of diagnosis



	AA	FV	Lan	GGC	WoS
Year 5_2017/18	47	21	36	105	209
Year 6_2018/19	26	23	47	118	214
Year 7_2019/20	34	29	47	99	209

## FIGO Stage

Stage of disease is an important prognostic factor and knowledge of the stage distribution allows the MCN to understand implications of current and future management of patients with ovarian cancer. Furthermore, it facilitates greater understanding of disease progression and outcomes through survival analyses therefore it is important that this information is available and recorded accurately.

Figure 2: Distribution of FIGO stage for epithelial ovarian cancer patients.

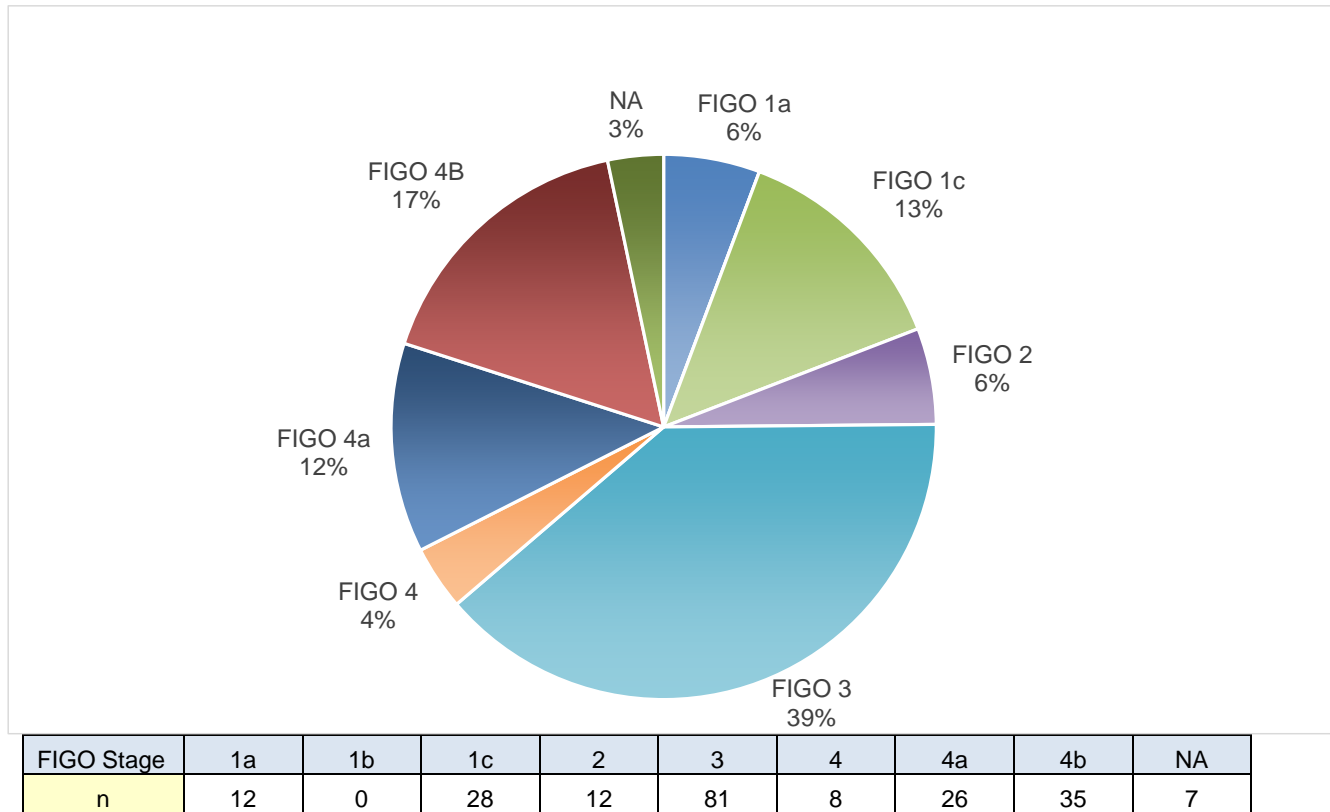
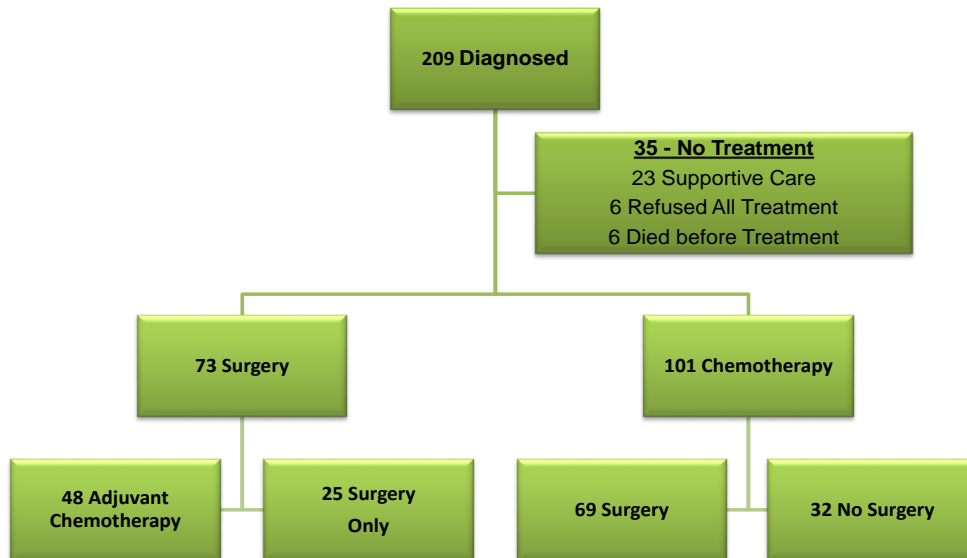


Figure 2 illustrates that 80.9% of patients in the WoS presented with advanced stage disease (FIGO 2 or above).

## Treatment

The main treatments for ovarian cancer are surgery and chemotherapy. Figure 3 illustrates the treatment regimens for patients diagnosed in Year 7.

Figure 3: Treatment regimens for patients diagnosed with epithelial ovarian cancer between October 19 and September 20.



## 3. Methodology

Further detail on the audit and analysis methodology and data quality is available in the meta data within appendix 1.

#### **4. Performance against Quality Performance Indicators (QPIs)**

Results for each QPI are shown in detail in the main report and illustrate Board performance against each target and overall WoS performance for each performance indicator. Results are presented graphically and the accompanying tabular format also highlights any missing data and its possible effect on any of the measured outcomes.

Data (both graphically and in tabular format) are presented by location of diagnosis or treatment, with some criteria given as an overall WoS representation. Specific regional and NHS Board actions have been identified to address issues highlighted through the data analysis.

Where the number of cases meeting the denominator criteria for any indicator is between one and four, the percentage calculation has not been shown on 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 a dash (-). Any commentary provided by NHS Boards relating to the impacted indicators will however be included as a record of continuous improvement.

## QPI 2 - Extent of disease assessed by CT or MRI prior to treatment.

For women diagnosed with ovarian cancer it is necessary to fully image the pelvis and abdomen prior to starting any definitive treatment in order to establish the extent of disease and minimise unnecessary treatment. The target for this QPI is set at 95%. The tolerance allowed by the target reflects the fact that CA125 assessment and ultrasound scan does not always raise suspicion of cancer<sup>1</sup>.

<b>QPI Title:</b>	Patients with epithelial ovarian cancer should have their stage of disease assessed by CT or MRI prior to treatment.
<b>Numerator:</b>	Number of patients with epithelial ovarian cancer having a CT scan or MRI of the abdomen and pelvis carried out prior to starting treatment.
<b>Denominator:</b>	All patients with epithelial ovarian cancer.
<b>Exclusions:</b>	Patients who decline to undergo investigation. Patients presenting for surgery as an emergency.
<b>Target:</b>	95%

Figure 4: Proportion of patients with epithelial ovarian cancer having a CT scan or MRI of the abdomen and pelvis performed prior to starting definitive treatment.

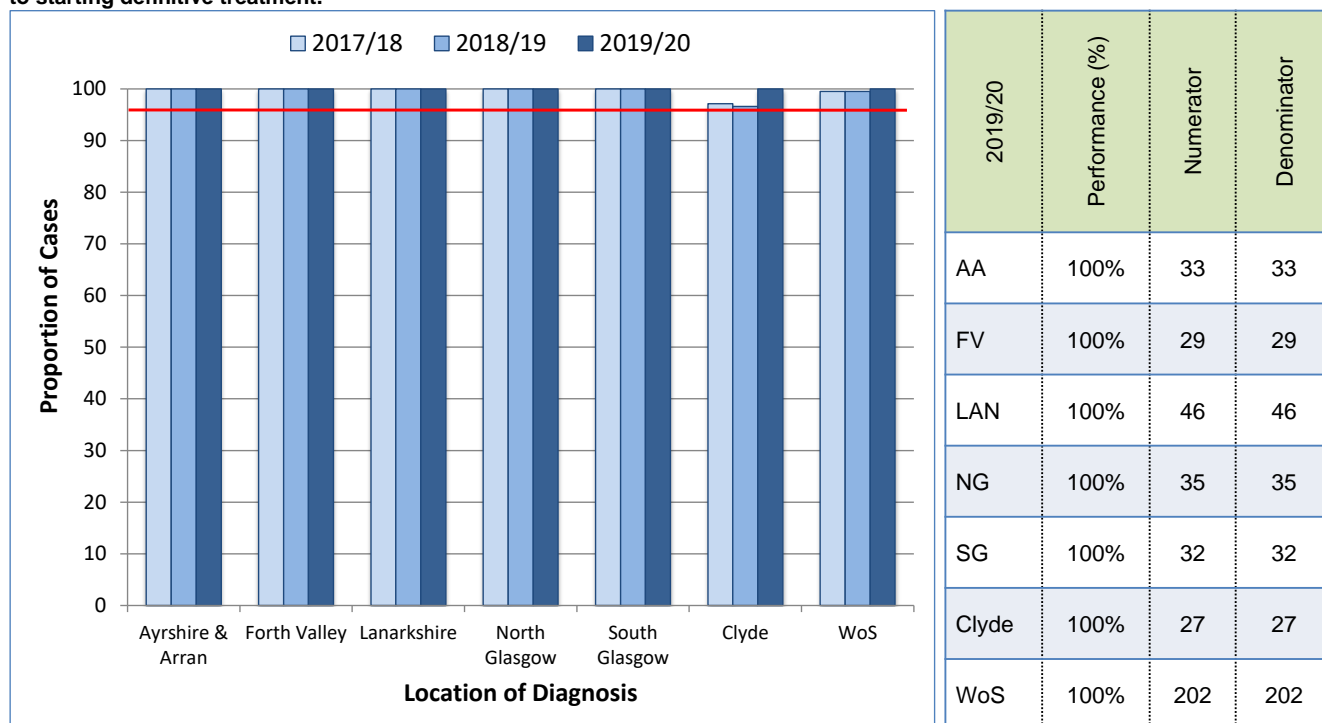


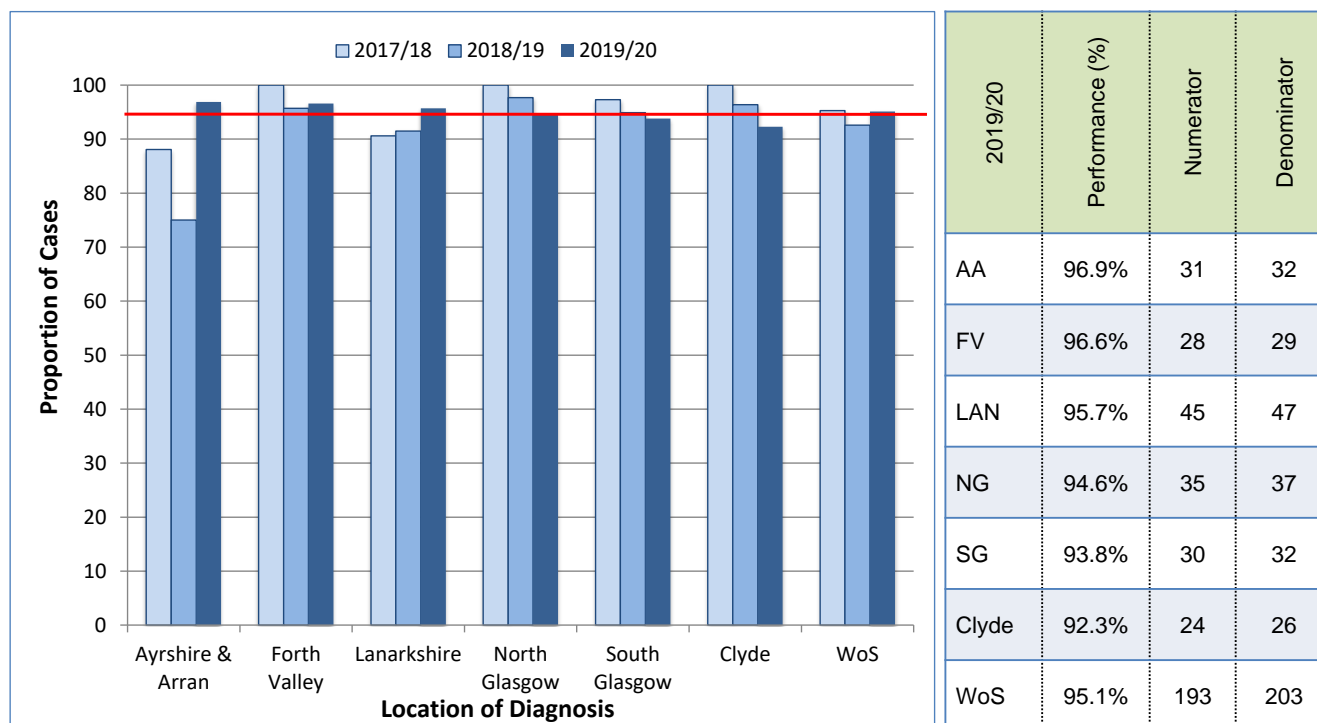
Figure 4 demonstrates excellent results across all Boards over the three years of reporting with all units consistently achieving the QPI target year on year; overall regional performance in the WoS in Year 7 was noted as 100%.

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

Effective MDT working is considered integral to provision of high quality ovarian cancer care, facilitating a cohesive treatment-planning function and ensuring treatment and care provision is individualised to patient needs. QPI 3 states that 95% of patients should be discussed at the MDT prior to definitive treatment. The tolerance allows for patients who need treatment urgently<sup>1</sup>.

<b>QPI Title:</b>	Patients with epithelial ovarian cancer should be discussed by a MDT prior to definitive treatment.
<b>Numerator:</b>	Number of patients with epithelial ovarian cancer discussed at the MDT before definitive treatment.
<b>Denominator:</b>	All patients with epithelial ovarian cancer
<b>Exclusions:</b>	Patients who died before first treatment.
<b>Target:</b>	95%

Figure 5: Proportion of patients with epithelial ovarian cancer who are discussed at a MDT meeting before definitive treatment.



Following formal review QPI 3 was revised to measure discussion at a 'regional MDT' and to exclude patients with a RMI of <200. Due to new fields being required to measure the revised QPI, results cannot be reported until next year. V3 measurability has been used in Figure 5.

Overall the WoS achieved 95.1% which meets the 95% QPI target. South Glasgow and Clyde narrowly missed the target with performance of 93.8% and 92.3% NHS GGC reviewed cases not meeting the QPI and reasons provided for not meeting the target included; patients receiving emergency treatment and patients with a RMI of less than 200.

## **Location of Surgery**

QPIs 4, 6, 10(ii) and 10(iii) are reported by location of surgery rather than by location of diagnosis. Surgical management of ovarian cancer is provided by gynaecological oncologists working in the regional specialist surgical centre in Glasgow Royal Infirmary (represented by North Glasgow on charts). Some patients with an RMI of less than 200, i.e. cancer is not suspected pre-operatively, may receive surgery in their local hospital but are subsequently diagnosed with epithelial ovarian cancer when post-operative pathology is available.

In Year 7 142 patients (67.9%) underwent surgery. Hospital of surgery is noted below.

- 116 cases in regional specialist centre (GRI)
- 15 cases in NHSGGC (not specialist surgical centre)
- 4 cases in NHS Lanarkshire
- 3 cases in NHS Forth Valley
- 4 cases in NHS Ayrshire & Arran

Please note that the number of operations carried out in local hospitals is small therefore comparisons of percentages should be made with caution.

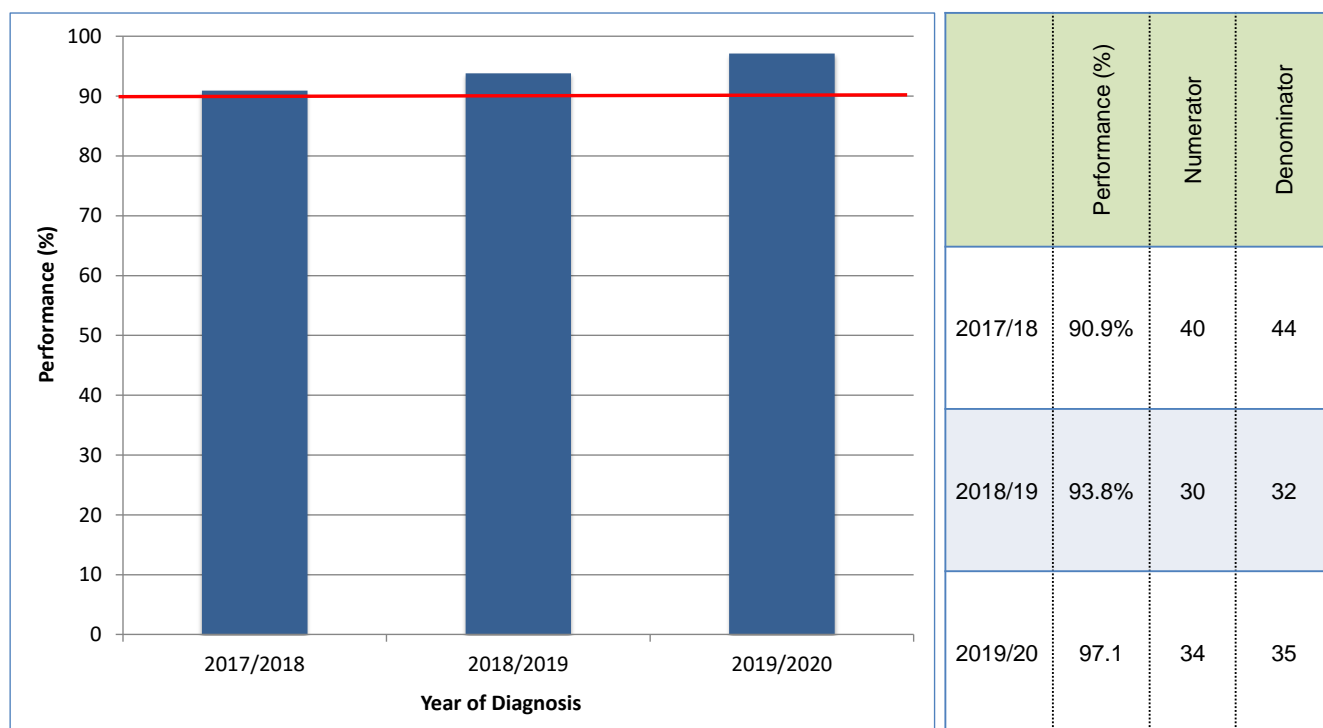


#### QPI 4 - Patients with early stage disease have an adequate staging operation

Surgery is considered the initial treatment of choice for women with early stage epithelial ovarian cancer and will typically include TAH, BSO and omentectomy and may also involve assessment by palpation, visualisation and/or biopsy as indicated, of peritoneal surfaces, appendix and bowel mesentery and sampling of pelvic and para-aortic lymph nodes<sup>1</sup>.

<b>QPI Title:</b>	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.
<b>Numerator:</b>	Number of early stage (FIGO Stage 1) epithelial ovarian cancer patients having primary surgery involving TAH, BSO, omentectomy and washings.
<b>Denominator:</b>	All early stage (FIGO Stage 1) epithelial ovarian cancer patients undergoing primary surgery.
<b>Exclusions:</b>	Patients having fertility conserving surgery. Patients presenting for emergency surgery
<b>Target:</b>	90%

Figure 6: Proportion of early stage (FIGO Stage 1) epithelial ovarian cancer patients having primary surgery involving TAH, BSO, omentectomy and washings.



Due to the small numbers meeting the denominator criteria in each year of analysis individual board results cannot be presented therefore Figure 6 shows WoS yearly results.

Of the 35 patients with early stage epithelial ovarian cancer patients who underwent primary surgery, 34 had an adequate staging operation involving TAH, BSO, omentectomy and washings, resulting in a performance of 97.1% against the 90% QPI target.

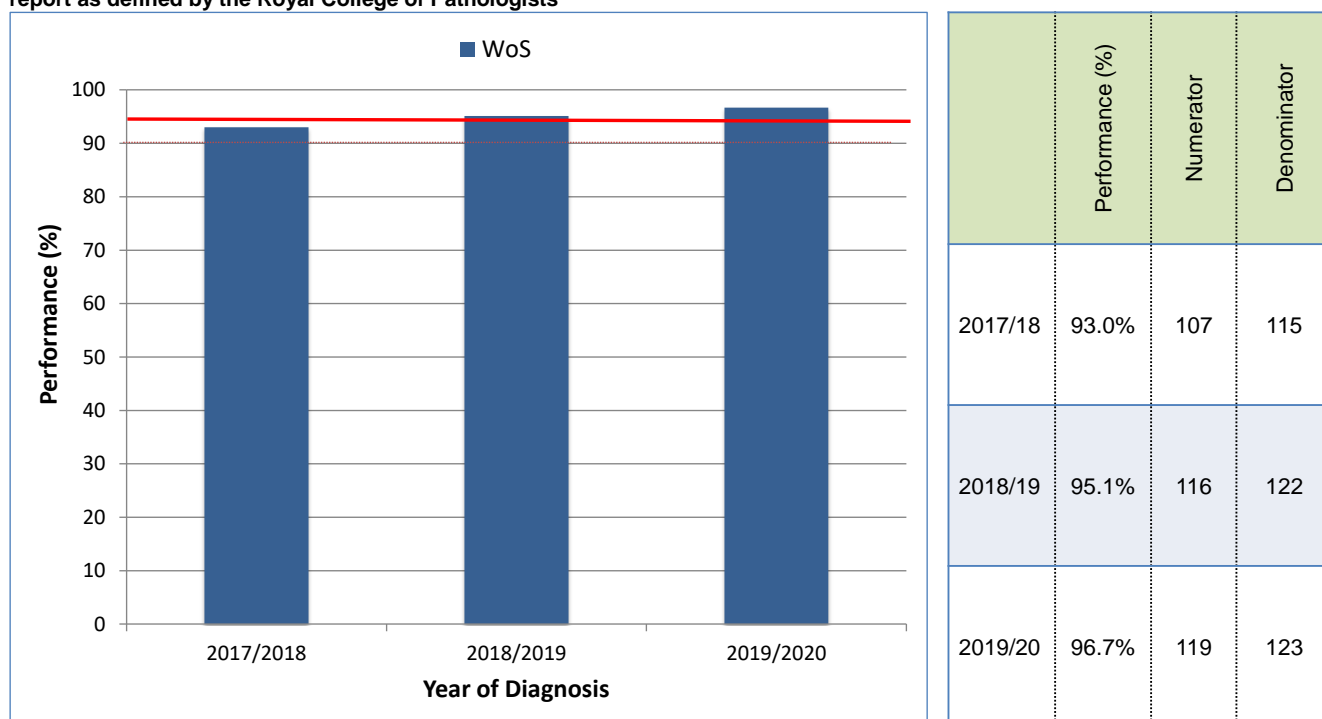
At unit level the majority of cases were operated on in North Glasgow who achieved 100% against the 90% target with all 18 patients having an adequate staging operation. The one case not meeting the target was reviewed and malignancy was not suspected at time of surgery.

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

Histopathological reporting provides prognostic indicators which inform treatment planning for women diagnosed with epithelial ovarian cancer. The use of datasets improves the completeness of data in pathology reports and the Royal College of Pathologists has agreed a minimum data set for reporting ovarian cancer<sup>1</sup>. The target for this QPI has been set at 90% and the tolerance within the target is designed to account for situations where it is not possible to report all components of the dataset due to poor quality of specimen.

<b>QPI Title:</b>	Histopathology reports relating to pelvic clearance surgery for patients with epithelial ovarian cancer contain all necessary information to inform treatment decision making.
<b>Numerator:</b>	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.
<b>Denominator:</b>	All patients with epithelial ovarian cancer undergoing definitive cytoreductive surgery.
<b>Exclusions:</b>	No Exclusions.
<b>Target:</b>	95%

Figure 7: Proportion of patients with epithelial ovarian cancer undergoing pelvic clearance surgery having a complete pathology report as defined by the Royal College of Pathologists



Following formal review the QPI target increased from 90% to 95%.

Due to the majority of operations taking place in the centre (North Glasgow) the numbers for other individual units are low therefore Figure 7 shows WoS yearly results. Overall in the WoS in Year 7, 96.7% of patients with epithelial ovarian cancer undergoing definitive cytoreductive surgery had a complete pathology report which meets the new 95% QPI target.

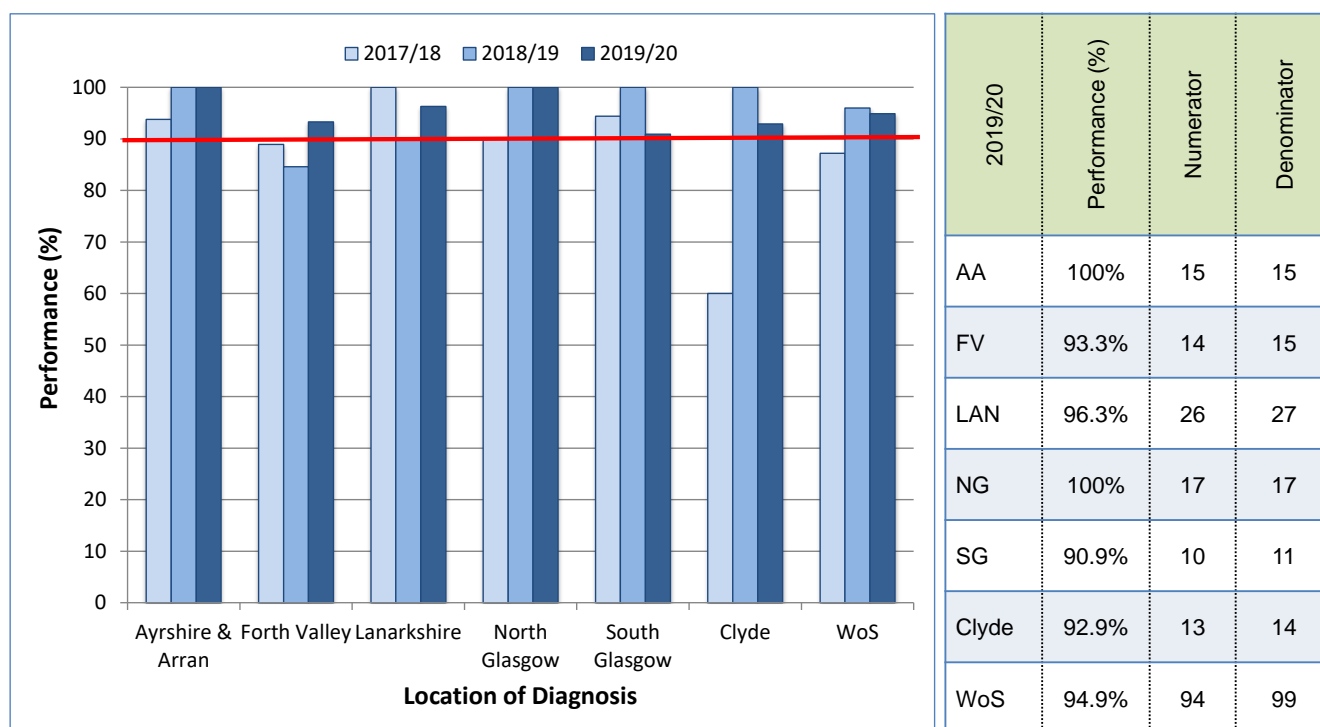
NHS Forth Valley did not meet the QPI target however numbers were very low and equated to one patient. The clinical lead reviewed the case that missed the target and FIGO stage was the only data item within the report that was missing.

### QPI 7 - Histological diagnosis prior to starting chemotherapy

QPI 7 looks at the proportion of patients who have a histological diagnosis prior to starting chemotherapy. The target for this QPI is set at 80%. The tolerance for this level reflects that not all patients are suitable for histological confirmation of disease, e.g. where no targetable lesion is identified on imaging and the patient unsuitable for general anaesthetic/laparoscopy<sup>1</sup>.

<b>QPI Title:</b>	Patients with epithelial ovarian cancer should have a histological diagnosis of their cancer prior to starting chemotherapy.
<b>Numerator:</b>	Number of patients who have a diagnosis of epithelial ovarian cancer confirmed by histology prior to starting chemotherapy.
<b>Denominator:</b>	All patients with epithelial ovarian cancer undergoing chemotherapy.
<b>Exclusions:</b>	No Exclusions
<b>Target:</b>	80%

Figure 8: Proportion of patients with epithelial ovarian cancer having a histological diagnosis prior to starting chemotherapy.



Following formal review the QPI target was increased from 80% to 90% to further drive improvement for a confirmed histological diagnosis prior to starting chemotherapy.

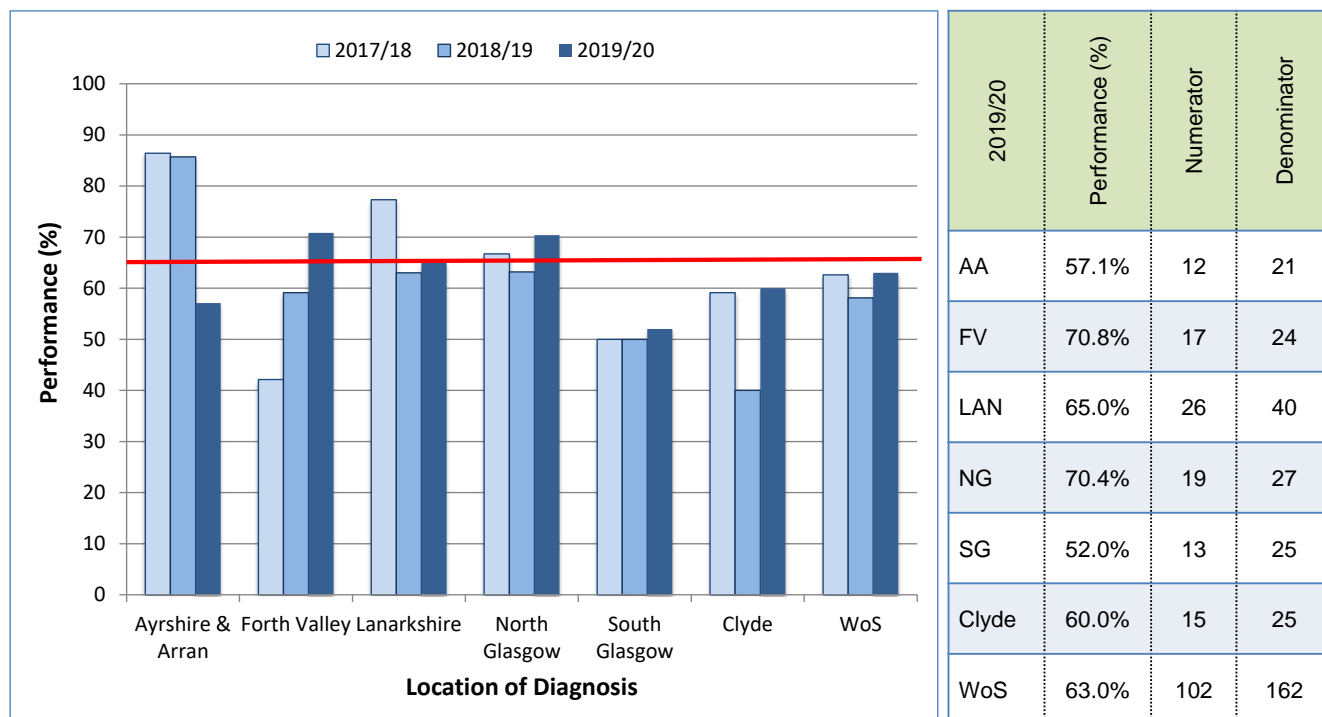
Performance across the WoS was 94.9% against the new 90% QPI target with 94 of 99 patients having their diagnoses of ovarian cancer confirmed by histology prior to starting chemotherapy. All units achieved the QPI target.

## QPI 10 – Surgery for Advanced Disease

Evidence shows that most women with ovarian cancer present with advanced disease. Surgery along with chemotherapy remains the optimal treatment for women with advanced ovarian cancer<sup>1</sup>.

<b>QPI 10(i):</b>	Patients with advanced epithelial ovarian cancer (FIGO Stage 2 or higher) should undergo primary or delayed surgery and should achieve no macroscopic residual disease.
<b>Numerator:</b>	Number of patients with advanced epithelial ovarian cancer (FIGO Stage 2 or higher) undergoing surgery (primary or delayed).
<b>Denominator:</b>	All patients with advanced epithelial ovarian cancer (FIGO Stage 2 or higher)
<b>Exclusions:</b>	No Exclusions
<b>Target:</b>	65%

Figure 10: Proportion of patients with advanced epithelial ovarian cancer (FIGO Stage 2 or higher) undergoing surgery.



Following formal review the target for QPI 10(i) was raised from 60% to 65%.

Overall in the WoS, 63% of patients with advanced epithelial ovarian cancer underwent either primary or delayed surgery which is marginally below the 65% QPI target. Three of the six units met the target with performance ranging from 52% in South Glasgow to 70.8% in NHS Forth Valley.

NHS Ayrshire & Arran and NHSGGC reviewed all cases not meeting the QPI and valid clinical reasons were provided. Reasons included patients who were clinically unwell, patients with significant disease, MDT decision, patient choice or death prior to surgery.

### Action Required:-

- The MCN will carry out a further more detailed review to establish if any trends are identified and if further action is required.

The target for both QPI 10(ii) and 10(iii) was raised from 50% to 60% at formal review.

QPI 10 (ii) looks at those patients with advanced epithelial cancer who underwent primary surgery where no residual disease is achieved. Due to the majority of operations taking place in the centre the numbers for other individual units are low therefore individual Board results cannot be presented. WoS performance against this QPI was 73.7% (28 out of 38 cases) against the 60% QPI target.

The third part of the QPI looks at those patients with advanced epithelial ovarian cancer who underwent delayed primary surgery after chemotherapy. Forty six patients underwent delayed primary surgery with 30 achieving no residual disease; this equates to 65.2% and meets the 60% QPI target. All cases were operated on at the centre (North Glasgow).

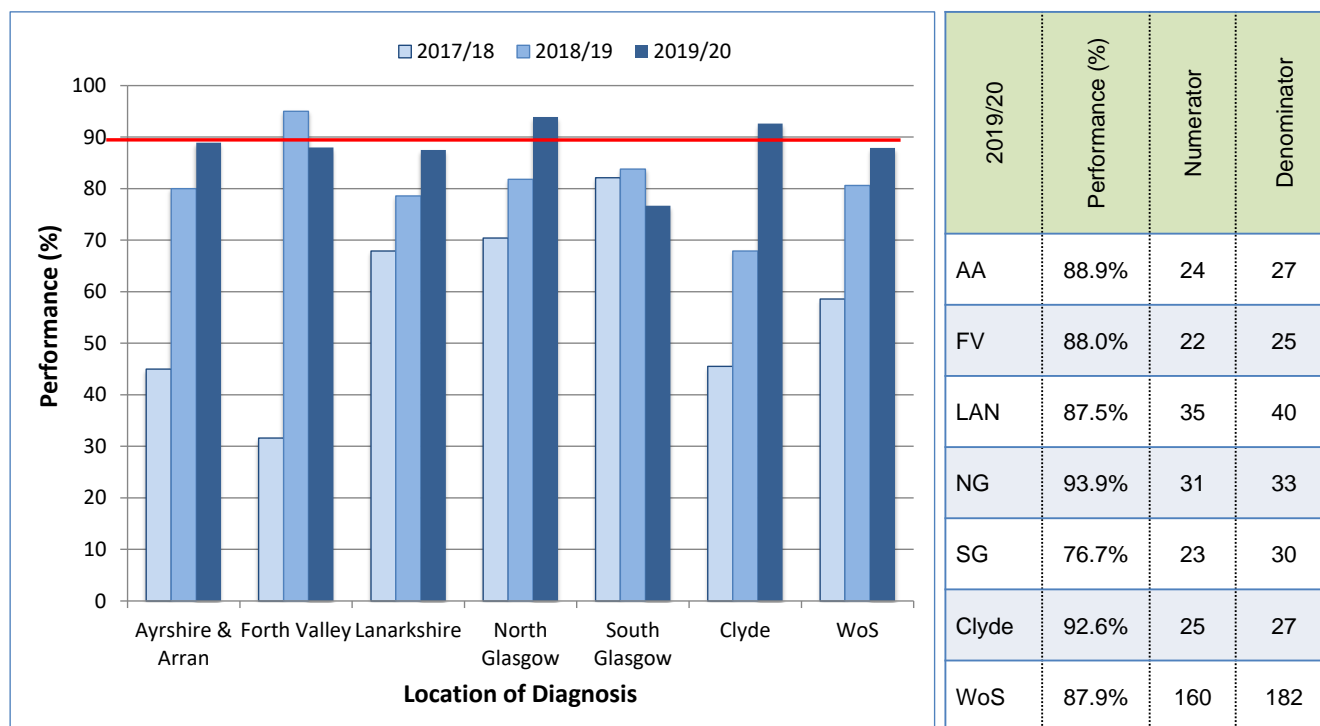
### QPI 11: Genetic Testing in Non-Mucinous Epithelial Ovarian Cancer.

Genetic testing should be performed in patients with ovarian cancer where the combined risk of BRCA1 and BRCA2 mutation is  $\geq 10\%$ . All women with non-mucinous ovarian cancer should be offered BRCA1 and BRCA2 mutation testing.

Access to genetic testing is very difficult to measure accurately therefore uptake is utilised within this QPI as a proxy for access. Although it will not provide an absolute measure of patient access to genetic testing it will give an indication across NHS Boards and highlight any areas of variance which can then be further examined.

<b>QPI Title:</b>	Patients with ovarian cancer should have access to genetic testing.
<b>Numerator:</b>	Number of patients with non-mucinous epithelial ovarian cancer who undergo genetic testing.
<b>Denominator:</b>	All patients with non-mucinous epithelial ovarian cancer.
<b>Exclusions:</b>	Patients with low grade serous disease.
<b>Target:</b>	90%

Figure 11: Proportion of patients with epithelial ovarian cancer who undergo genetic testing.



Following formal review QPI 11 was changed in line with guidance and to be not specific to only BRCA testing. The clinical cohort changed to non-mucinous epithelial ovarian cancer and the exclusion removed for mucinous tumours.

Only two units achieved the 90% target for patients with epithelial ovarian cancer undergoing genetic testing although improvement was noted in the majority of Boards compared to the previous year. All cases not meeting the QPI were reviewed by Boards and reasons provided included patients who declined genetic testing, patients that died before genetic testing could be discussed and cases that were not offered genetic testing after diagnosis. NHS Lanarkshire added that to further improve this

result genetic testing is now being offered to patients when they receive their diagnosis as opposed to when they are referred to oncology.

**Action Required:**

- All Boards to consider whether the Lanarkshire model of offering patients genetic testing when they receive their diagnosis could be adopted to promote improvement in this area.

## QPI 12 – 30 Day Mortality after Treatment for Ovarian Cancer

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

<b>QPI Title:</b>	30 day mortality following treatment for ovarian cancer.
<b>Numerator:</b>	Number of patients with epithelial ovarian cancer who die within 30 days of treatment.
<b>Denominator:</b>	All patients with epithelial ovarian cancer who undergo treatment. .
	a) Surgery
	b) Primary/Palliative Chemotherapy
	c) Adjuvant chemotherapy
<b>Exclusions:</b>	No exclusions.
<b>Target:</b>	<5%

Overall in the WoS there were no deaths within 30 days of surgery in patients diagnosed with epithelial ovarian cancer.

With regards to mortality following SACT, a decision has been taken nationally to move to a new generic QPI (30-day mortality for SACT) applicable across all tumour types. This new QPI will use CEPAS (Chemotherapy ePrescribing and Administration System) data to measure SACT mortality to ensure that the QPI focuses on the prevalent population rather than the incident population. The measurability for this QPI is still under development to ensure consistency across the country and it is anticipated that performance against this measure will be reported in the next audit cycle. In the meantime all deaths within 30 days of SACT will continue to be reviewed at a NHS Board level.



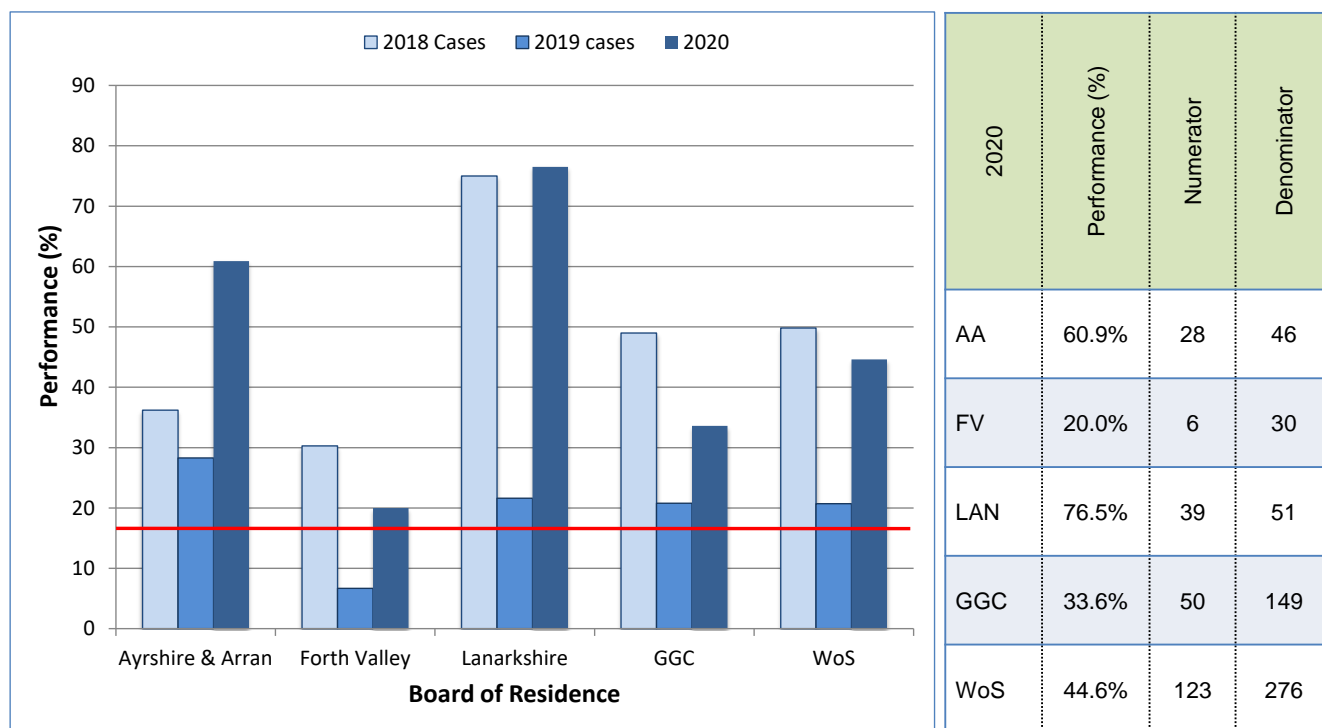
## Clinical Trial Access

Clinical trials are necessary to demonstrate the efficacy of new therapies and other interventions. Furthermore, evidence suggests improved patient outcomes when hospitals are actively recruiting patients into clinical trials<sup>1</sup>. Data definitions and measurability criteria to accompany the Clinical Trial QPI are available from the HIS website<sup>1</sup>.

The clinical trials QPI will be measured utilising Scottish Cancer Research Network (SCRN) data and ISD incidence data, as is the methodology currently utilised by the Chief Scientist Office (CSO) and National Cancer Research Institute (NCRI). Utilising SCRN data allows for comparison with CSO published data and ensures capture of all clinical trials recruitment, not solely first line treatment trials, as contained in the clinical audit data. Given that a significant proportion of clinical trials are for relapsed disease this is felt to be particularly important in driving quality improvement. This methodology utilises incidence as a proxy for all patients with cancer. This may slightly over, or underestimate, performance levels, however this is an established approach currently utilised by NHS Scotland<sup>1</sup>.

<b>QPI Title:</b>	All patients should be considered for participation in available clinical trials/research studies wherever eligible.
<b>Numerator:</b>	Number of patients diagnosed with ovarian cancer consented for a clinical trial/research study.
<b>Denominator:</b>	All patients with diagnosed with ovarian cancer.
<b>Exclusions:</b>	No exclusions.
<b>Target:</b>	15%

Figure 12: Proportion of patients diagnosed with ovarian cancer who are consented for a clinical trial / research study in 2020.



Following formal review the Clinical Trials Access QPI was updated to measure the number of patients consented for participation in a clinical trial rather than only those who are enrolled. There are a number of patients who undergo screening but do not proceed to enrolment for various reasons, e.g. they do

not have the mutation required for entry on to the trial. The denominator for this QPI is identified by using a 5 year average of Scottish Cancer Registry data.

All Boards achieved the 15% target for patients consenting for clinical trials, and performance for ovarian cancer was much higher than many other tumour groups. However it was evident that recruitment rates are lower in NHS Forth Valley.

#### **Action Required**

- MCN to explore in conjunction with FV the reasons for the lower trials recruitment rates and establish if any improvement action is required.

#### **5. Next Steps**

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 summary of actions for each NHS Board has been included within the Action Plan templates in Appendix I.

## **Acknowledgement**

This report has been prepared using clinical audit data provided by the following NHS Boards in the WoSCAN area:

NHS Ayrshire & Arran  
NHS Forth Valley  
NHS Greater Glasgow and Clyde  
NHS Lanarkshire

We would like to thank all members and active participants in the cancer network for their continued support of the MCN, and the many hospitals that are committed to making the audit succeed. We also acknowledge the efforts of the clinical effectiveness staff, nurses, and other service users for their work in ensuring the data are available to enable analysis to take place each year. Without their considerable efforts this level of progress would not be possible.

## Abbreviations

<b>BWoSCC</b>	Beatson West of Scotland Cancer Centre
<b>BSO</b>	Bilateral Salpingo-Oophorectomy
<b>CT</b>	Computed Tomography
<b>eCASE</b>	Electronic Cancer Audit Support Environment
<b>FIGO</b>	Federation of Gynaecological Oncologists
<b>GRI</b>	Glasgow Royal Infirmary
<b>HIS</b>	Healthcare Improvement Scotland
<b>ISD</b>	Information Services Division
<b>MCN</b>	Managed Clinical Network
<b>MDT</b>	Multidisciplinary Team
<b>MRI</b>	Magnetic resonance imaging
<b>NCQSG</b>	National Cancer Quality Steering Group
<b>NHSGGC</b>	NHS Greater Glasgow and Clyde
<b>PET</b>	Positron Emission Tomography
<b>QPI</b>	Quality Performance Indicator
<b>RCAG</b>	Regional Cancer Advisory Group
<b>RMI</b>	Risk of Malignancy Index
<b>TAH</b>	Total Abdominal Hysterectomy
<b>WoS</b>	West of Scotland
<b>WoSCAN</b>	West of Scotland Cancer Network

## References

1. Healthcare Improvement Scotland. Ovarian Cancer Quality Performance Indicators, August 2013 [Accessed on: 17<sup>th</sup> December 2021] Available at: [http://www.healthcareimprovementscotland.org/our\\_work/cancer\\_care\\_improvement/cancer\\_qpis/quality\\_performance\\_indicators.aspx](http://www.healthcareimprovementscotland.org/our_work/cancer_care_improvement/cancer_qpis/quality_performance_indicators.aspx)
2. Information Services Division. Cancer in Scotland, June 2004 (updated July 2020) [Accessed on: 17<sup>th</sup> December 2021]. Available at: <http://www.isdscotland.org/Health-Topics/Cancer/Cancer-Statistics/>
3. Information Services Division, Cancer Statistics, Summary statistics for female genital organ cancers. [Accessed on: 17<sup>th</sup> December 2021]. Available at: <http://www.isdscotland.org/Health-Topics/Cancer/Cancer-Statistics/Female-Genital-Organ/>

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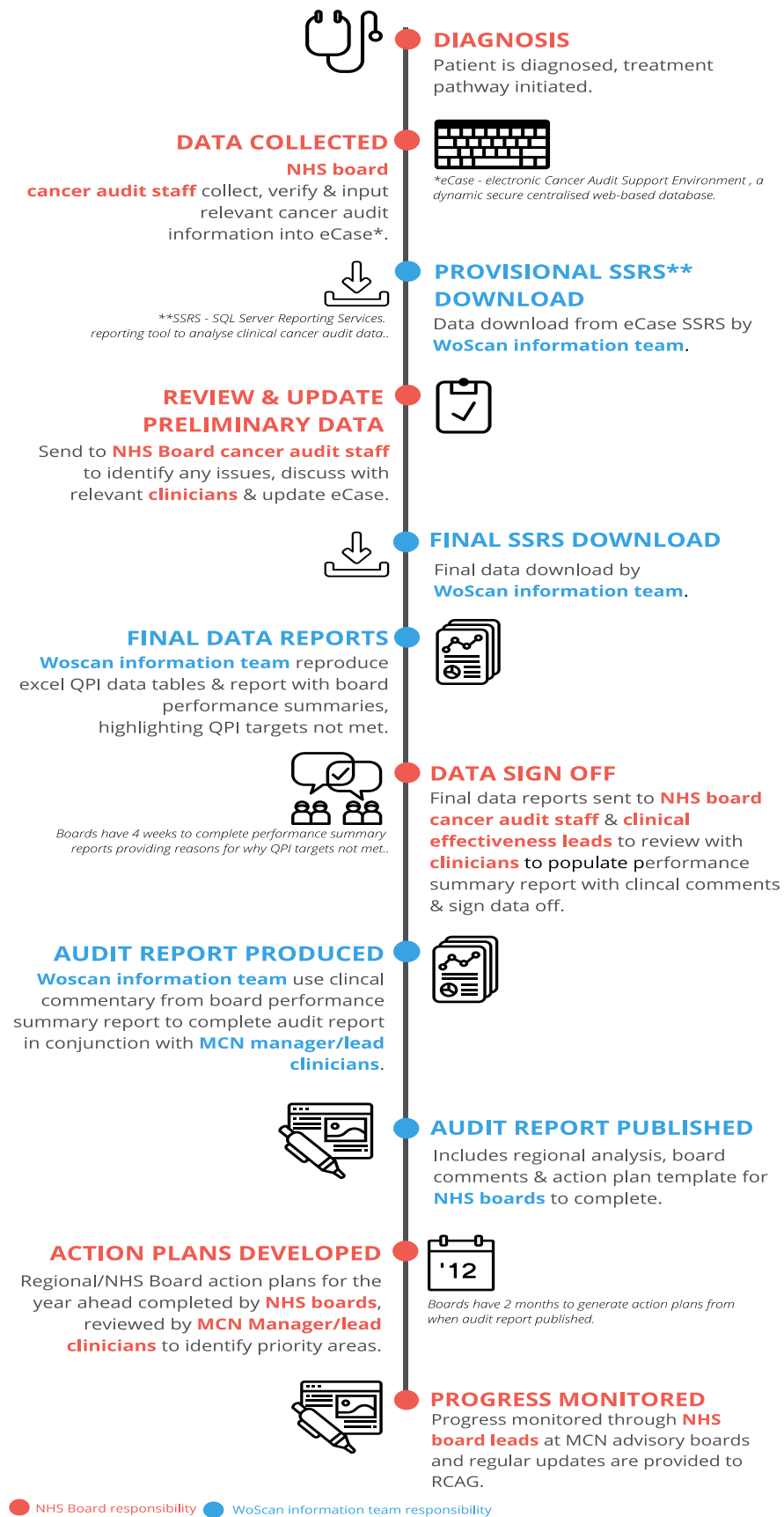
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## Appendix 1: Meta Data

Report Title	Cancer Audit Report: Ovarian Cancer Quality Performance Indicators																								
Time Period	Patients diagnosed between 01 October 2019 to 30 September 2020																								
Data Source	Cancer Audit Support Environment (eCASE). A secure centralised web-based database which holds cancer audit information in Scotland.																								
Data extraction date	2200 hrs on 18 August 2021																								
Methodology	<p>Analysis was performed centrally for the region by the WoSCAN Information Team. The timescales agreed took into account the patient pathway to ensure that a complete treatment record was available for the majority of patients.</p> <p>Initial results were provided to Boards to check for inaccuracies, inconsistencies or obvious gaps and a subsequent download taken upon which final analysis was carried out.</p> <p>The final data analysis was disseminated for NHS Board verification in line with the regional audit governance process to ensure that the data was an accurate representation of service in each area. Please see info graphic in appendix 2 for a more detailed look at the reporting process.</p>																								
Data Quality	<p>Audit data completeness can be assessed by estimating the proportion of expected patients that have been identified through audit compared to the number reported by the National Cancer registry (provided by ISD, National Services Division); this is known as case ascertainment. Figures should only be used as a guide as it is not possible to compare the same exact cohort from each data source. Note that a 5 year average is taken for cancer registry cases to take account of annual fluctuations in incidence within NHS Boards.</p> <p>Ovarian Cancer</p> <table border="1"> <thead> <tr> <th>Health Board of diagnosis</th> <th>(01/10/2019-30/09/2020) Audit</th> <th>Cancer Reg 2015-19*</th> <th>Case Ascertainment</th> </tr> </thead> <tbody> <tr> <td>Ayrshire &amp; Arran</td> <td>34</td> <td>44</td> <td>77.3%</td> </tr> <tr> <td>Forth Valley</td> <td>29</td> <td>27</td> <td>107.4%</td> </tr> <tr> <td>GGC</td> <td>99</td> <td>152</td> <td>65.1%</td> </tr> <tr> <td>Lanarkshire</td> <td>47</td> <td>54</td> <td>87.0%</td> </tr> <tr> <td>WoS Total</td> <td>209</td> <td>277</td> <td>75.5%</td> </tr> </tbody> </table>	Health Board of diagnosis	(01/10/2019-30/09/2020) Audit	Cancer Reg 2015-19*	Case Ascertainment	Ayrshire & Arran	34	44	77.3%	Forth Valley	29	27	107.4%	GGC	99	152	65.1%	Lanarkshire	47	54	87.0%	WoS Total	209	277	75.5%
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## Appendix 2: Cancer Audit Timeline





## Appendix 1: Action / Improvement Plans

### WoSCAN

#### Action / Improvement Plan – Ovarian Cancer

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

<b>KEY (Status)</b>	
<b>1</b>	Action fully implemented
<b>2</b>	Action agreed but not yet implemented
<b>3</b>	No action taken (please state reason)

<b>No</b>	<b>Action Required</b>	<b>NHS Board Action Taken</b>	<b>Timescales</b>		<b>Lead</b>	<b>Status (see key)</b>
			<b>Start</b>	<b>End</b>		
	<i>Ensure actions mirror those detailed in Audit Report.</i>	Provide detailed outcome of clinical review, details of specific improvement action taken, or reasons why no action taken.	<i>Insert date</i>	<i>Insert date</i>	<i>Insert name of responsible lead for each action.</i>	<i>Insert No. from key above</i>
1.	<i>QPI 10 – Surgery for Advanced Disease</i> The MCN will carry out a further more detailed review to establish if any trends are identified and if further action is required. (Surgery)					
	<i>QPI 13 - Clinical Trial Access</i> MCN to explore in conjunction with FV the reasons for the lower trials recruitment rates and establish if any improvement action is required. (Clinical Trials)					

**NHS Ayrshire & Arran**  
**Action / Improvement Plan – Ovarian Cancer**

<b>NHS Board:</b>	NHS Ayrshire & Arran
<b>Action Plan Lead:</b>	
<b>Date:</b>	

<b>KEY (Status)</b>	
<b>1</b>	Action fully implemented
<b>2</b>	Action agreed but not yet implemented
<b>3</b>	No action taken (please state reason)

<b>No</b>	<b>Action Required</b>	<b>NHS Board Action Taken</b>	<b>Timescales</b>		<b>Lead</b>	<b>Status (see key)</b>
			<b>Start</b>	<b>End</b>		
	<i>Ensure actions mirror those detailed in Audit Report.</i>	Provide detailed outcome of clinical review, details of specific improvement action taken, or reasons why no action taken.	<i>Insert date</i>	<i>Insert date</i>	<i>Insert name of responsible lead for each action.</i>	<i>Insert No. from key above</i>
1.	<i>QPI 11: Genetic Testing in Non-Mucinous Epithelial Ovarian Cancer</i> All Boards to consider whether the Lanarkshire model could be adopted to promote improvement in this area. (Practice)					

**NHS Forth Valley**  
**Action / Improvement Plan – Ovarian Cancer**

<b>NHS Board:</b>	NHS Forth Valley
<b>Action Plan Lead:</b>	
<b>Date:</b>	

<b>KEY (Status)</b>	
<b>1</b>	Action fully implemented
<b>2</b>	Action agreed but not yet implemented
<b>3</b>	No action taken (please state reason)

<b>No</b>	<b>Action Required</b>	<b>NHS Board Action Taken</b>	<b>Timescales</b>		<b>Lead</b>	<b>Status (see key)</b>
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1.	<i>QPI 11: Genetic Testing in Non-Mucinous Epithelial Ovarian Cancer</i> All Boards to consider whether the Lanarkshire model could be adopted to promote improvement in this area. (Practice)					

## NHSGGC

### Action / Improvement Plan – Ovarian Cancer

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

KEY (Status)	
<b>1</b>	Action fully implemented
<b>2</b>	Action agreed but not yet implemented
<b>3</b>	No action taken (please state reason)

No	Action Required	NHS Board Action Taken	Timescales		Lead	Status (see key)
			Start	End		
	<i>Ensure actions mirror those detailed in Audit Report.</i>	Provide detailed outcome of clinical review, details of specific improvement action taken, or reasons why no action taken.	<i>Insert date</i>	<i>Insert date</i>	<i>Insert name of responsible lead for each action.</i>	<i>Insert No. from key above</i>
1.	QPI 11: Genetic Testing in Non-Mucinous Epithelial Ovarian Cancer All Boards to consider whether the Lanarkshire model could be adopted to promote improvement in this area. (Practice)					