

**West of Scotland Cancer Network**

**Breast Cancer  
Managed Clinical Network**



# **Audit Report**

## **Breast Cancer Quality Performance Indicators**

**Clinical Audit Data:  
01 January 2020 to 31 December 2020**

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# Breast Cancer Quality Performance Indicators

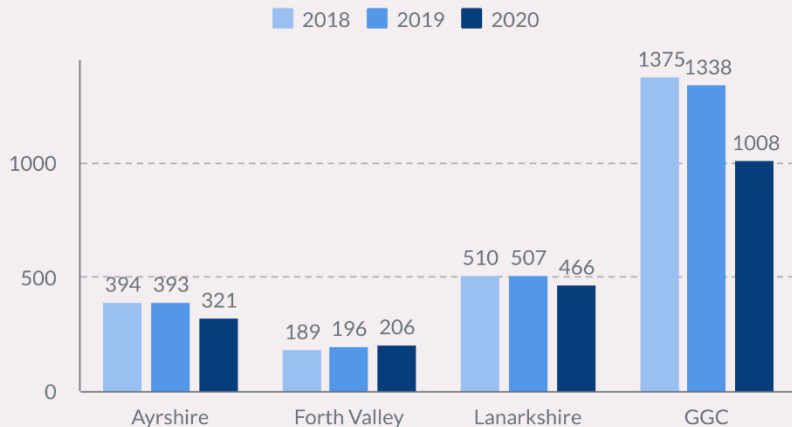
Patients Diagnosed: January 2020 - December 2020

**Number Diagnosed:**  
**2001**

**Case Ascertainment:**  
**80%**

**Median Age:**  
**63**

Number Of Cases Diagnosed by NHS Board



## QPI Performance

QPI Target	WoS Result	Met/Not Met
6(i)-Immediate Reconstruction Rate 20%	10.0%	✗
6(ii)-Immediate Reconstruction Rate within 6 weeks 90%	80.6%	✗
8(i)-Minimising Hospital Stay - Day Case 60%	77.3%	✓
8(ii)-Minimising Hospital Stay - 23 hour surgery 60%	85.2%	✓
9-HER2 Status for Decision Making 90%	79.9%	✗
10-RT For Breast Conservation <40%	41.9%	✗
11(i)-Adjuvant Chemo (hormone receptor positive HER2 negative) 80%	71.2%	✗
11(ii)-Adjuvant Chemotherapy (triple negative/ HER2 positive) 80%	82.6%	✓
13-Re-excision Rates <20%	17.9%	✓
14(i)-Genetics Referral (aged <30) 90%	90.0%	✓
14(ii)-Genetics Referral(Triple Neg >50) 90%	93.0%	✓
17-Genomic Testing 60%	53.8%	✗
18(i)-Neo-Adjuvant Chemotherapy 80%	57.2%	✗
18(ii)-Neo-Adjuvant Chemotherapy (pathological complete response) 30%	34.4%	✓
19-DIBH Radiotherapy 80%	77.5%	✗

### Key Achievements

- 7 of the 16 breast cancer QPI targets were met regionally in 2020. Particular areas of note include -
- Continuing to deliver overall good quality timely breast cancer treatment through the initial phase of the COVID-19 pandemic despite major changes to the sites of delivery of breast outpatient and surgical services across the region.
  - Significant improvement in length of hospital stay for breast cancer surgery.
  - Overall re-excision rates remain below the QPI threshold reducing the burden on patients and health care services.
  - Appropriate referral of patients for gene mutation analysis.
  - Fairly consistent pathological response to neoadjuvant chemotherapy.

### Key recommendations:

- Understand the reasons for variance in adjuvant chemotherapy and genomic assay testing.
- Identify any areas where data collection is challenging.
- Support increasing the workforce or introduction of technology to improve HER testing turnaround time were needed.

## **Executive Summary**

### **Introduction**

This report contains an assessment of the performance of West of Scotland (WoS) breast cancer services using clinical audit data relating to patients diagnosed with breast cancer in the twelve months between 1<sup>st</sup> January 2020 and 31<sup>st</sup> December 2020.

Twelve months of data were measured against v4.0 of the Breast Cancer Quality Performance Indicators (QPIs) which were implemented for patients diagnosed on or after 01 January 2018. This was the ninth consecutive year of analysis following the initial Healthcare Improvement Scotland (HIS) publication of Breast Cancer QPIs in 2012<sup>1</sup>. Data definitions and measurability criteria to accompany the Breast Cancer QPIs are available from the PHS website<sup>2</sup>.

In order to ensure the success of the Cancer QPIs in driving quality improvement in cancer care, QPIs will continue to be assessed and amended to ensure they remain clinically effective and relevant. Previous formal reviews of breast cancer QPIs took place in 2015 and 2018. With nine years of reporting now complete, a third cycle of review commenced in December 2021. This clinically led review aims to identify potential refinements to the current QPIs and involves key clinicians from each of the Regional Cancer Networks.

### **Results**

A summary of the Breast Cancer Quality Performance Indicators for the patients diagnosed in 2020 is presented below. Data are analysed by location of diagnosis and illustrate Board performance against each target and overall regional performance for each performance indicator.

## Breast Cancer QPI Performance Summary Report

	Above Target Result
	Below Target Result
-	No comparable measure for previous years
<b>Audit Reporting Period:</b>	01/01/2018 – 31/12/2020

Quality Performance Indicator (QPI)	Performance by NHS Board									
	Target	Year	AA	FV	Lan	Clyde	NE.G	WG	SG	WoS
<b>QPI 6(i):</b> Proportion of patients who undergo immediate breast reconstruction at the time of mastectomy for breast cancer.	20%	2020	13.6%	6.0%	11.8%	4.2%	13.0%	-	8.8%	10.0%
		2019	22.4%	21.9%	30.8%	25.9%	14.7%	27.7%	20.4%	24.8%
		2018	23.0%	29.1%	31.9%	25.0%	5.7%	40.0%	35.9%	28.3%
<b>QPI 6(ii):</b> Proportion of patients who undergo immediate breast reconstruction at the time of mastectomy for breast cancer within 6 weeks of treatment decision.	90%	2020	100%	-	61.5%	-	-	-	75.0%	80.6%
		2019	0.0%	70.0%	87.2%	73.7%	57.1%	81.0%	80.0%	75.0%
		2018	NA	NA	NA	NA	NA	NA	NA	NA
<b>QPI 8(i):</b> Proportion of patients undergoing wide excision and/or an axillary sampling procedure for breast cancer as day case surgery	60%	2020	79.1%	57.1%	87.5%	67.8%	75.7%	-	68.6%	73.3%
		2019	71.8%	63.8%	88.6%	66.6%	85.0%	71.8%	88.3%	75.5%
		2018	77.5%	55.4%	85.9%	72.7%	82.6%	77.2%	81.5%	77.4%

Quality Performance Indicator (QPI)	Performance by NHS Board									
	Target	Year	AA	FV	Lan	Clyde	NE.G	WG	SG	WoS
<b>QPI 8(ii):</b> Proportion of patients with breast cancer undergoing mastectomy (without reconstruction) with a maximum hospital stay of 1 night following their procedure.	60%	2020	90.2%	89.3%	88.3%	81.0%	74.5%	-	85.6%	85.2%
		2019	65.9%	82.3%	77.3%	27.3%	45.0%	72.2%	33.3%	60.0%
		2018	38.7%	82.6%	80.1%	8.1%	38.3%	42.2%	12.0%	48.9%
<b>QPI 9:</b> Proportion of patients with invasive breast cancer for whom the HER2 status, as defined by ImmunoHistoChemistry (IHC) and/or FISH, is reported within 2 weeks of core biopsy.	90%	2020	61.8%	77.7%	79.8%	84.2%	87.4%		86.1%	79.9%
		2019	88.3%	94.4%	79.7%	74.6%	79.4%	80.4%	80.4%	81.3%
		2018	91.1%	91.8%	82.4%	82.2%	82.6%	80.1%	80.4%	83.8%
<b>QPI 10:</b> Proportion of patients ≥ 70 years of age with T1 N0, ER-positive, HER2-negative, LVI negative, Grade I to II breast cancers undergoing conservation surgery (completely excised with margin ≥1mm) with hormone therapy who receive radiotherapy.	<40%	2020	25.0%	80.0%	52.9%	9.1%	0.0%	-	71.4%	41.9%
		2019	NA	0.0%	16.7%	0.0%	25.0%	0.0%	100%	22.2%
		2018	NA	NA	NA	NA	NA	NA	NA	NA
<b>QPI 11(i):</b> Proportion of patients with hormone receptor positive, HER2 negative breast cancer who have a >5% overall survival benefit of chemotherapy treatment predicted at 10 years and/or high risk genomic assay score that undergo adjuvant chemotherapy	80%	2020	72.7%	81.3%	43.4%	94.1%	88.9%	-	86.2%	71.2%
		2019	0.0%	25.0%	55.8%	86.4%	86.7%	85.7%	90.0%	72.2%
		2018	NA	NA	56.8%	83.3%	93.8%	77.8%	100%	76.6%
<b>QPI 11(ii):</b> Proportion of patients with triple negative or HER2 positive breast cancer who have a >5% overall survival benefit of chemotherapy treatment predicted at 10 years that undergo adjuvant chemotherapy.	80%	2020	100%	96.2%	56.8%	85.7%	90.9%	-	84.1%	82.6%
		2019	57.1%	21.9%	64.5%	89.2%	82.9%	90.3%	100%	82.3%
		2018	66.7%	71.4%	67.9%	83.8%	84.2%	82.8%	95.0%	79.4%

Quality Performance Indicator (QPI)	Performance by NHS Board									
	Target	Year	AA	FV	Lan	Clyde	NE.G	WG	SG	WoS
<b>QPI 13:</b> Proportion of surgically treated patients with breast cancer (invasive or in-situ) who undergo re-excision or mastectomy following their initial breast surgery.	<b>&lt;20%</b>	2020	11.5%	19.8%	23.5%	13.0%	24.2%	-	15.9%	17.9%
		2019	10.2%	22.7%	21.1%	16.4%	24.7%	13.7%	14.4%	17.3%
		2018	8.6%	19.7%	22.2%	14.6%	23.7%	9.3%	9.0%	14.8%
<b>QPI 14(i):</b> Proportion of patients with breast cancer who are under 30 years of age referred to a specialist genetics clinic.	<b>90%</b>	2020	NA	-	-	-	-	-	-	90.0%
		2019	-	-	-	-	-	-	NA	100%
		2018	NA	NA	-	NA	-	-	-	100%
<b>QPI 14(ii):</b> Proportion of patients with triple negative breast cancer under 50 years of age referred to a specialist genetics clinic.	<b>90%</b>	2020	83.3%	100%	80.0%	100%	100%	-	100%	93.0%
		2019	75.0%	-	94.4%	66.7%	60.0%	100%	80.0%	80.4%
		2018	100%	100%	100%	100%	100%	90.9%	-	98.2%
<b>QPI 17:</b> Proportion of patients with ER positive, HER2 negative, node negative breast cancer who have a 3-5% overall survival benefit of chemotherapy predicted at 10 years that undergo genomic testing.	<b>60%</b>	2020	-	88.9%	15.0%	100.0%	-	-	-	53.8%
		2019	-	50.0%	50.0%	85.7%	-	-	-	55.6%
		2018	71.4%	100%	44.1%	55.6%	87.5%	-	-	60.6%
<b>QPI 18(i)</b> Proportion of patients with triple negative or HER2 positive, Stage II or III ductal breast cancer who receive chemotherapy that undergo neo-adjuvant chemotherapy	<b>80%</b>	2020	30.8%	45.8%	77.6%	58.3%	43.3%	-	62.5%	57.2%
		2019	-	53.8%	78.4%	69.6%	57.1%	63.0%	73.5%	67.1%
		2018	39.3%	46.2%	63.6%	58.0%	52.9%	61.5%	70.0%	57.3%

Quality Performance Indicator (QPI)	Performance by NHS Board									
	Target	Year	AA	FV	Lan	Clyde	NE.G	WG	SG	WoS
<b>QPI 18(ii)</b> Proportion of patients with triple negative or HER2 positive, Stage II or III ductal breast cancer who undergo neo-adjuvant chemotherapy who achieve a pathological complete response.	30%	2020	37.5%	36.4%	26.3%	38.1%	38.5%	-	38.1%	34.4%
		2019	66.7%	28.6%	37.5%	37.5%	43.8%	46.7%	40.0%	40.0%
		2018	NA	NA	NA	NA	NA	NA	NA	NA
<b>QPI 19:</b> Proportion of patients with left sided breast cancer or DCIS receiving adjuvant radiotherapy treatment who use a DIBH radiotherapy technique.	80%	2020	72.9%	85.4%	77.1%	76.1%	71.6%	-	80.9%	77.5%
		2019	41.7%	62.9%	66.7%	69.9%	63.0%	59.0%	73.9%	65.1%
		2018	NA	NA	NA	NA	NA	NA	NA	NA
<b>QPI 16: Clinical Trial Access</b> Proportion of patients diagnosed with breast cancer who are consented* for a clinical trial / research study.	15%	2020								
		2019	3.4%	8.2%	10.1%	NHSGGC – 5.7%				6.1%
		2018	3.7%	10.7%	14.5%	NHSGGC – 6.2%				7.3%

(-) dash denotes a denominator of less than 5. Figures have been removed to ensure confidentiality.



## Conclusions and Action Required

Analysis of 2020 audit data and comparison with previous years data demonstrates a continual commitment to provide an equitable and consistent standard of care for breast cancer patients in the west of Scotland. The ongoing improvement in data quality over several years has enabled robust analysis of performance against QPIs for the ninth year.

The results presented within this report illustrate that some of the QPI targets set have been challenging for NHS Boards to achieve and there remains room for further service improvement. Where QPI targets were not met, NHS Boards have provided detailed comment. In the main these indicate valid clinical reasons or that, in some cases, patient choice or co-morbidities have influenced patient management. Additionally, NHS Boards have indicated where positive action has already been taken at a local level to address any issues highlighted through the QPI data analysis. It is anticipated that these positive changes will result in improved performance going forward.

NHS Boards are encouraged to continue with this proactive approach of reviewing data and addressing issues as necessary, in order to work towards increasingly advanced performance against targets, and demonstration of overall improvement in quality of the care and service provided to patients.

Key points of note that we have seen are:

- In 2020 the COVID-19 pandemic impacted on Breast cancer services and resulted in decreases in the numbers of patients diagnosed. Despite this good quality timely breast cancer treatment continued to be delivered through the initial phase of the COVID-19 pandemic notwithstanding major changes to the sites of delivery of breast outpatient and surgical services across the region.
- Significant improvement in reduction of length of hospital stay for breast cancer surgery
- Overall re-excision rates remain below the QPI threshold reducing the burden on patients and health care services.
- Appropriate referral of patients for gene mutation analysis
- Fairly consistent pathological response to neoadjuvant chemotherapy

Actions identified within this report to improve provision of Breast cancer services across the WoS are collated below.

### Actions required:

#### *QPI 11 – Adjuvant Chemotherapy*

- MCN to initiate discussions with SACT Programme Board to look at possible reasons for the variance in performance.

#### *QPI 18 – Neo-Adjuvant Chemotherapy*

- NHS Ayrshire & Arran to provide further information on all cases not meeting the QPI.

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

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

Additionally, progress will be reported annually to the Regional Cancer Advisory Group (RCAG) by NHS Board Territorial Lead Cancer Clinicians and MCN Clinical Leads, and nationally on a three-yearly basis to Healthcare Improvement Scotland as part of the governance processes set out in CEL 06 (2012).

## 1. Introduction

This report presents an assessment of performance of West of Scotland (WoS) Breast Cancer Services relating to patients diagnosed between 01 January 2020 and 31 December 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 Breast Cancer Quality Performance Indicators (QPIs) which were implemented for patients diagnosed on or after 01 January 2018. This was the ninth consecutive year of analysis following the initial Healthcare Improvement Scotland (HIS) publication of Breast Cancer QPIs in 2012<sup>1</sup>.

## 2. Background

The Breast Cancer Managed Clinical Network (MCN) was established in 2002 as a means of delivering equitable high quality clinical care to all breast cancer patients across four NHS Boards: Ayrshire & Arran, Forth Valley, Greater Glasgow and Clyde and Lanarkshire, covering a population of 2.5 million.

The Breast Cancer MCN continues to support and develop the clinical service for approximately 2400 breast cancer patients per annum. The effective management of these patients throughout the region relies on coordinated delivery of treatment and care that requires close collaboration of professionals from a range of specialties. WoS breast cancer services are organised around six Multidisciplinary Teams (MDTs). The configuration of the MDTs in the region is set out below.

Table 1: WoS MDT Configuration

MDT	Constituent Hospital
Ayrshire	Crosshouse Hospital & Ayr Hospital
Forth Valley	Forth Valley Royal Hospital
Lanarkshire	Monklands District General, Wishaw General Hospital, Hairmyres
Greater Glasgow North	Stobhill Hospital
Greater Glasgow South	New Victoria Infirmary , Gartnavel General
Greater Glasgow Clyde	Royal Alexandra Hospital , Inverclyde Royal Hospital, Vale of Leven

### 2.1 National Context

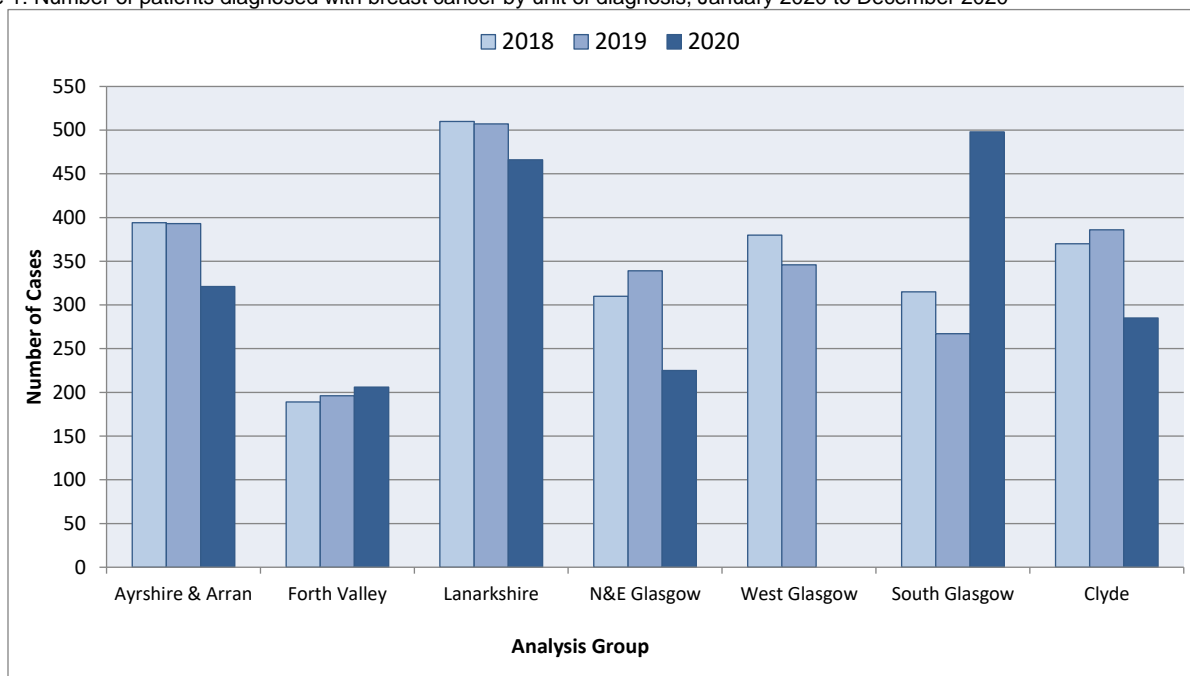
Breast cancer is the most common cancer in women in Scotland with approximately 5000 new cases diagnosed annually. The incidence rate of breast cancer continues to rise with a 1.5% increase over the last decade. This may be attributed to the higher prevalence of known risk factors among the female population such as long standing changes in fertility, increasing levels of post-menopausal obesity and increases in alcohol consumption<sup>4</sup>. Breast cancer in men is very rare, accounting for less than 1% of all cancers in Scotland<sup>3</sup>.

In spite of the increase in incidence of breast cancer, mortality rates from breast cancer have decreased by 15.1% over the last 10 years<sup>3</sup>. Significant improvements have been achieved in long term survival with around 86% of women surviving 5 years based upon current Public Health Scotland (PHS) data<sup>3</sup>. Early detection of breast cancer through a national screening programme, improvements in diagnosis and staging of breast cancer and improved treatment interventions are all associated with improvement in survival.

## 2.2 West of Scotland Context

A total of 2001 cases of breast cancer were recorded through audit as diagnosed in the WoS between 01 January 2020 and 31 December 2020. The number of patients diagnosed within each unit is presented in Figure 1. As the largest WoS Board, 50% of all new cases of breast cancer were diagnosed in NHS Greater Glasgow and Clyde (NHSGGC) which is in line with population estimates for this board.

Figure 1: Number of patients diagnosed with breast cancer by unit of diagnosis, January 2020 to December 2020



	AA	FV	Lan	N&E G	WG	SG	Clyde	WoS
2018	394	189	510	310	380	315	370	2468
2019	393	196	507	339	346	267	386	2434
2020	321	206	466	225	-	498	285	2001

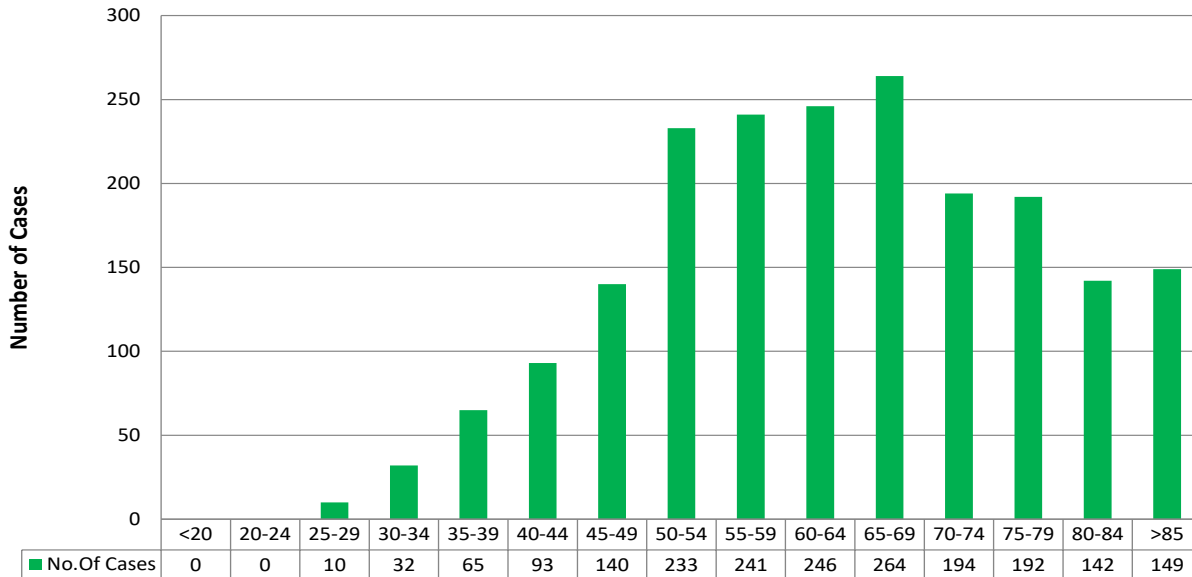
During 2020 West Glasgow MDT and South Glasgow MDT merged. QPI results will now be reported as per the three NHSGGC sectors rather than 4 MDTs. QPI results for South Glasgow now incorporate West Glasgow results.

There was an 18% decline in numbers of patients being diagnosed with breast cancer in the West of Scotland in 2020 compared with 2019. This is likely to be largely due to the impact of the COVID-19 pandemic, with the first lockdown coinciding with this audit period. There is emerging evidence of considerable declines in numbers of patients being diagnosed with cancer in 2020, particularly during April – June 2020, across a range of different cancer types.

## Age

Figure 2 shows the age distribution of patients diagnosed with breast cancer in the West of Scotland in 2020, with numbers of patients diagnosed highest in the 65-69 year age bracket.

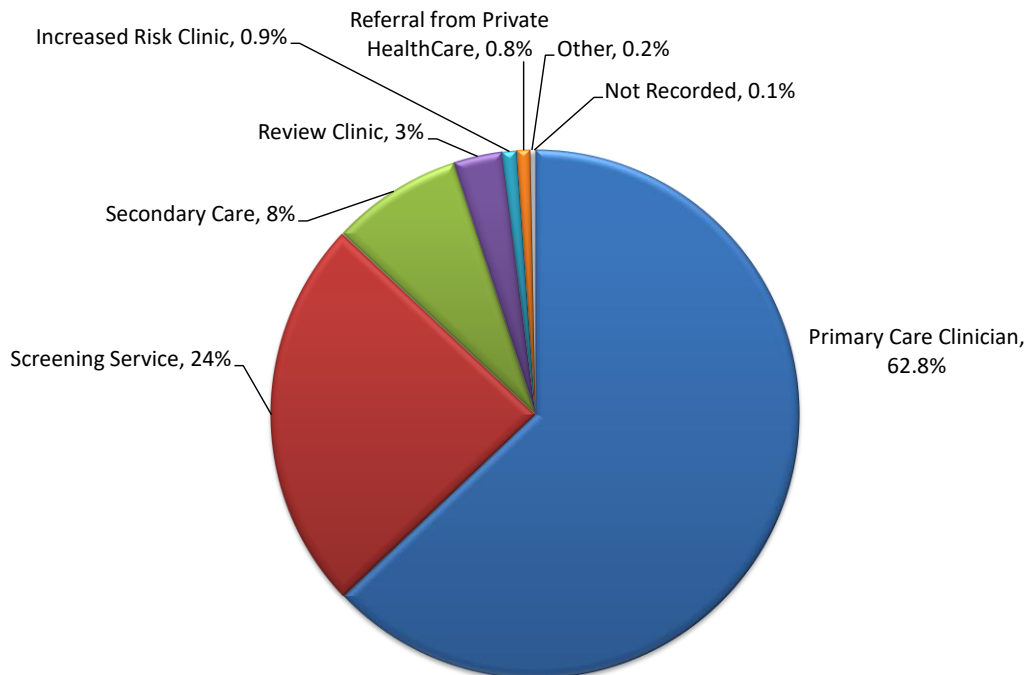
Figure 2: Age range of patients diagnosed with breast cancer, January 2020 to December 2020



## Source of Referral

Figure 3 illustrates that the majority of patients diagnosed with breast cancer in the WoS were referred from a Primary Care Clinician (62.8%) or from the screening service (24%).

Figure 3: Source of referral of patients diagnosed with breast cancer, January 2020 to December 2020



Due to the COVID-19 pandemic the breast screening programme was paused between March 2020 and August 2020. This resulted in 43% decrease in breast screening referrals in 2020 than in the previous year.

### **3. Methodology**

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

### **4. Results and Action Required**

#### **4.1 Performance against Quality Performance Indicators (QPIs)**

The following section includes a detailed summary of each of the breast cancer QPIs outlining the variation at individual unit level. Graphs and charts have been provided where this aids interpretation and, where appropriate, numbers have also been included to provide context. Where possible, and with consideration given to any changes after formal review, results for patients diagnosed in 2020 have been presented alongside the previous years' results to illustrate trends.

Data (both graphically and in tabular format) are presented by location of diagnosis with some criteria given as an overall West of Scotland representation. Boards have already reviewed cases where targets have not been met, and the detailed clinical commentary provided by Boards is noted beside each measure along with details of any specific changes that have already been implemented to address issues highlighted through the analysis.

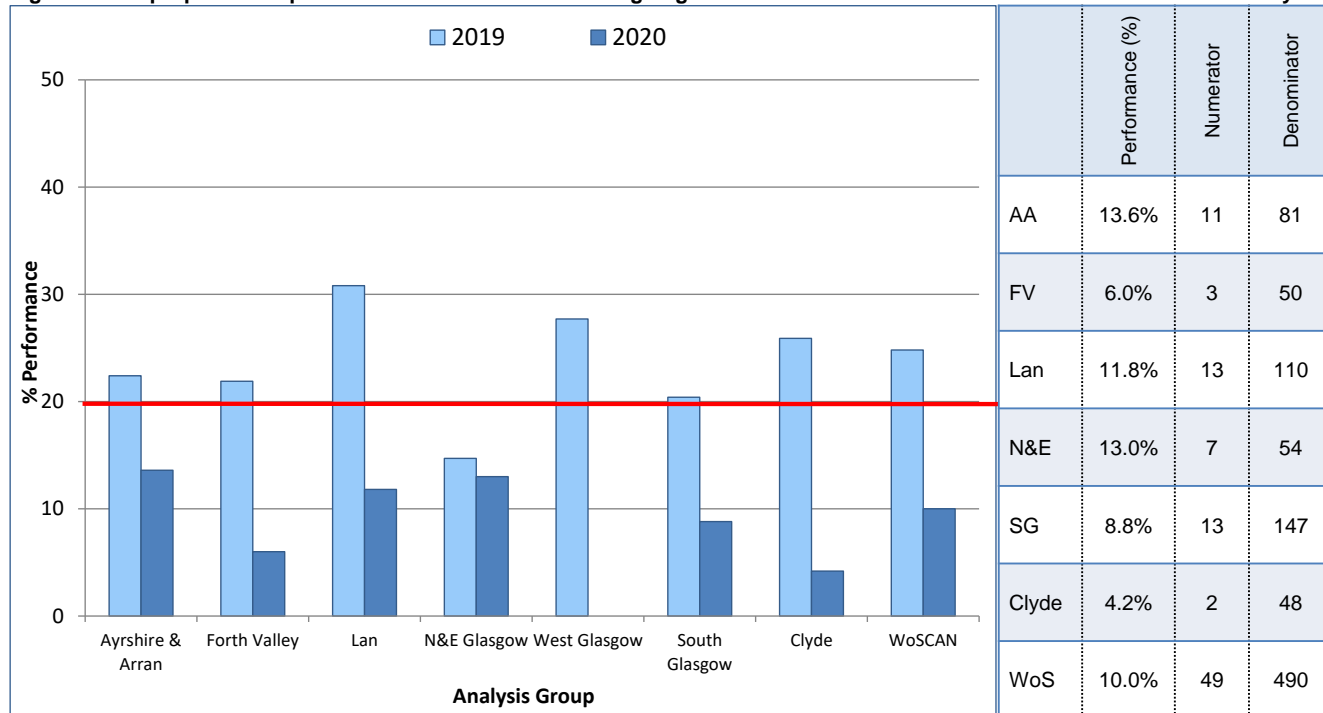
Where the number of cases meeting the denominator criteria for any indicator is between one and four, the percentage calculation has not been shown on any associated charts or tables. This is to avoid any unwarranted variation associated with small numbers and to minimise the risk of disclosure. Any 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 6: Immediate Reconstruction Rate

Evidence suggests that breast reconstruction is not associated with an increase in the rate of local recurrence, nor does it affect the ability to detect recurrence and it can yield psychological benefit<sup>1</sup>. Access to immediate breast reconstruction is difficult to measure accurately therefore uptake is used as a proxy. Although it will not provide an absolute measure of patient access to this procedure it will give an indication of access across NHS Boards and highlight any areas of variance which can then be further examined<sup>1</sup>. The tolerance within this target accounts for patients' choice and fitness for treatment. Patient choice is a key factor in the number of patients who undergo immediate breast reconstruction at the time of mastectomy.

QPI Title:	Patients undergoing mastectomy for breast cancer should have access to timely immediate breast reconstruction.
Numerator:	Number of patients with breast cancer undergoing immediate breast reconstruction at the time of mastectomy.
Denominator:	All patients with breast cancer undergoing mastectomy.
Exclusions:	All patients with M1 disease and all male patients.
Target:	20% or above

Figure 4: The proportion of patients with breast cancer undergoing immediate breast reconstruction at the time of mastectomy.



\*South Glasgow data for 2020 includes cases diagnosed in West Glasgow due to MDTs merging

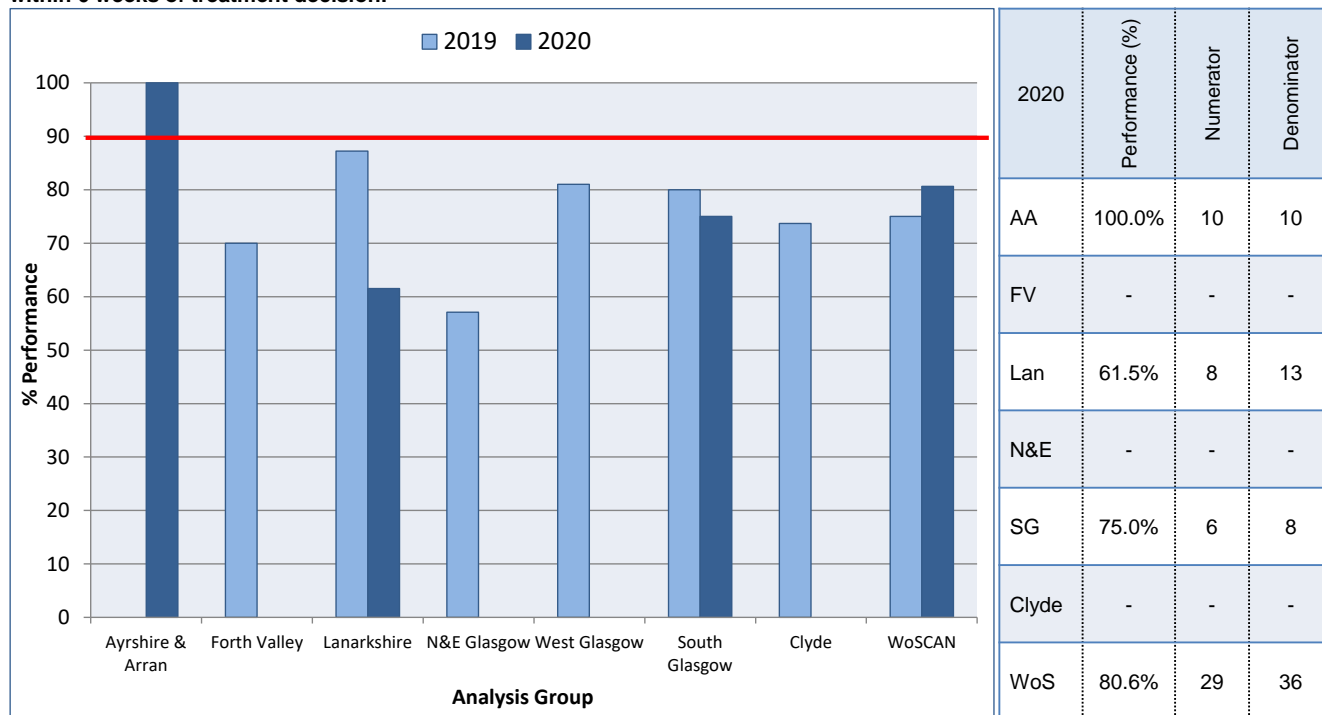
Overall in the WoS 10% patients underwent immediate breast reconstruction at the time of mastectomy which is below the 20% QPI target.

QPI 6 results have been greatly affected by the COVID-19 pandemic with immediate breast reconstruction procedures paused between March and September 2020 in line with national guidance. Following this time Immediate breast reconstruction was being offered to patients albeit to a more restricted criteria in view of limited theatre capacity. This has since been rescinded although theatre capacity at the regional plastic surgery centre continues to be limited. It is expected that the results for this QPI should improve in 2021 but may not reach the current QPI standard.

## QPI 6(ii) Immediate Reconstruction Rate

The second part of the specification looks at the proportion of patients with breast cancer undergoing immediate breast reconstruction at the time of mastectomy and within 6 weeks of treatment decision.

Figure 5: The proportion of patients with breast cancer undergoing immediate breast reconstruction at the time of mastectomy and within 6 weeks of treatment decision.



(-) dash denotes a denominator of less than 5. Figures have been removed to ensure confidentiality.

Data has been restricted for NHS Ayrshire & Arran, NHS Forth Valley and NHSGCC N&E and Clyde sectors due to small numbers.

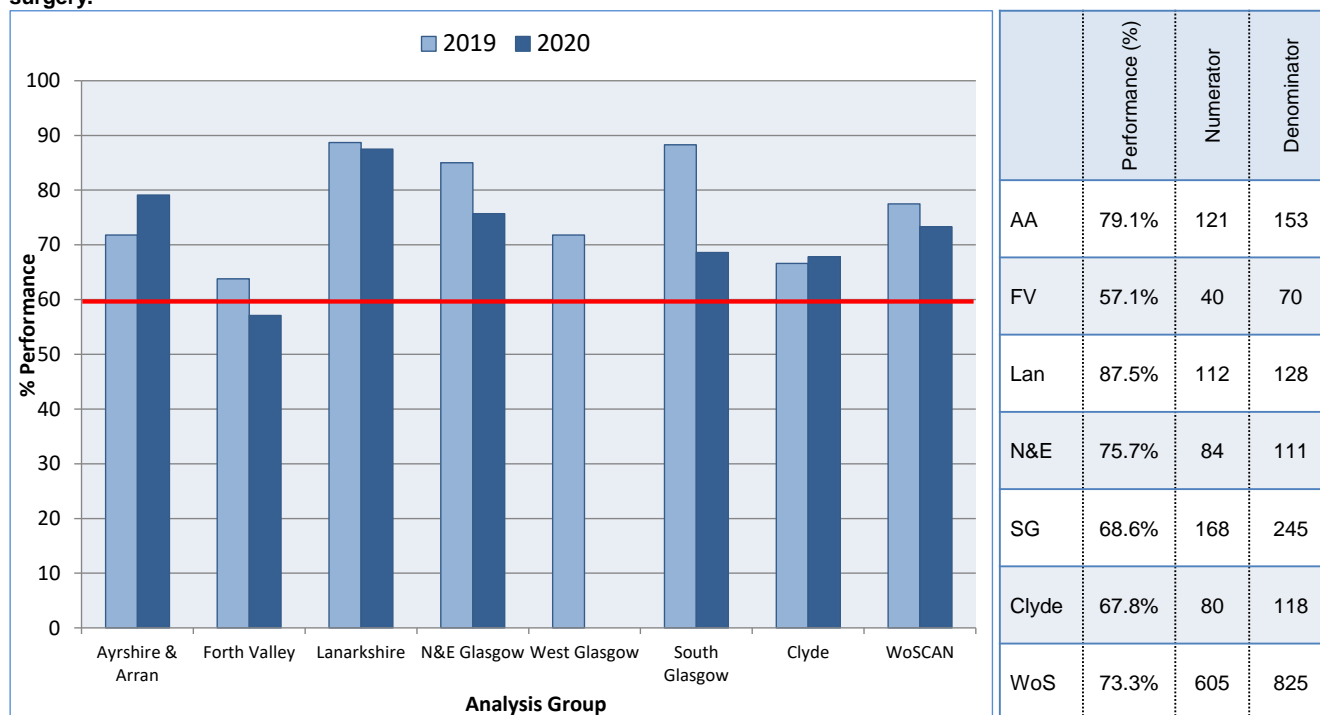
Overall in the WoS 80.6% of patients who underwent immediate breast reconstruction at the time of mastectomy did so within 6 weeks of treatment decision. However, as with the previous QPI, results have been severely impacted by the COVID-19 pandemic.

## QPI 8: Minimising Hospital Stay

It has been shown that major breast surgery can be delivered safely as day case or one night stay in the majority of patients without compromising clinical quality, surgical outcomes and patient experience.<sup>1</sup> Benefits of short stay include reduction in readmissions, reduction in complications, improved patient mobility and enhanced recovery. However, it is not always appropriate for all patients due to social circumstances, co-morbidities and/or geographical residence<sup>1</sup>.

QPI Title:	(i) Patients should have the opportunity for day case surgery wherever appropriate.
Numerator:	Number of patients with breast cancer undergoing wide excision and/or axillary sampling procedure (sentinel node biopsy or four node sample) as day case surgery.
Denominator:	All patients with breast cancer undergoing wide excision and/or axillary sampling procedure (sentinel node biopsy or node sample ( $\geq 4$ nodes)).
Exclusions:	All patients with breast cancer undergoing partial breast reconstruction.
Target:	60% or above

Figure 6: The proportion of patients with breast cancer undergoing wide excision and/or axillary sampling procedure as day case surgery.



PHS provided information from The General/Acute Inpatient and Day Case dataset (SMR01) to calculate the number of day case surgeries being carried out by each NHS Board. Across the WoS, 73.3% of patients with breast cancer undergoing wide excision and/or axillary sampling were day case surgeries. All units achieved the target with the exception of NHS Forth Valley who narrowly missed the 60% QPI target with performance of 57.1%.

It should be noted that patients that had surgery in an Independent Sector hospital (carried out by NHS surgeons) during 2020 due to the pandemic are not included in QPI 8(i). The data for QPI 8 is provided by PHS from the SMR01 dataset and Board of Diagnosis is not included within these reports, therefore it was not possible to assign these patients to the correct Board.

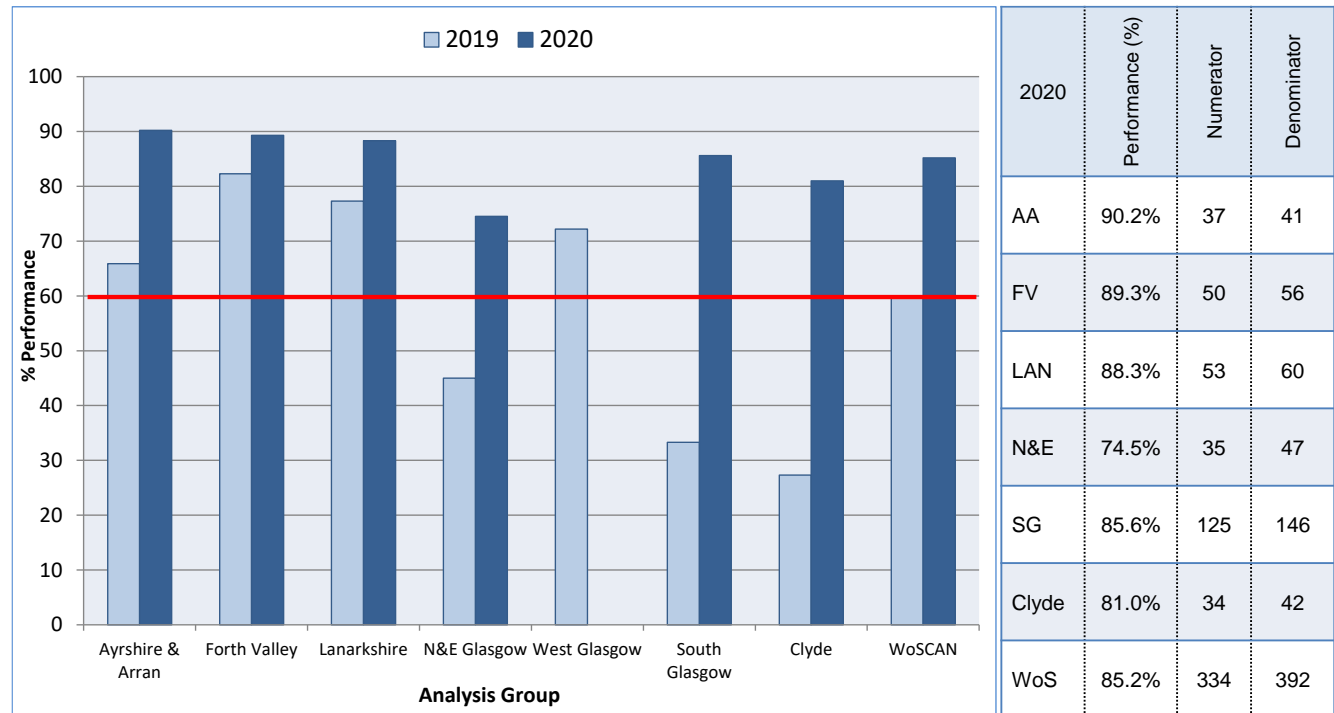
NHS Forth Valley reviewed all patients who breached this target which highlighted difficulties with data capture. With the COVID-19 pandemic, the majority of breast surgery for NHS Forth Valley patients was



transferred and carried out in the Independent Sector (BMI Kings Park Hospital) in order to continue to deliver timely care to cancer patients. In the initial stages of the pandemic, the agreement was that it would be more appropriate to have all patients stay overnight in the private sector, whilst pathways were being established. When looking at the raw data available, 91.7% of patients from NHS Forth Valley Board Residence that had surgery at BMI Kings Park Hospital were day cases (33 patients). Moreover, NHSFV provided mutual aid to other health boards, and so removing these patients (6 patients from NHS Lanarkshire) means that the local QPI has been met at 61.3%. The Board had made improvements from historical practice and in the previous year had managed to meet this QPI target. NHS Forth Valley will continue to monitor and are working to further increase day surgery rates locally.

QPI Title:	(ii) Patients should have the opportunity for day case surgery wherever appropriate.
Numerator:	Number of patients with breast cancer undergoing mastectomy (without reconstruction) with a maximum hospital stay of 1 night following their procedure.
Denominator:	All patients with breast cancer undergoing mastectomy (without reconstruction)
Exclusions:	No exclusions.
Target:	60% or above

Figure 7: The proportion of patients with breast cancer undergoing mastectomy (without reconstruction) with a maximum stay of 1 night following their procedure.



Overall, 334 of the 392 patients undergoing mastectomy (without reconstruction) in the WoS had a maximum of a one night hospital stay following their procedure, resulting in a performance of 85.2% which meets the QPI target; All units met this target.

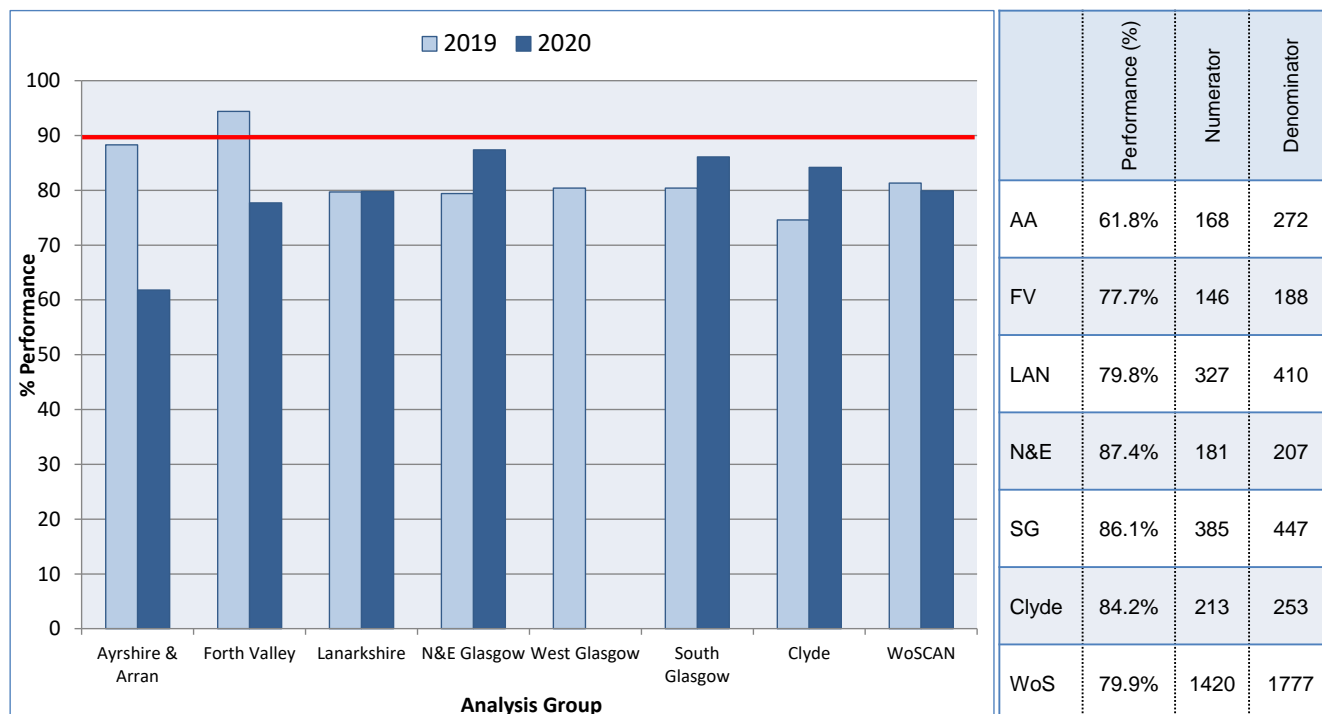
As with the previous QPI the patients that had surgery in the Independent Sector during 2020 due to the pandemic are not included in QPI 8(i).

## QPI 9: HER2 Status for Decision Making

HER2 status has a significant impact on survival and therefore has a significant influence on decisions regarding neo-adjuvant and adjuvant treatment<sup>1</sup>. The target for this QPI is set at 90% with the tolerance designed to account for situations where insufficient disease is present on core biopsy

QPI Title:	HER2 status should be available to inform treatment decision making.
Numerator:	Number of patients with invasive breast cancer for whom the HER2 status (as defined by IHC and/or FISH analysis) is reported within 2 weeks of core biopsy.
Denominator:	All patients with invasive breast cancer.
Exclusions:	No exclusions.
Target:	90% or above

Figure 8: The proportion of patients with invasive breast cancer for whom the HER2 status is reported within 2 weeks of core biopsy.



Overall in the WoS 79.9% of patients with invasive breast cancer had their HER2 status reported within 2 weeks of core biopsy, which is below the 90% QPI target. No unit met the target with performance ranging from 61.8% in NHSAA to 87.4% in N&E Glasgow sector.

As with previous years the majority of cases not meeting the target required FISH testing to establish HER2 status. The FISH service is centrally funded and the current standard for Molecular Pathologists is to report FISH results within 14 days of receipt, which is not aligned with the requirements of this QPI.

A new digital image assessment system is currently being validated which may improve FISH turnaround times.

### QPI 10: Radiotherapy for Breast Conservation in Older Adults

Following formal review QPI 10 was changed to focus on minimising radiotherapy treatment in patients'  $\geq 70$  years of age with early stage breast cancer and a low risk of recurrence (T1 N0, ER-positive, HER2-negative, LVI negative, Grade I to II breast cancers undergoing conservation surgery with hormone therapy).

QPI Title:	Radiotherapy use should be reduced in patient's $\geq 70$ years of age with early stage breast cancer and a low risk of recurrence.
Numerator:	Number of patients $\geq 70$ years with T1 N0, ER-positive, HER2-negative, LVI negative, Grade I to II breast cancers undergoing conservation surgery (completely excised with margin $\geq 1$ mm) with hormone therapy who receive radiotherapy.
Denominator:	All patients $\geq 70$ years with T1 N0, ER-positive, HER2-negative, LVI negative, Grade I to II breast cancers undergoing conservation surgery (completely excised with margin $\geq 1$ mm) with hormone therapy.
Exclusions:	All patients with breast cancer taking part in clinical trials of radiotherapy treatment.
Target:	$<40\%$

Due to the small numbers meeting the denominator criteria for QPI 10 individual unit results cannot be presented. WoS performance against this QPI was 41.9% (26 out of 62 cases) of patients  $\geq 70$  years with T1 N0, ER-positive, HER2-negative, LVI negative, Grade I to II breast cancers undergoing conservation surgery (completely excised with margin  $\geq 1$ mm) with hormone therapy receiving radiotherapy. This is an improvement on the previous years results of 22.2% Three out of six units met the target.

NHS Forth Valley commented that that radiotherapy dose and fractionation changed in April 2019 reducing the number of visits from 15 days to 5 days which has encouraged patients to opt for treatment as it became less inconvenient. The option of partial breast radiotherapy following the results of the Import low study will likely reduce the frequency and severity of side effects.

NHS Lanarkshire reported that all cases not meeting this QPI were reviewed. All patients were treated appropriately with all receiving 2 field radiotherapy. Local recurrence in the PRIME II study was higher in those who had radiotherapy withheld and this has been confirmed with longer follow up. The Board added that radiotherapy is offered to fit patients expected to live 10+ years after diagnosis and should not be withheld on the basis of this QPI. The QPI will continue to be monitored through NHS Lanarkshire's local quarterly QPI reporting processes. The Q1 2021 result is showing improvement, although small numbers are noted.

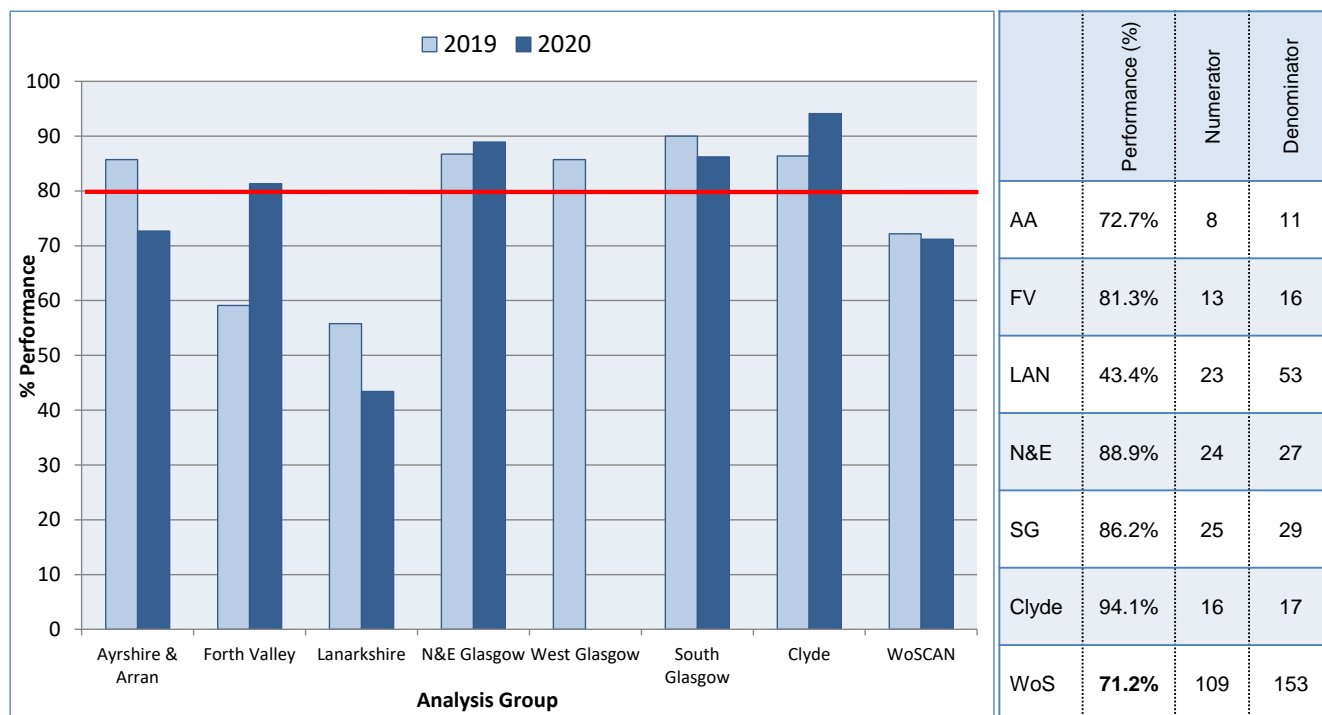
NHSGGC commented that review of the South Glasgow results show low numbers and individual patient choice regarding benefit of radiotherapy.

### QPI 11: Adjuvant Chemotherapy

Large randomised trials have confirmed that adjuvant systemic therapy improves relapse-free survival and overall survival. Success of treatment is based on a number of different factors including tumour size, grade and involvement of lymph nodes. Prognostic tools such as PREDICT assist clinicians and patients to make informed decisions on appropriate treatment by predicting survival and determining those patients likely to benefit from adjuvant treatment<sup>1</sup>. The target for this QPI is set at 80% with the tolerance designed to account for factors of patient choice, co-morbidities and fitness for treatment.

QPI Title:	(i) Patients with breast cancer should receive chemotherapy post operatively where it will provide a survival benefit for patients.
Numerator:	Number of patients with hormone receptor positive HER2 negative breast cancer who have a $\geq 5\%$ overall survival benefit of chemotherapy treatment predicted at 10 years and/or high risk genomic assay score that undergo adjuvant chemotherapy.
Denominator:	Number of patients with hormone receptor positive HER2 negative breast cancer who have a $\geq 5\%$ overall survival benefit of chemotherapy treatment predicted at 10 years and/or high risk genomic assay score.
Exclusions:	All patients with breast cancer taking part in clinical trials of chemotherapy treatment, all patients who have had neo-adjuvant chemotherapy and all patients with M1 disease.
Target:	80%

Figure 9: Number of patients with hormone receptor positive HER2 negative breast cancer who have a  $\geq 5\%$  overall survival benefit of chemotherapy treatment predicted at 10 years and/or high risk genomic assay score that undergo adjuvant chemotherapy.



Performance across WoS was 71.2% against the 80% target with 82 of 109 patients with hormone receptor positive HER2 negative breast cancer who had a  $\geq 5\%$  overall survival benefit of chemotherapy treatment predicted at 10 years and/or high risk genomic assay score undergoing adjuvant chemotherapy. As with the previous year's analysis some variation in performance is evident. Four of the six units met the QPI target however NHS Ayrshire & Arran and NHS Lanarkshire both failed to meet the QPI target with performance of 72.7% and 43.4% respectively.

NHS Ayrshire & Arran commented that all cases have been reviewed and reasons for patients not meeting include, patients who refused chemotherapy, patients who were not ideal candidates due to other health problems and another case where due to the impact of COVID-19 the patient continued with radiotherapy and endocrine therapy.

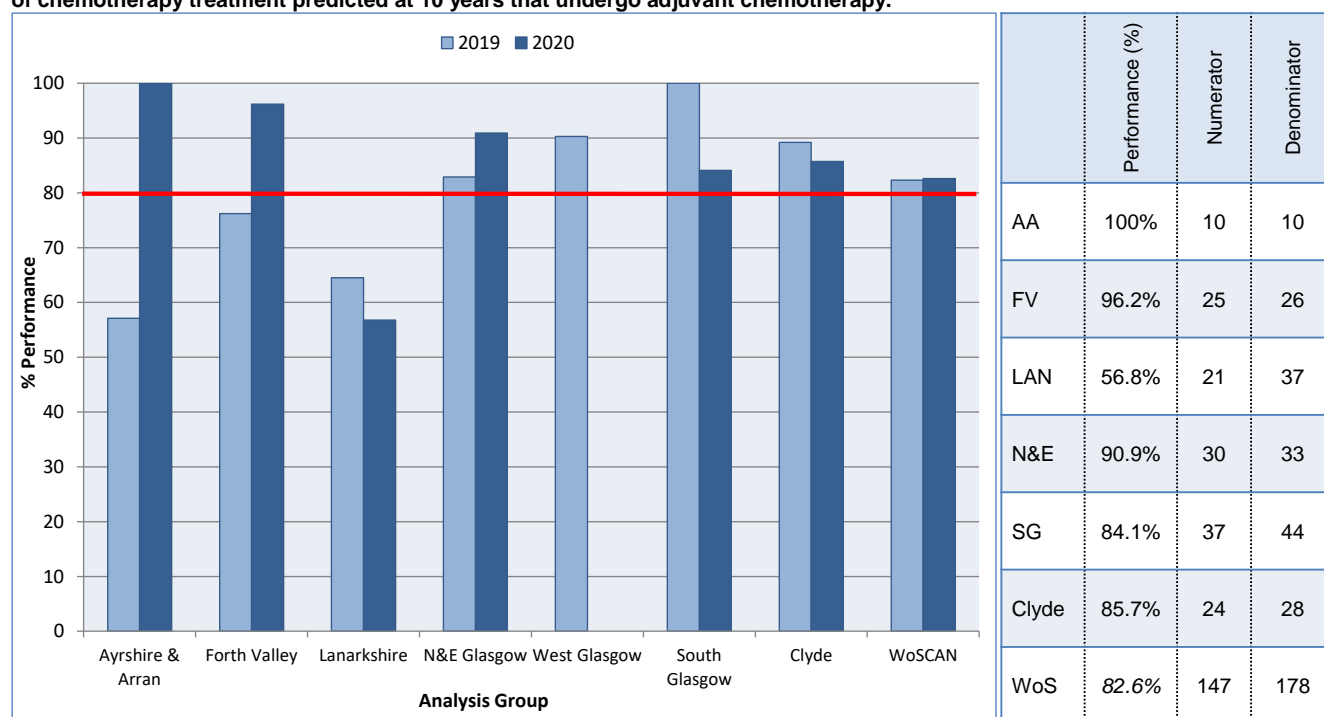
NHS Lanarkshire reviewed all cases not meeting the QPI, The reasons provided for patients not receiving adjuvant chemotherapy are as follows; patients that declined adjuvant chemotherapy, patients that had a low Oncotype score and were therefore not suitable for adjuvant chemotherapy, patients with co-morbidities which prevented them having adjuvant chemotherapy, patients that were diagnosed with metastatic disease shortly after surgery and were started on palliative treatment and MDT decision not to give chemotherapy due to COVID-19.

Action Required:

- MCN to initiate discussions with SACT Programme Board to look at possible reasons for the variance in performance.

<b>QPI Title:</b>	(ii) Patients with breast cancer should receive chemotherapy post operatively where it will provide a survival benefit for patients.
<b>Numerator:</b>	Number of patients with triple negative or HER2 positive breast cancer who have a $\geq 5\%$ overall survival benefit of chemotherapy treatment predicted at 10 years that undergo adjuvant chemotherapy.
<b>Denominator:</b>	Number of patients with triple negative or HER2 positive breast cancer who have a $\geq 5\%$ overall survival benefit of chemotherapy treatment predicted at 10 years.
<b>Exclusions:</b>	All patients with breast cancer taking part in clinical trials of chemotherapy treatment, all patients who have had neo-adjuvant chemotherapy and all patients with M1 disease.
<b>Target:</b>	80%

**Figure 10: The proportion of patients with triple negative or HER2 positive breast cancer who have a  $\geq 5\%$  overall survival benefit of chemotherapy treatment predicted at 10 years that undergo adjuvant chemotherapy.**



Overall in the WoS, 82.6% of patients with triple negative or HER2 positive breast cancer who had a  $\geq 5\%$  overall survival benefit of chemotherapy treatment predicted at 10 years underwent adjuvant chemotherapy, which achieves the 80% QPI target. All units with the exception of NHS Lanarkshire achieved the target.

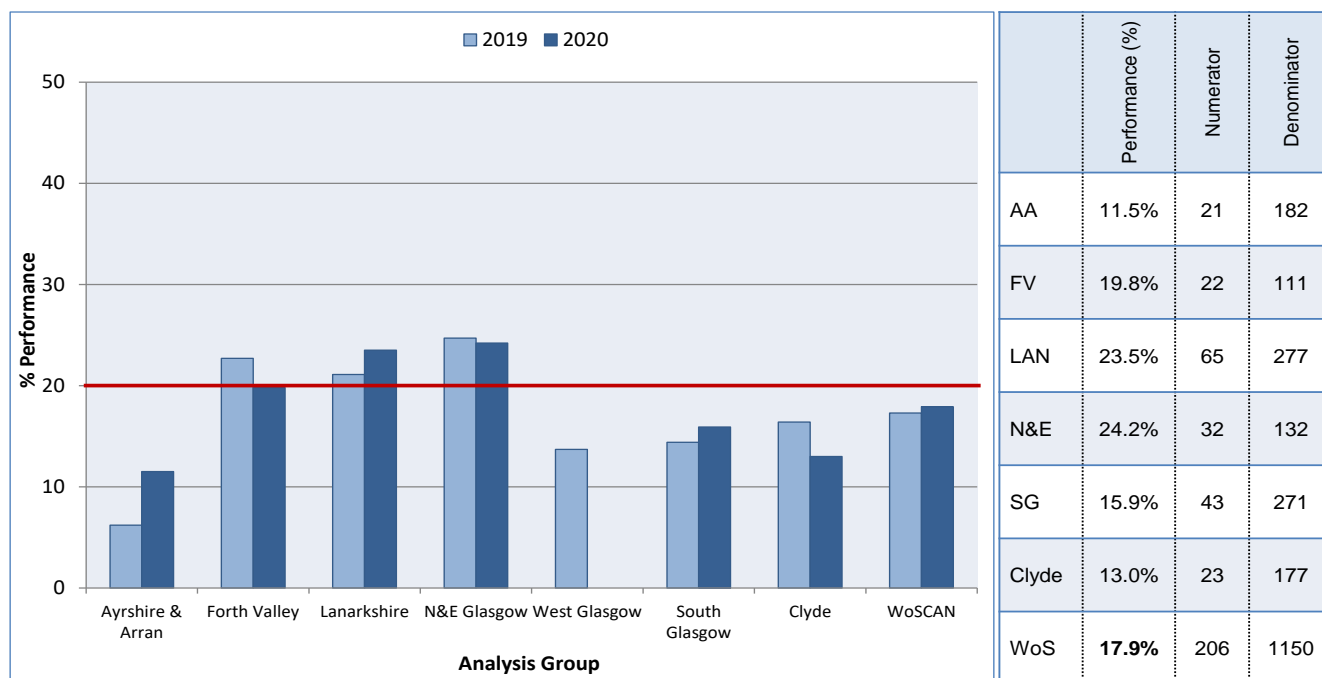
NHS Lanarkshire achieved 56.8% against the 80% target. The Board reviewed all cases not meeting the QPI and reported that the reasons for patients not receiving adjuvant chemotherapy included; patients who declined adjuvant chemotherapy. The mean age of these patients was 72 (range 51-82), patients that had co-morbidities which prevented them having adjuvant chemotherapy, and patient choice.

### QPI 13: Re-excision Rates

It is important to minimise treatment related morbidity. Patients undergoing additional surgical procedures can be subject to unnecessary stress, as well as potential complications and delays in recovery. Re-operation is also a factor related to poorer cosmetic outcomes for patients<sup>1</sup>.

QPI Title:	Patients undergoing surgery for breast cancer should only undergo one definitive operation where possible.
Numerator:	Number of patients with breast cancer (invasive or in-situ) having breast conservation surgery who undergo re-excision or mastectomy following initial breast surgery.
Denominator:	All patients with breast cancer (invasive or in-situ) having breast conservation surgery as their initial or only breast surgery.
Exclusions:	All patients with lobular carcinoma in situ (LCIS).
Target:	<20%

Figure 11: The proportion of patients with breast cancer (invasive or in-situ) having breast conservation surgery who undergo re-excision or mastectomy following initial breast surgery.



Performance across the WoS was 17.9% against the <20% QPI target with 206 of 1150 patients with breast cancer (invasive or in-situ) having breast conservation surgery undergoing re-excision or mastectomy following initial breast surgery. Four of the six units met the target with performance ranging from 24.2% in N&E Glasgow to 11.5% in NHS Ayrshire & Arran.

NHS Lanarkshire commented that following case review it was noted that 57 patients had 2 surgical procedures and 8 patients had 3 procedures.

NHSGGC commented that overall NHSGGC met the target. Review of the North Glasgow cases not meeting indicated that there was a lower mastectomy rate and higher WLE. Part of this was due to having no access to operating theatres in the NHS for 6 months and a push to do mostly day cases in private hospitals. Most cases were DCIS at margins. The re-excision rate now appears lower again with return to “business as usual” lists.



### QPI 14: Referral for Genetics Testing

Where patients have breast cancer, genetic testing should be offered if their combined BRCA1 and BRCA2 mutation carrier probability is  $\geq 10\%$ <sup>1</sup>.

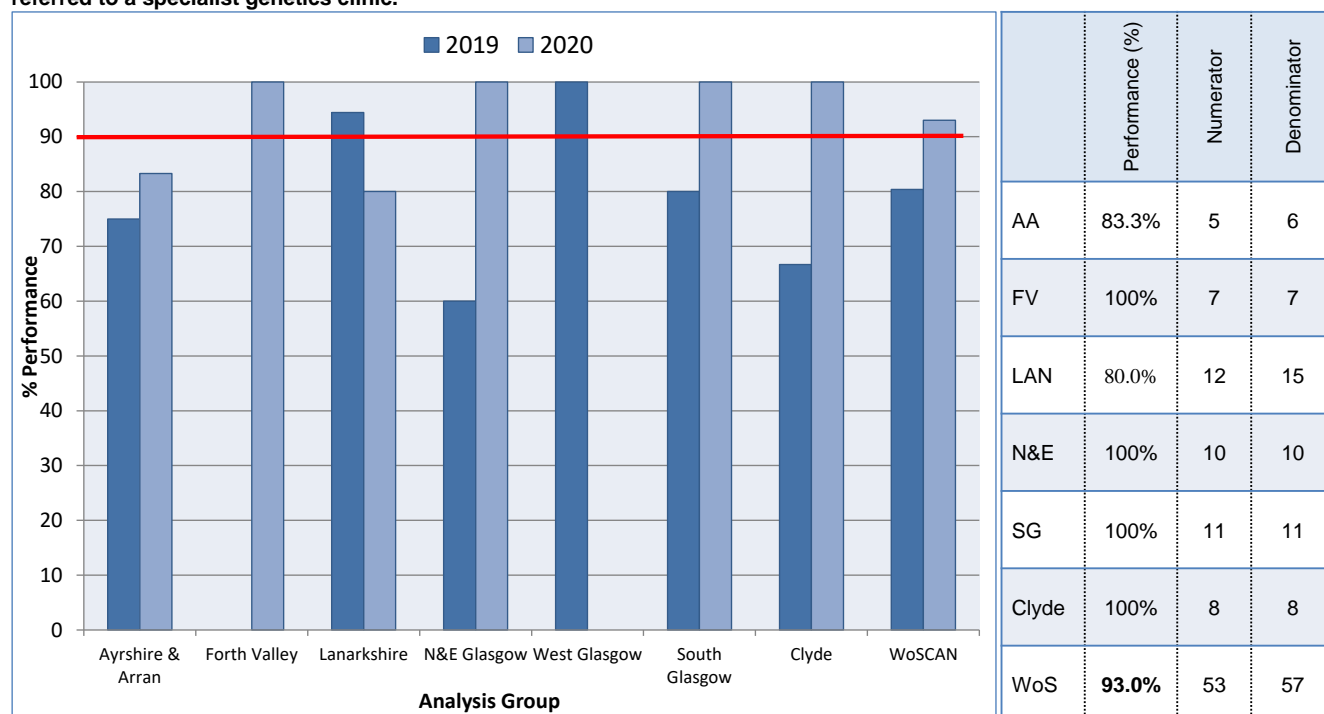
QPI Title:	Patients with breast cancer should be offered referral to a specialist genetics clinic where appropriate.
Numerator:	Number of patients referred to a specialist genetic clinic for testing who; (i) Are under 30 years of age (ii) With triple negative breast cancer who are under 50 years of age.
Denominator:	All patients with breast cancer who; (i) Are under 30 years of age (ii) With triple negative breast cancer who are under 50 years of age.
Exclusions:	No exclusions.
Target:	90%

Due to the small numbers meeting the denominator criteria for QPI 14(i) individual unit results cannot be presented. West of Scotland performance against this QPI was 90% (9 out of 10 cases) of patients under 30 years of age being referred to a specialist genetic clinic for testing.

NHS Lanarkshire reviewed the one case not meeting this QPI and valid clinical reasons were reported.

Part (ii) of the QPI looked at patients with triple negative breast cancer under the age of 50 who were referred to a specialist genetic clinic for testing.

**Figure 12: Proportion of patients with triple negative breast cancer who are under 50 and meet the criteria for gene testing and are referred to a specialist genetics clinic.**



Performance across the WoS was 93% against the 90% QPI target with 53 of 57 patients aged under 50, diagnosed with triple negative breast cancer being referred to a specialist genetics clinic. Four of the six units achieved the target with the majority showing improvement on previous years, however numbers are small so comparisons should be made with caution.

NHS Ayrshire & Arran commented that one patient wasn't referred to genetics and therefore small numbers impacted on the performance reported.

NHS Lanarkshire commented that all cases not meeting this QPI have been reviewed. The reasons provided for patients not being referred to a specialist genetics clinic included; two patients who were not referred to Genetics because they were already known to the service and one patient presented with a very advanced, metastatic breast cancer and died soon after presentation to the service.

## **QPI 15: 30 Day Mortality following Systemic Anti-Cancer Therapy**

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.

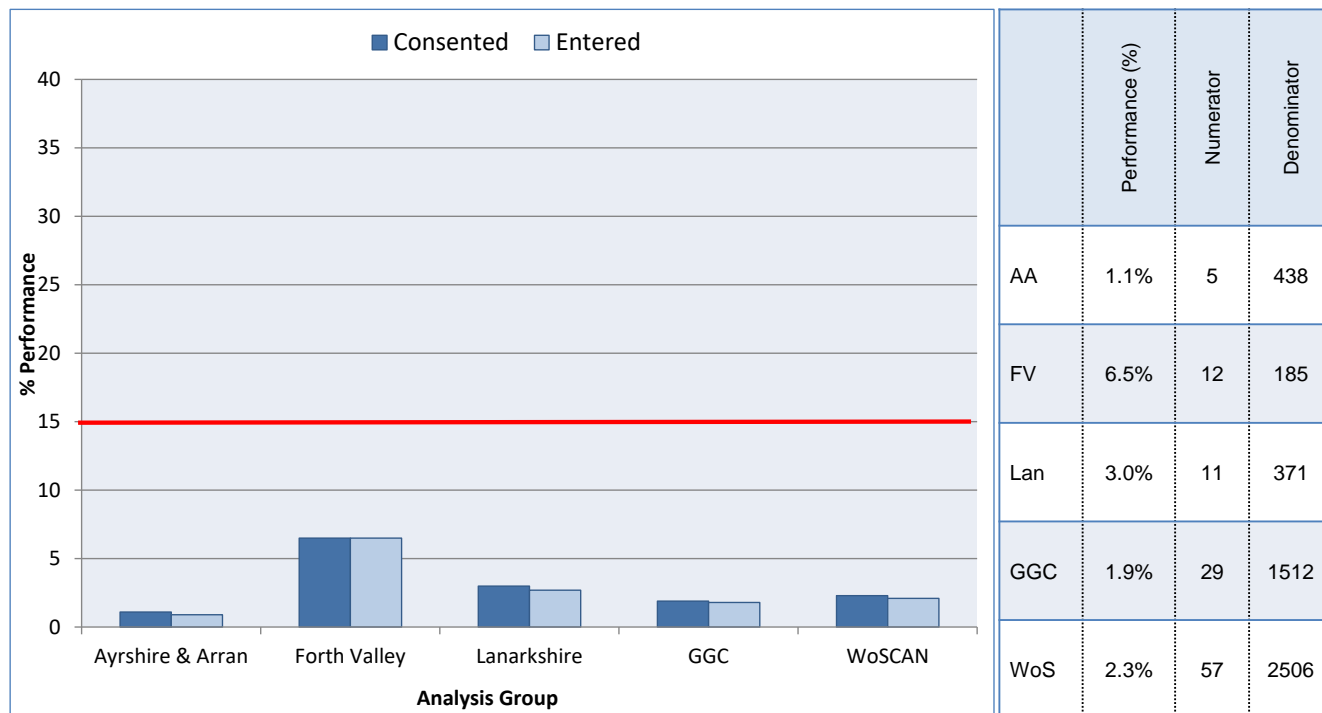
## QPI 16: Clinical Trial Access

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>.

<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 breast cancer consented for a clinical trial/research study.
<b>Denominator:</b>	All patients with diagnosed with breast cancer.
<b>Exclusions:</b>	No exclusions.
<b>Target:</b>	15%

The clinical trials QPI is measured utilising Scottish Cancer Research Network (SCRN) data and PHS incidence data, as this is the methodology currently utilised by the Chief Scientist Office (CSO) and the National Cancer Research Institute (NCRI). The principal benefit of this approach is that this data is already collected utilising a robust mechanism<sup>1</sup>. The QPI looks at *all* patients with breast cancer consented into a trial in the calendar year 1<sup>st</sup> January to 31<sup>st</sup> December 2020, and not just those patients who had an initial diagnosis in that same period.

Figure 13: Proportion of patients diagnosed with breast cancer consented for a clinical trial/research study.



The denominator for this QPI is identified by using a 5 year average of Scottish Cancer Registry data. Results provided are for numbers of patients consented for clinical trials or research studies in 2020 and are reported by patients Board of residence. Overall in the WoS approximately 2.3% of patients with breast cancer are consented for clinical trials and research study access, well below the target of 15%.

Performance against this QPI was affected by the COVID-19 pandemic in 2020. Individual trial sponsors advised that recruitment should be suspended due to the COVID-19 pandemic and all trial activity was stopped on the 13th March 2020. As the year progressed, Principal Investigators of the trials worked with the senior trials management group to undertake a risk assessment for each individual trial and get updated approval before being able to re-open to recruitment; many suspended clinical trials were re-opened between June and October 2020. However some patients were reluctant to attend hospital during the lockdown period, further impacting on recruitment once trials were reopened.

**Table 3: List of clinical trials carried out at Beatson West of Scotland Cancer Centre (BWoSCC) in 2020 and the number of patients with breast cancer consented into each clinical trial per year. (N.B. All recruits noted below were resident within WoS).**

<b>Short Title</b>	<b>TOTAL</b>
OPTIMA	<b>37</b>
POSNOC	<b>6</b>
Add-Aspirin Trial	<b>1</b>
AGI-134	<b>1</b>
Cardiac CARE	<b>2</b>
CO41101 - Ipatasertib with atezolizumab and Paclitaxel in TNBC	<b>2</b>
ECMC biomarker	<b>2</b>
IMAGINE	<b>2</b>
plasmaMATCH	<b>4</b>
Total	<b>57</b>

### QPI 17: Genomic Testing

Gene expression profiling tests can provide an indication of how the disease may progress and therefore assist in treatment planning in relation to chemotherapy<sup>1</sup>. The tolerance within this target accounts for factors of patient choice and fitness for treatment.

QPI Title:	Patients with breast cancer should undergo genomic testing where appropriate.
Numerator:	Number of patients with ER positive, HER2 negative, node negative breast cancer who have a 3-5% overall survival benefit of chemotherapy treatment predicted at 10years that undergo genomic testing.
Denominator:	All patients with ER positive, HER2 negative, node negative breast cancer who have a 3-5% overall survival benefit of chemotherapy treatment predicted at 10years.
Exclusions:	All patients with breast cancer taking part in clinical trials of chemotherapy treatment and patients who have had neo-adjuvant therapy.
Target:	60%

Due to the small numbers meeting the denominator criteria for QPI 17 individual unit results cannot be presented. WoS performance against this QPI was 53.8% (21 out of 39 cases) of patients with ER positive, HER2 negative, node negative breast cancer who have a 3-5% overall survival benefit of chemotherapy treatment predicted at 10 years that underwent genomic testing. All units with the exception of NHS Lanarkshire achieved the QPI target.

NHS Lanarkshire performance was noted as 15% against the 60% target. NHS Lanarkshire commented that all cases not meeting the QPI were reviewed. Reasons provided for patients not undergoing genomic testing included; patients that were discussed at MDT where the decision was made for the patient not be offered chemotherapy, therefore genomic testing was not done, patients who declined chemotherapy, patients who were not fit for chemotherapy and patient choice.

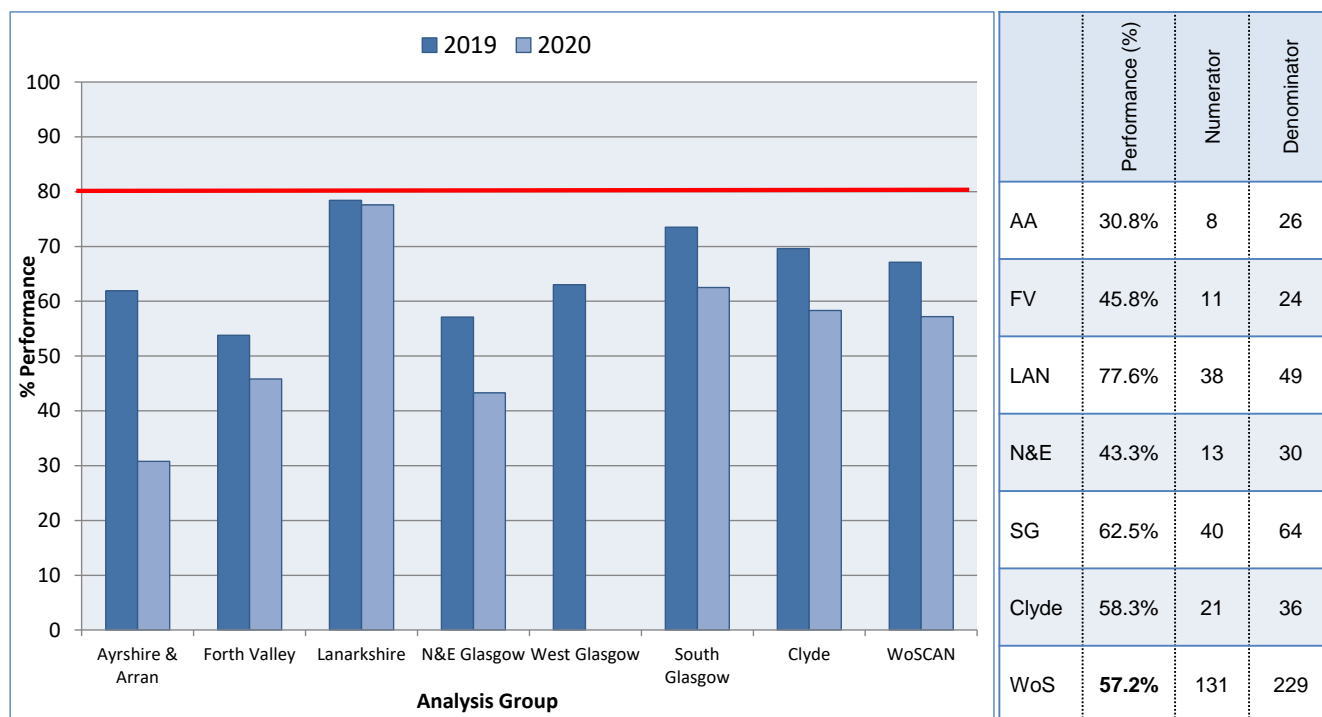
### QPI 18: Neo-adjuvant Chemotherapy

Pathological complete response is used as an endpoint to predict clinical benefit and survival. Those patients who achieve pathological complete response (defined as ypT0 ypN0) demonstrate improved survival with the greatest benefit shown in aggressive tumour subtypes.

Evidence has shown that pathologic response to neo-adjuvant chemo is prognostic in HER2 positive and triple negative breast cancers<sup>1</sup>.

QPI Title:	(i) Patients with breast cancer who receive chemotherapy should be offered neo-adjuvant chemotherapy with the aim of achieving pathological complete response where appropriate.
Numerator:	Number of patients with triple negative or HER2 positive, Stage II or III ductal breast cancer who receive chemotherapy that undergo neo-adjuvant chemotherapy.
Denominator:	All patients with triple negative or HER2 positive, Stage II or III ductal breast cancer who receive chemotherapy.
Exclusions:	All patients that undergo palliative chemotherapy.
Target:	80%

Figure 14: The proportion of patients with triple negative or HER2 positive, Stage II or III ductal breast cancer who receive chemotherapy that undergo neo-adjuvant chemotherapy



Of the 229 patients with triple negative or HER2 positive, Stage II or III ductal breast cancer who received chemotherapy, 57.2% underwent neo-adjuvant chemotherapy, which is below the QPI target of 80%. No unit met the target. Performance ranged from 30.8% in NHS Ayrshire & Arran to 77.6% in NHS Lanarkshire

NHS Ayrshire & Arran reviewed cases and provided reasons for 4 patients not meeting the QPI. These reasons included patient choice and patients that received adjuvant chemotherapy only. NHS Ayrshire & Arran should provide further information on all cases not meeting the QPI.

NHS Forth Valley commented that the oncologist reviewed all patients who did not meet the target. All patients not meeting the target were treated as clinically appropriate. Reasons for cases not receiving

neo-adjuvant chemotherapy included patients had surgery first due to COVID-19, patients who were clinical decisions due to co-morbidities and patient choice. The Board added that they will continue to monitor the QPI.

NHS Lanarkshire reviewed all cases not meeting this QPI and commented that the results of this QPI has been impacted due to the COVID-19 pandemic. These included opting for surgery as primary treatment because of the initial concerns over safety of chemotherapy and contracting COVID and severity of illness; co-morbidity and frailty, and clinical stage uncertain pre-operatively.

NHSGGC reported that all cases have been reviewed. Reasons for cases not receiving neo-adjuvant chemotherapy included; initial COVID-19 advice was to operate and not give chemo. Significant number of patients in this group. Pre-existing co-morbidities resulted in advice to go for adjuvant chemo. Several patients had smaller cancers on imaging (<2cms) and advice to operate first then found to have larger cancers on operative pathology. COVID-19 has distorted these figures significantly.

**Action required:**

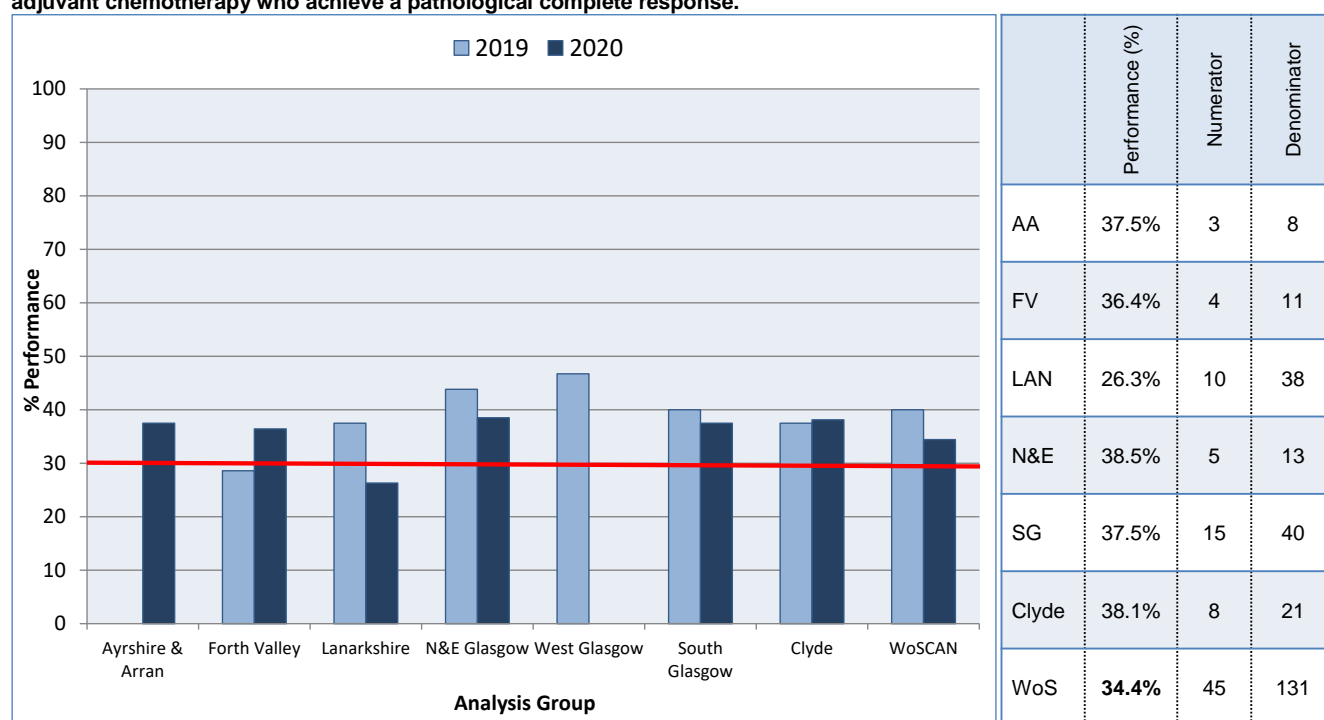
- NHS Ayrshire & Arran to provide further information on all cases not meeting the QPI.



Part two of the QPI looks at patients with triple negative or HER2 positive, Stage II or III ductal breast cancer who undergo neo-adjuvant chemotherapy who achieve a pathological complete response. The target for this QPI is set at 30% with the tolerance designed to account for the fact that due to tumour variations, not all patients will achieve a pathological complete response.

QPI Title:	(ii) Patients with triple negative or HER2 positive, Stage II or III ductal breast cancer who undergo neo-adjuvant chemotherapy who achieve a pathological complete response.
Numerator:	Number of patients with triple negative or HER2 positive, Stage II or III ductal breast cancer who undergo neo-adjuvant chemotherapy who achieve a pathological complete response.
Denominator:	All patients with triple negative or HER2 positive, Stage II or III ductal breast cancer who undergo neo-adjuvant chemotherapy.
Exclusions:	No exclusions.
Target:	30%

Figure 15: The proportion of patients with triple negative or HER2 positive, Stage II or III ductal breast cancer who undergo neo-adjuvant chemotherapy who achieve a pathological complete response.



Overall in the WoS, 34.4% of patients with triple negative or HER2 positive, Stage II or III ductal breast cancer who underwent neo-adjuvant chemotherapy achieved a pathological complete response, which meets the 30% QPI target. All units met the QPI target with the exception of NHS Lanarkshire who were slightly below the 30% target with a performance of 26.3%.

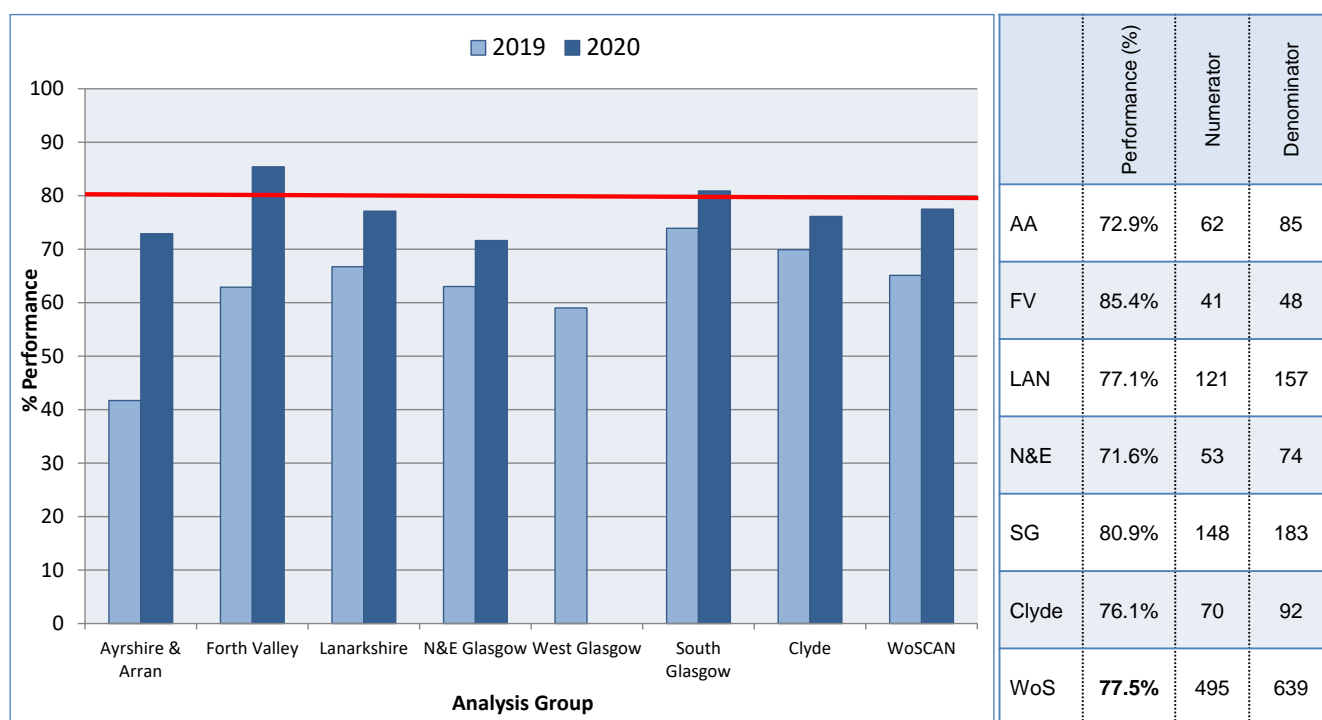
NHS Lanarkshire commented that the result of this QPI was impacted due to the COVID-19 pandemic. All cases not meeting this QPI were reviewed and reasons for cases not meeting included; patients who completed neo-adjuvant chemotherapy and had a partial response to therapy, patients who stopped neo-adjuvant chemotherapy early (due to COVID-19 or co-morbidities) and patients that showed no significant response to neo-adjuvant chemotherapy.

### QPI 19: Deep Inspiratory Breath Hold (DIBH) Radiotherapy

Evidence has shown that the use of deep inspiratory breath-hold (DIBH) technique during breast radiotherapy leads to a significant reduction in cardiac side effects without compromising the target coverage. This has been shown to lead to a reduction in future cardiovascular morbidity and mortality.

QPI Title:	Proportion of patients with left sided breast cancer or DCIS receiving adjuvant radiotherapy treatment who use a DIBH radiotherapy technique.
Numerator:	Number of patients with left sided breast cancer or DCIS receiving adjuvant radiotherapy treatment who use a DIBH radiotherapy technique.
Denominator:	All patients with left sided breast cancer or DCIS receiving adjuvant radiotherapy treatment.
Exclusions:	No exclusions
Target:	80%

Figure 16: The proportion of patients with left sided breast cancer or DCIS receiving adjuvant radiotherapy treatment who use a DIBH radiotherapy technique.



Overall in the WoS 77.5% of patients with left sided breast cancer or DCIS receiving adjuvant radiotherapy treatment used a DIBH radiotherapy technique, which is below the 80% target set for this QPI. NHS Forth Valley and NHSGCC South Glasgow sector both achieved the QPI and improved performance from the previous year is noted in all units.

NHS Ayrshire & Arran reported that there was no record of DIBH noted on the radiotherapy spreadsheets or any correspondence for 23 patients.

NHS Lanarkshire commented that all cases not meeting this QPI have been reviewed and feedback from the BWoSCC indicated the following reasons for patients not having radiotherapy using DIBH technique; cases where patients could not achieve the minimum threshold, patients that could not achieve consistent breath hold, cases where patients breathed out during the breath hold scan and the scan had to be abandoned, cases where patients did not have DIBH for medical/clinical reasons, cases where patients could not have DIBH due to equipment failure, patients declined DIBH and in a few

cases no reason was documented in the patient notes, One case was incorrectly recorded on eCASE as not having DIBH when they did receive DIBH, once rectified the overall result would be 77.7% (122/157).

NHSGGC commented that numerous patients were unsuitable due to respiratory co-morbidity.

## **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 III.

## **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>DCIS</b>	Ductal Carcinoma InSitu
<b>DIBH</b>	Deep Inspiratory Breath Hold
<b>e-CASE</b>	Electronic Cancer Audit Support Environment
<b>FNA</b>	Fine Needle Aspiration
<b>HER2</b>	Human Epidermal growth factor Receptor
<b>HIS</b>	Healthcare Improvement Scotland
<b>IHC</b>	ImmunoHistoChemistry
<b>MCN</b>	Managed Clinical Network
<b>MDT</b>	Multidisciplinary Team
<b>NHSGGC</b>	NHS Greater Glasgow and Clyde
<b>NCQSG</b>	National Cancer Quality Steering Group
<b>PHS</b>	Public Health Scotland
<b>QPI(s)</b>	Quality Performance Indicator(s)
<b>RCAG</b>	Regional Clinical Audit Group
<b>SACT</b>	Systemic Anti-Cancer Therapy
<b>SCRN</b>	Scottish Cancer Research Network
<b>WLE</b>	Wide Local Excision
<b>WoS</b>	West of Scotland
<b>WoSCAN</b>	West of Scotland Cancer Network

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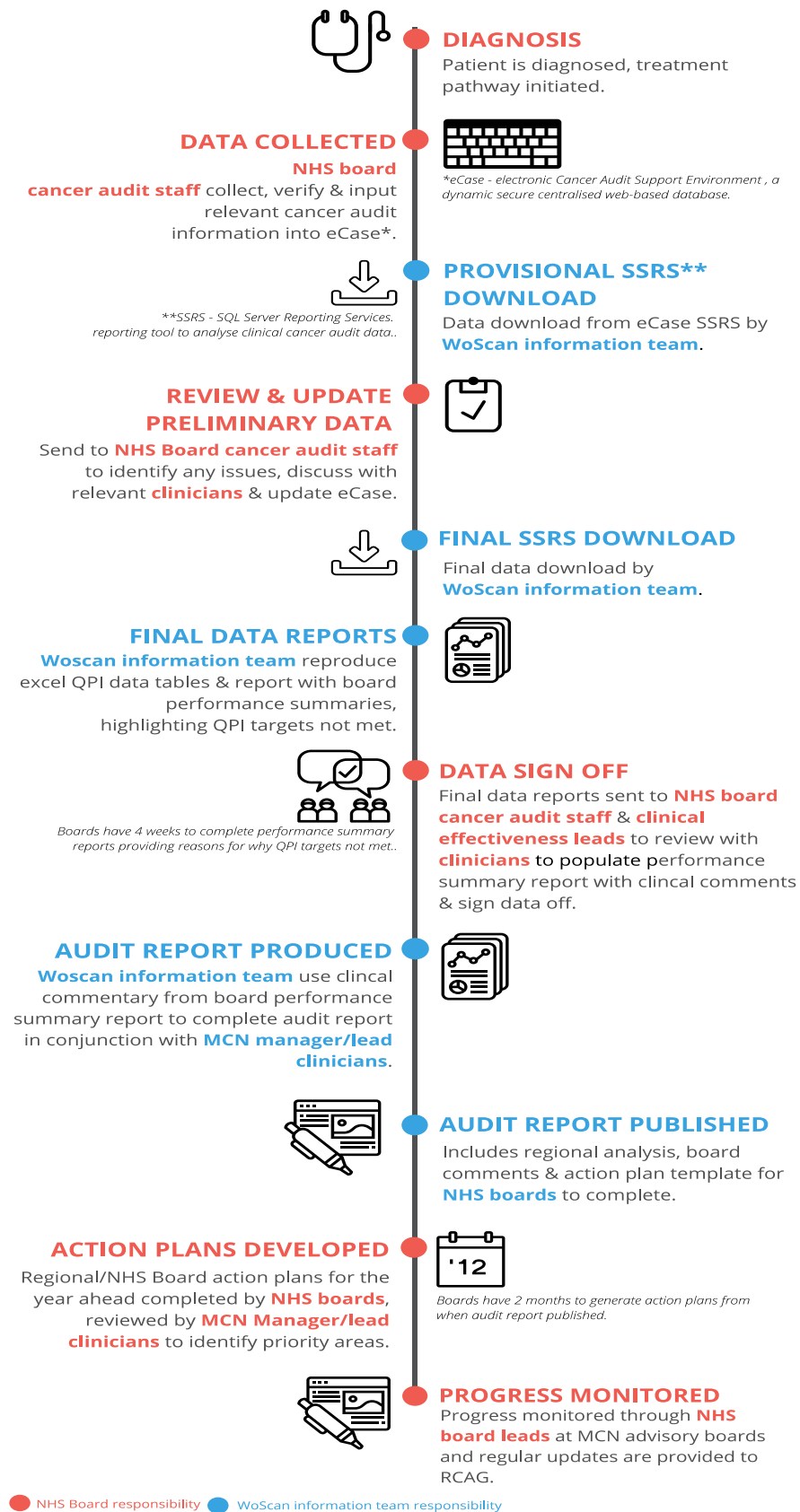
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## Appendix 1: Meta Data

Report Title	Cancer Audit Report: Breast Cancer Quality Performance Indicators																										
Time Period	Patients diagnosed between 01 January 2020 and 31 December 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 3 <sup>rd</sup> November 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>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 PHS Public Health Scotland); 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>Breast Cancer</p> <table border="1"> <thead> <tr> <th>Health Board of diagnosis</th> <th>2020 Audit</th> <th>Cancer Reg 2015-19*</th> <th>Case Ascertainment</th> </tr> </thead> <tbody> <tr> <td>Ayrshire &amp; Arran</td> <td>321</td> <td>438</td> <td>73.3%</td> </tr> <tr> <td>GGC</td> <td>1008</td> <td>1512</td> <td>66.7%</td> </tr> <tr> <td>Forth Valley</td> <td>206</td> <td>185</td> <td>111.4%</td> </tr> <tr> <td>Lanarkshire</td> <td>466</td> <td>371</td> <td>125.6%</td> </tr> <tr> <td>WoSCAN Total</td> <td>2001</td> <td>2506</td> <td>79.8%</td> </tr> </tbody> </table>			Health Board of diagnosis	2020 Audit	Cancer Reg 2015-19*	Case Ascertainment	Ayrshire & Arran	321	438	73.3%	GGC	1008	1512	66.7%	Forth Valley	206	185	111.4%	Lanarkshire	466	371	125.6%	WoSCAN Total	2001	2506	79.8%
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## Appendix 2: Cancer Audit Timeline



### Appendix 3: Action / Improvement Plan

#### Action / Improvement Plan 01 Jan - 31 Dec 2020

<b>Health 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)

No	Action Required	Health Board Action Taken	Timescales		Lead	Progress/Action Status	Status (see key)
			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 specific action.</i>	<i>Provide detail of action in progress, change in practices, problems encountered or reasons why no action taken.</i>	<i>Insert No. from key above</i>
1.	QPI 18 – Neo-Adjuvant Chemotherapy NHS Ayrshire & Arran to provide further information on all cases not meeting the QPI.						

## Action / Improvement Plan

<b>Health 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
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1.	QPI 11 – Adjuvant Chemotherapy MCN to initiate discussions with SACT Programme Board to look at possible reasons for the variance in performance.						