SCAN
South East Scotland Cancer Network

NHS SCOTLAND

Working regionally to improve cancer services

SOUTH EAST SCOTLAND CANCER NETWORK (SCAN) PROSPECTIVE CANCER AUDIT

BREAST CANCER 2019

COMPARATIVE AUDIT REPORT

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Document History

Version	Circulation	Date	Comments
Version 1	Lead clinicians	27/11/2020	Draft report circulated in advance of sign off meeting on 3/12/2020
Version 2	SCAN Breast sign off Group	15/12/2020	Report sent to Sign off group for checking comments and actions and for Lead clinician's commentary
Version 3	SCAN Breast Group	21/12/2020	for final comment
Version 4	SCAN Group SCAN Governance Framework SCAN Action Plan Board Leads	19/01/2021	Comments updated for final circulation
Version 4W	Published to the SCAN website	May 2021	Assessed for disclosive information

Introduction by Chair of the SCAN Breast Group

Welcome to the SCAN region audit report for 2019.

This year sees the introduction of some new indicators. These include the time to immediate reconstruction. While some areas remain short of the (arbitrary) target for reconstruction, all areas have access to a service and it is important that we know this is done in a timely manner and if not, what are the issues leading to this delay so they may be addressed. A minimising hospital stay target has been introduced for those having mastectomy and the radiotherapy target has been changed to reduce excessive treatment for low risk patients. This has required some changes in protocol which should result in improvements over coming years. The target for HER2 reporting has been raised and the pathology team are to be congratulated for improving results in the face of severe pressures in their department. Targets for adjuvant chemotherapy have always proved problematic and the use of genomic testing has been added this time. Analysis of outliers this year has potentially identified problems with PREDICT scoring and the process of decision making, and these are being addressed. It remains disappointing that Chemocare has been unable to provide figures for mortality following chemotherapy. The use of deep inspiratory breath hold radiotherapy techniques is relatively new and a target has been introduced for this to support the roll out of this across the region. Finally, we now have a target which relates to an aspect of outcome rather than process and it is great to see a good proportion of patients having a complete pathological response to chemotherapy.

Efforts have been made to increase the focus on outcome measures and an indicator related to disease recurrence is long overdue. Once again the audit team have been able to assemble regional figures on recurrence rates which will help inform design of an indicator at the next review.

Many thanks to the audit staff for pulling this report together and to clinical staff for their ongoing hard work.

Matthew Barber
SCAN Breast Group Chair
December 2020

Action Points for 2019

QPI	Action required	Person responsible for action	Date for update	Progress
QPI: 6 (i) Immediate reconstruction	Further data to be sought regarding the number of patients resident in Dumfries and Galloway having immediate reconstruction in Glasgow or Crosshouse Hospitals.	Jennifer Bruce		
QPI 6 (ii) Time to mastectomy and immediate reconstruction	Further audit required to establish types of immediate reconstruction being carried out. This will enable clinicians to assess the degree to which delays are attributable to Plastics capacity.	Christine Dodds		
QPI 8 (ii) Minimising hospital stay (mastectomy patients)	Ensure new surgical staff are aware of the intention to discharge these patients the day after their surgery, where possible.	Matthew Barber		
QPI 11 (i) & (ii) Adjuvant chemotherapy	Oncologists to look into discrepancies in Predict scores and ensure Predict is being used accurately.	Peter Hall		
QPI 13 Re-excision rates	Encourage surgeons to maintain a focus on both the patient experience, as well as the limitations of the service.	Matthew Barber		
QPI 17 Genomic testing	Clinicians to remain mindful of the potential benefit of genomic testing.	Oncologsts - all		
QPI 19 Use of DIBH technique in radiotherapy	Greater use of DIBH to be implemented to reduce cardiac morbidity.	Clinical oncologists - all		

Action Points for 2018

None identified at SCAN sign-off meeting 24/10/2019. There are a significant number of new QPIs which SCAN clinicians are responding to. Improvements against the new targets are anticipated in next year's report.

Action Points for 2017

None identified at SCAN sign-off meeting 23/10/2018.

Action Points for 2016

None identified.

Action Points for 2015

QPI	Action required	Person responsible for action	Date for update	Progress
QPI 9: HER2 for Decision Making	Investigate possible benefits of change to Her2 & FISH testing process for D&G: transfer from Glasgow to Edinburgh laboratories	Dr. Jeremy Thomas	01/06/2016	**Completed**

Breast Cancer QPI Attainment Summary 2019			Target %	Borders		D&G		Fife		Lothian		SCAN	
QPI 6 Immediate reconstruction	i) Immediate reconstruction		20	N 1 D 18	5.6%	N 3 D 28	10.7%	N 7 D 63	11.1%	N 59 D 141	41.8%	N 70 D 250	28.0%
	ii) Immediate reconstruction within 42 days		90	N 0 D 0	N/A	N 3 D 3	100%	N 5 D 7	71.4%	N 38 D 48	79.2%	N 46 D 58	79.3%
QPI 8 Minimising Hospital Stay	i) Day case surgery (conservation)	By HB surgery	60	N 33 D 33	100%	N 47 D 54	87.0%	N 106 D 132	80.3%	N 676 D 795	85.0%	N 862 D 1014	85.0%
		By HB residence	60	N 46 D 46	100%	N 47 D 55	85.5%	N 255 D 315	81.0%	N 517 D 610	84.8%	N 865 D 1026	84.3%
	ii) Mastectomy without reconstruction	By HB of treatment	60	N 1 D 18	5.6%	N 31 D 39	79.5%	N 43 D 67	64.2%	N 22 D 133	16.5%	N 97 D 257	37.7%
		By HB of Residence	60	N 1 D 18	5.6%	N 31 D 39	79.5%	N 53 D 89	59.6%	N 21 D 124	16.9%	N 106 D 270	39.3%
QPI 9 Her2 status for decision making			90	N 51 D 63	81.0%	N 62 D 94	66.0%	N 118 D 177	66.7%	N 686 D 779	88.1%	N 917 D 1113	82.4%
QPI 10 Radiotherapy for conservation in Older Adults			<40	N 0 D 0	N/A	N 0 D 3	0.0%	N 2 D 4	50.0%	N 18 D 31	58.1%	N 20 D 38	52.6%
QPI 11 Adjuvant chemotherapy	i) Hormone receptor (ER plus/minus PR) positive, HER2 negative breast cancer		80	N 3 D 9	33.3%	N 8 D 12	66.7%	N 17 D 20	85.0%	N 36 D 51	70.6%	N 64 D 92	69.6%
	ii) Triple negative or HER2 positive breast cancer		80	N 2 D 5	40.0%	N 3 D 3	100%	N 14 D 17	82.4%	N 23 D 30	76.7%	N 42 D 55	76.4%
QPI 13 Re-excision rates			<20	N 4 D 39	10.3%	N 8 D 52	15.4%	N 28 D 106	26.4%	N 164 D 696	23.6%	N 204 D 893	22.8%
QPI 14 Referral for genetics testing	i) Patients under 30		90	N 0 D 0	N/A	N 1 D 1	100%	N 3 D 3	100%	N 3 D 3	100%	N 7 D 7	100%
	ii) Patients under 50 (triple negative)		90	N 2 D 3	66.7%	N 3 D 3	100%	N 5 D 5	100%	N 14 D 14	100%	N 24 D 25	96.0%
QPI 15 30 day mortality following chemotherapy ***Data to be reported using Chemocare - Reports not yet available***		Neoadjuvant	<1	N D		N D		N D		N D		N D	
		Adjuvant	<1	N D		N D		N D		N D		N D	
		Palliative	<5	N D		N D		N D		N D		N D	

Breast Cancer QPI Attainment Summary 2019		Target %	**Borders**		**D&G**		**Fife**		**Lothian**		**SCAN**	
QPI 16 Clinical trials & Research Study access – patients consented to any trial (SCRN data)		15	N 13 D 75	17.4%	N 10 D 114	8.8%	N 17 D 208	8.2%	N 194 D 906	21.4%	N 234 D 1302	18.0%
QPI 17 Genomic testing		60	N 0 D 2	0.0%	N 5 D 8	62.5%	N 3 D 8	37.5%	N 9 D 21	42.9%	N 17 D 39	43.6%
QPI 18 Neoadjuvant chemotherapy (triple negative or HER2 positive, Stage II or III ductal breast cancer)	Patients receiving neoadjuvant chemo	80	N 10 D 11	90.9%	N 7 D 9	77.8%	N 27 D 36	75.0%	N 60 D 74	81.1%	N 104 D 130	80.0%
	Patients with pathological complete response	30	N 3 D 10	30.0%	N 3 D 7	42.9%	N 13 D 27	48.1%	N 27 D 60	45.0%	N 46 D 104	44.2%
QPI 19 Deep Inspiratory Hold (DIBH) Radiotherapy		80	N 4 D 20	20.0%	N 8 D 23	34.8%	N 23 D 57	40.4%	N 100 D 330	30.3%	N 135 D 430	31.4%

Introduction and Methods

Cohort
This report covers patients newly diagnosed with breast cancer in SCAN between 01/01/2019 and 31/12/2019. The results contained within this report are presented by NHS board of Staging and first treatment.

Dataset and Definitions
This report presents the performance of NHS Boards within the South East Scotland Cancer Network (SCAN) against Quality Performance Indicators (QPIs) developed by the Scottish Government in collaboration with the three Regional Cancer Networks in Scotland, Information Services Division (ISD), and Healthcare Improvement Scotland.

The stated intention is that QPIs should be responsive to changes in clinical practice and emerging evidence, and, in keeping with the overarching aim of the cancer quality work programme, they should focus attention on areas most important in terms of improving survival and patient experience whilst reducing variance and ensuring safe, effective and person-centred cancer care.

Following a period of development, public engagement and finalisation, each set of QPIs is published by Healthcare Improvement Scotland.[1] Accompanying datasets and measurability criteria for QPIs are published on the ISD website.[2] NHS boards are required to report against QPIs as part of a mandatory, publicly reported programme at a national level.

The Breast Cancer QPIs were implemented from 01/01/2012, results were first reported in November 2012, and they have since undergone formal review in 2016 and 2019.

The standard QPI format is shown below:

QPI Title:	Short title of Quality Performance Indicator (for use in reports etc.)	
Description:	Full and clear description of the Quality Performance Indicator.	
Rationale and Evidence:	Description of the evidence base and rationale which underpins this indicator.	
Specifications:	Numerator:	Of all the patients included in the denominator those who meet the criteria set out in the indicator.
	Denominator:	All patients to be included in the measurement of this indicator.
	Exclusions:	Patients who should be excluded from measurement of this indicator.
	Not recorded for numerator:	Include in the denominator for measurement against the target. Present as not recorded only if the patient cannot otherwise be identified as having met/not met the target.
	Not recorded for exclusion:	Include in the denominator for measurement against the target unless there is other definitive evidence that the record should be excluded. Present as not recorded only where the record cannot otherwise be definitively identified as an inclusion/exclusion for this standard.
	Not recorded for denominator:	Exclude from the denominator for measurement against the target. Present as not recorded only where the patient cannot otherwise be definitively identified as an inclusion/exclusion for this standard.
Target:	Statement of the level of performance to be achieved.	

[1] QPI documents are available at www.healthcareimprovementscotland.org
[2] Datasets and measurability documents are available at www.isdscotland.org

Audit Process

Data was analysed by the audit facilitators in each NHS board according to the measurability document provided by ISD. SCAN data was collated by Christine Dodds, SCAN Senior Audit Facilitator for Breast Cancer, and Kit Gilchrist, Audit Facilitator.

Data capture is focused around the weekly multidisciplinary meetings ensuring that data covering patient referral, investigations and diagnosis is being picked up through routine process.

Oncology data is obtained largely from electronic systems including downloads from ARIA (within the radiotherapy department) and ChemoCare for chemotherapy data. However, processes vary between the 5 separate hospitals providing a breast service in SCAN. Recent years have seen less reliance on the need to access case notes for data collection. Lothian has now ceased routine use of case notes, however, the process remains dependent on audit staff for capture and entry of most of the data, and for quality checks.

Patients were identified through registration at weekly multidisciplinary team meetings, including patients referred from the Scottish Breast Screening Programme. Data capture was largely dependent on the review of various hospitals electronic records systems. All SCAN Health Boards recorded the audit data in a national cancer audit database: eCase.

It should be noted that Borders, Dumfries & Galloway and Fife Health Boards each have one hospital providing a specialist service for the diagnosis and treatment of Breast cancer, whereas in Lothian there are two: St John's (SJH) in Livingston, West Lothian, and the Western General Hospital (WGH) in Edinburgh.

Each of the five hospitals provides surgery and chemotherapy but radiotherapy is provided centrally in Edinburgh Cancer Centre. Patients living closer to either Carlisle or Dundee may opt to have oncology treatment out with the SCAN region. Collecting complete audit data for these patients remains a challenge.

Lead Clinicians and Audit Personnel

SCAN Region	Hospital	Lead Clinician	Audit Support
NHS Borders	Borders General Hospital	Mr Shareef Al-Sabounchi	Alistair Johnston Suzanne Tunmore
NHS Dumfries & Galloway	Dumfries & Galloway Royal Infirmary	Ms Maria Bews-Hair	Campbell Wallis Jennifer Bruce
NHS Fife	Queen Margaret Hospital	Mr Christopher Cartlidge	Julie Whyte
SCAN & NHS Lothian	St John's Hospital Western General Hospital	Mr Matthew Barber Mr Oliver Young	Christine Dodds Kit Gilchrist

Data Quality

Estimate of case ascertainment

An estimate of case ascertainment (the percentage of the population with Breast cancer recorded in the audit) is made by comparison with the Scottish Cancer Registry five year average data: 2014 to 2018.

High levels of case ascertainment provide confidence in the completeness of the audit recording and contribute to the reliability of results presented. Levels greater than 100% may be attributable to an increase in incidence. Allowance should be made when reviewing results where numbers are small and variation may be due to chance.

Numbers recorded in audit: patients diagnosed 01/01/2019 to 31/12/2019

	Borders	D&G	Fife	Lothian	SCAN
Breast cancer	70	110	199	957	**1336**

Estimate of case ascertainment: calculated using the average of five years Cancer Registry data (2014 – 2018) by Region of Residence.

Cancer Registry totals by institution of diagnosis - all breast cancer referrals (screen-detected* and symptomatic)

**Patients diagnosed in SESBSP are counted under HB of first treatment*

Year of diagnosis	Borders	D&G	Fife	Lothian	SCAN
2014	75	126	195	887	**1283**
2015	72	139	257	899	**1367**
2016	71	99	185	872	**1227**
2017	85	95	194	916	**1290**
2018	70	111	207	957	**1346**
Total	**373**	**570**	**1038**	**4531**	**6513**
5 yr average	***74.6***	***114***	***207.6***	***906.2***	***1302.6***
SCAN 2019	70	110	199	957	**1336**
SCAN (% 5 yr)	93.8%	96.5%	97.10%	105.6%	**102.6%**

Case ascertainment methodology

Data tables were received from the Cancer Registry for the years 2014 – 2018 for all residents of the SCAN region with a diagnosis of a new primary breast cancer. The ISD analyst had removed duplicate records for patients with bilateral disease or multiple tumours, as well as patients treated privately, to ensure figures were comparable. These were entered into the table above, by year of diagnosis, and by the most probable HB of audit i.e. patients diagnosed through the South East Scotland Breast Screening Programme were counted according to where they commenced treatment.

A high proportion of new patients are diagnosed by Screening, with impalpable tumours requiring specialist equipment for investigations. These patients are frequently referred to the Edinburgh Breast Unit for staging rather than their local specialist unit.

These factors, and other instances of cross-border flows between Health Boards (often as a result of patient preferences) means that the overall estimate of case ascertainment for SCAN should be regarded as more reliable than the individual figure for each Board.

Quality Assurance
All hospitals in the region participate in a Quality Assurance (QA) programme provided by the National Services Scotland Information Services Division (ISD). QA of the Breast cancer data was carried out in 2019; the results are shown below:

	Borders	D&G	Fife	Lothian	Scotland
Accuracy of data recording	97.1%	100%	99.3%	95.3%	96.1%

NHS Lothian's score was affected by a number of missing adjuvant hormone therapy start dates.

Clinical Sign-off
This report compares data from reports prepared for individual hospitals and signed off as accurate following review by the lead clinicians from each service. The collated SCAN results are reviewed jointly by the lead clinicians, to assess variances and provide comments on results:

- Individual Health Board results were reviewed and signed-off locally.
- Collated results were presented and discussed by lead clinicians at Edinburgh Breast Unit on 03/12/2020
- The final draft of this SCAN regional comparative report will be circulated to members of the SCAN Breast Group during December 2020 for final comments.

Actions for improvement

After final sign-off, the process stipulates that this report should be sent to Clinical Governance groups with action plans for completion at Health Board level, if appropriate.

The report is uploaded to the SCAN website, together with action plans (where applicable), once it has been fully signed off and checked for any potentially disclosive material.

QPI Results

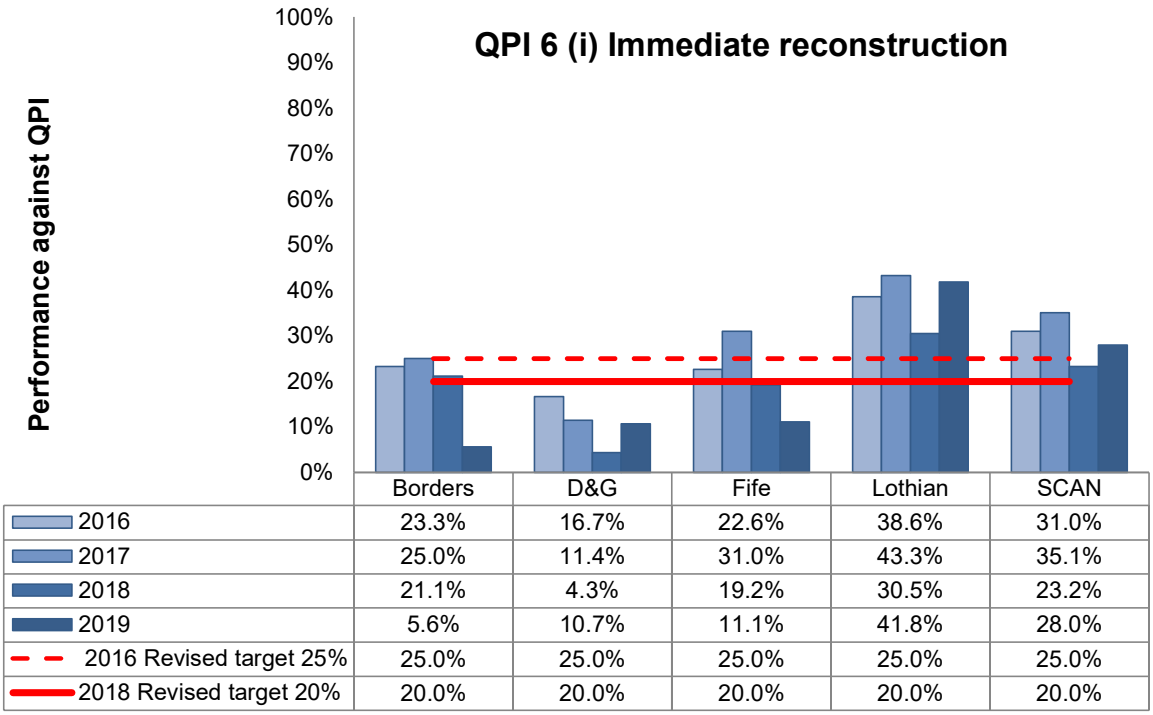
QPI 6 (i): Immediate Reconstruction Rate Target = 20%

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 males.

Target = 20%	Borders	D&G	Fife	*SJH*	*WGH*	Lothian	SCAN
2019 cohort	**70**	**110**	**199**	112	845	**957**	**1336**
Ineligible for this QPI	52	82	136	87	729	816	**1086**
Numerator	1	3	7	6	53	59	70
Not recorded	0	0	0	0	0	0	0
Denominator	18	28	63	25	116	141	250
Not Recorded for Exclusions	0	0	0	0	0	0	0
Not Recorded for Denominator	0	0	0	0	12	12	12
% Performance	**5.6%**	**10.7%**	**11.1%**	**24.0%**	**45.7%**	**41.8%**	**28.0%**



	Borders	D&G	Fife	Lothian	SCAN
2016	23.3%	16.7%	22.6%	38.6%	31.0%
2017	25.0%	11.4%	31.0%	43.3%	35.1%
2018	21.1%	4.3%	19.2%	30.5%	23.2%
2019	5.6%	10.7%	11.1%	41.8%	28.0%
2016 Revised target 25%	25.0%	25.0%	25.0%	25.0%	25.0%
2018 Revised target 20%	20.0%	20.0%	20.0%	20.0%	20.0%

Comments

It was noted that patients who are likely to require adjuvant radiotherapy following surgery are discouraged from having an immediate reconstruction. Delayed reconstruction is clinically more appropriate for this group of patients, and this is inevitably reflected in the figures above.

Borders: 17 patients did not have immediate reconstruction at the time of mastectomy. In 10 cases this was the patient's choice. In 3 cases it was because the patient was not suitable for reconstruction. 4 other patients underwent delayed reconstruction.

Dumfries & Galloway: 25 patients did have an immediate reconstruction. In Dumfries & Galloway there are different pathways for symptomatic and screening patients. Screening patients having IBR are treated and audited in Ayrshire and Arran whereas screening patients having standard mastectomy are treated and audited in Dumfries & Galloway. This artificially reduces reported performance in Dumfries & Galloway.

Dumfries & Galloway clinicians also commented that patients who would require to have immediate reconstruction in Edinburgh are influenced by the significant travel that would be involved, and are therefore less likely to proceed.

Fife: 56 patients did not have immediate reconstruction. Based on the reasons found, 29% of patients did not receive an immediate reconstruction due to patient choice. A clinical recommendation was made for 32% based on a variety of reasons; mainly the potential for post-mastectomy radiotherapy, co-morbidities/risk/borderline-fitness and smoking history. 5% could not be offered an immediate reconstruction due to this procedure being suspended during the first phase of the coronavirus pandemic.

Lothian met the target for this QPI.

Action: Further data to be sought regarding the number of patients resident in Dumfries and Galloway having immediate reconstruction in Glasgow or Crosshouse Hospitals.

QPI 6 (ii): Immediate Reconstruction Rate

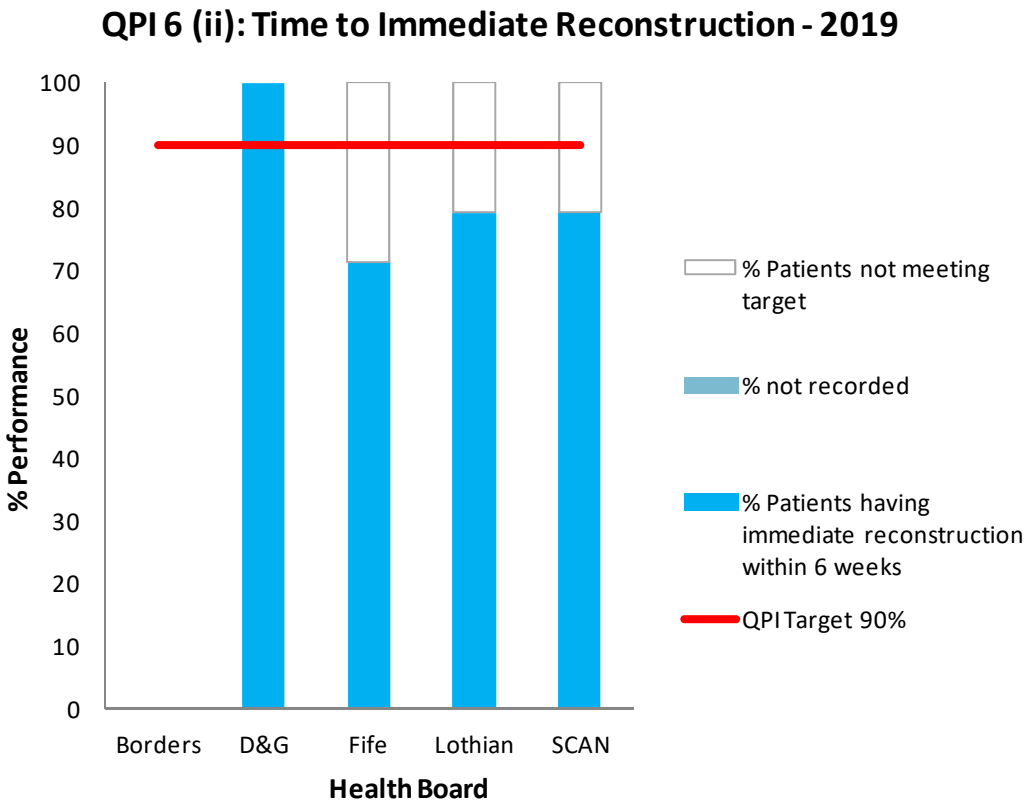
Target = 90%

Numerator = Number of patients with breast cancer undergoing immediate breast reconstruction at time of mastectomy & within 6 weeks (42 days) of treatment decision.

Denominator = All patients with breast cancer undergoing immediate reconstruction at time of mastectomy.

Exclusions = All patients with M1 disease, males, and patients undergoing neoadjuvant chemotherapy.

Target = 90%	**Borders**	**D&G**	**Fife**	*SJH*	*WGH*	**Lothian**	**SCAN**
2019 cohort	**70**	110	199	112	845	**957**	**1336**
Ineligible for this QPI	70	107	192	106	803	909	**1278**
Numerator	0	3	5	4	34	38	46
Not recorded	0	0	0	0	0	0	0
Denominator	0	3	7	6	42	48	58
Not Recorded for Exclusions	0	0	0	0	0	0	0
Not Recorded for Denominator	0	0	0	0	0	0	0
% Performance	**N/A**	**100%**	**71.4%**	**66.7%**	**81.0%**	**79.2%**	**79.3%**



Comments

QPI 6 (ii) is reported here for the first time because it required a new data field to be collected.

Borders: No patients were eligible for this QPI.

Dumfries & Galloway was the only Health Board to meet the QPI target. 2 of the 3 patients there eligible for this QPI were referred to Edinburgh for reconstruction and treated there. Matthew Barber expressed hope in the SCAN Breast group meeting on 11/11/2020 that Dumfries & Galloway surgery capacity will improve; the issue concerns the ability of the Plastics service in Dumfries to meet the demand quickly enough, particularly as these patients require surgery to treat their cancer, which introduces urgency to their choice of immediate reconstruction.

Fife: The Denominator number is small - only 2 patients did not meet the target, resulting in Fife not meeting this QPI. 1 of these patients had their surgery carried out in Lothian and the other was given a surgical date only once the implant supply had been checked (missing the target by 6 days). Since then, an implant bank has been established in Fife to ensure this delay does not recur.

Lothian: 10 patients with breast cancer did not undergo immediate breast reconstruction within 6 weeks of the treatment decision. 5 patients chose to delay surgery due to holidays and other such commitments. In the case of another patient, the decision was made to proceed with adjuvant chemotherapy first. In 2 complex cases surgery was booked outwith the recommended timeframe but both patients were being treated with neoadjuvant Letrozole. 1 patient experienced a delay in receiving review by plastic surgeons; it is unclear why the patient was not seen earlier.

Action: Further audit required to establish the types of immediate reconstruction being carried out in this cohort. This will enable clinicians to assess the degree to which delays are attributable to Plastics capacity.

QPI 8 (i): Minimising Hospital Stay Target = 60%
(Based on SMR01 Data and Provided to Boards by ISD via the ACaDMe system).

Numerator = Number of patients with breast cancer undergoing wide excision and/or axillary sampling procedure (sentinel node biopsy or node sample (≥4 nodes), discharged on same day as their procedure.

Denominator = All patients with breast cancer undergoing wide excision and/or axillary sampling procedure (sentinel node biopsy or node sample (≥4 nodes).

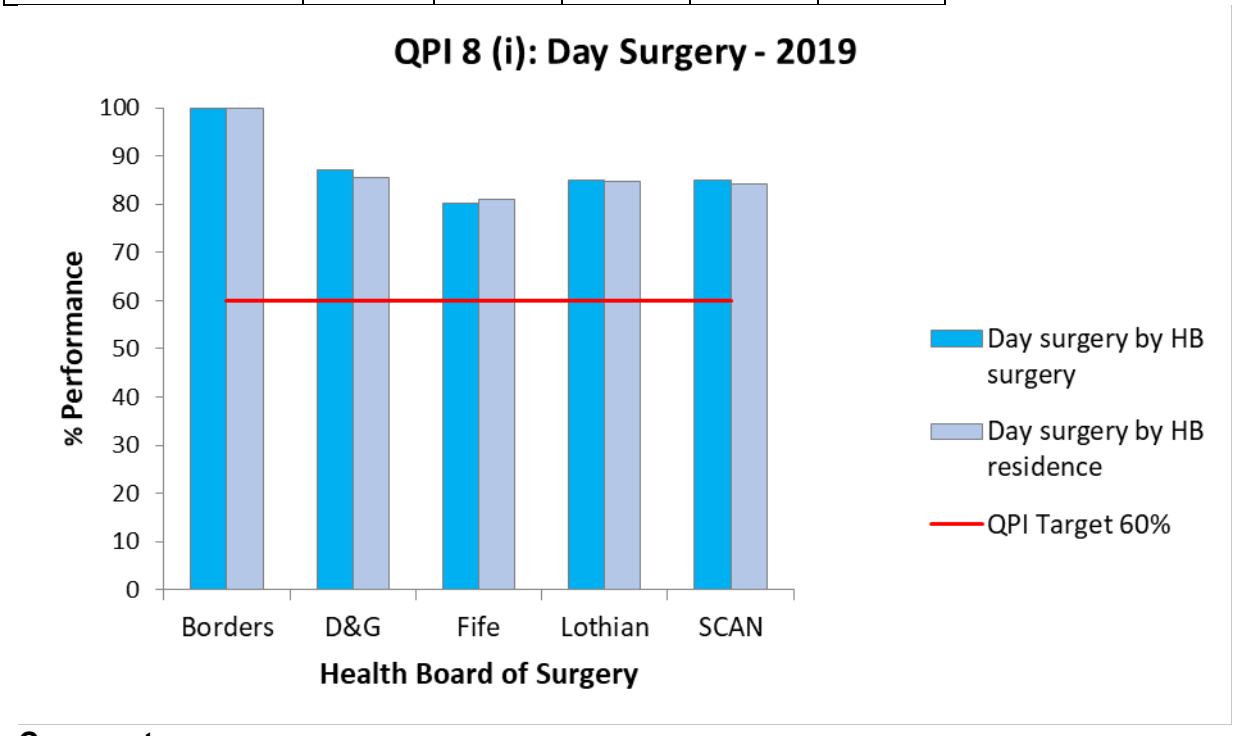
Exclusions = All patients with breast cancer undergoing partial breast reconstruction.

By Health Board of Surgery:

Day surgery only - without overnight hospital stay	Borders	D&G	Fife	*WGH*	*SJH*	Lothian	SCAN
Numerator	33	47	106	*630*	*46*	676	**862**
Denominator	33	54	132	*744*	*51*	795	**1014**
% Performance	100.0%	87.0%	80.3%	*84.7%*	*90.2%*	85.0%	**85.0%**

By Health Board of Residence:

Day surgery only - without overnight hospital stay	Borders	D&G	Fife	Lothian	SCAN
Numerator	46	47	255	517	**865**
Denominator	46	55	315	610	**1026**
% Performance	100.0%	85.5%	81.0%	84.8%	**84.3%**



Comments

All boards met the target for this QPI, and have done since the outset.

Action: Not required

Historical summary

This QPI has been met by all SCAN Health Boards since measurement started in 2013.

QPI 8 (i): Day case surgery	Borders	D&G	Fife	*SJH*	*WGH*	Lothian	SCAN
2019 day case surgery	100.0%	87.0%	80.3%	*90.2%*	*84.7%*	85.0%	85.0%
2018 day case surgery	71.1%	86.6%	69.4%	98.0%	82.5%	83.5%	81.2%
2017 day case surgery	70.3%	71.9%	75.2%	90.7%	76.3%	77.3%	76.4%
2016 day case surgery	70.6%	75.4%	71.0%	94.8%	75.8%	77.4%	76.1%
2015: no overnight stay							
2015 Performance	65.8%	77.1%	67.3%	93.2%	75.8%	76.7%	75.4%
2013 & 2014: maximum 1 overnight stay							
2014 Performance	81.6%	88.0%	96.1%	93.1%	92.9%	93.0%	93.04%
2013 Performance	92.3%	97.9%	97.1%	93.8%	93.1%	93.7%	94.4%

2012 - not available

QPI 8 (ii): Minimising Hospital Stay Target = 60%

(Based on SMR01 Data and Provided to Boards by ISD via the ACaDMe system).

Numerator = Number of patients with breast cancer undergoing mastectomy (without reconstruction) with a maximum hospital stay of 1 night following the procedure.

Denominator = All patients with breast cancer undergoing mastectomy (without reconstruction).

Exclusions = All patients undergoing breast reconstruction.

By Health Board of Treatment:

Minimum 1 overnight stay for mastectomy (without reconstruction)	Borders	D&G	Fife	*WGH*	*SJH*	Lothian	SCAN
Numerator	1	31	43	*21*	*1*	22	**97**
Denominator	18	39	67	*100*	*33*	133	**257**
% Performance	5.6%	79.5%	64.2%	*21.0%*	*3.0%*	16.5%	**37.7%**

By Health Board of Residence:

Minimum 1 overnight stay for mastectomy (without reconstruction)	Borders	D&G	Fife	Lothian	SCAN
Numerator	1	31	53	21	**106**
Denominator	18	39	89	124	**270**
% Performance	5.6%	79.5%	59.6%	16.9%	**39.3%**

Comments where the QPI was not met:

Borders: Removal of drains later on the day of surgery has been agreed in principal. The challenge appears to be one of changes to mindset, as previous practices have been established over many years.

Lothian: During 2019 processes at St John's were changed to allow these patients to be seen by a physiotherapist sooner, allowing for earlier discharge. The Western General does have a policy for next-day discharge for these patients but it has not yet become embedded in practice.

Action: Ensure new surgical staff are aware of the intention to discharge these patients the day after their surgery, where possible.

QPI 9: HER2 Status for Decision Making

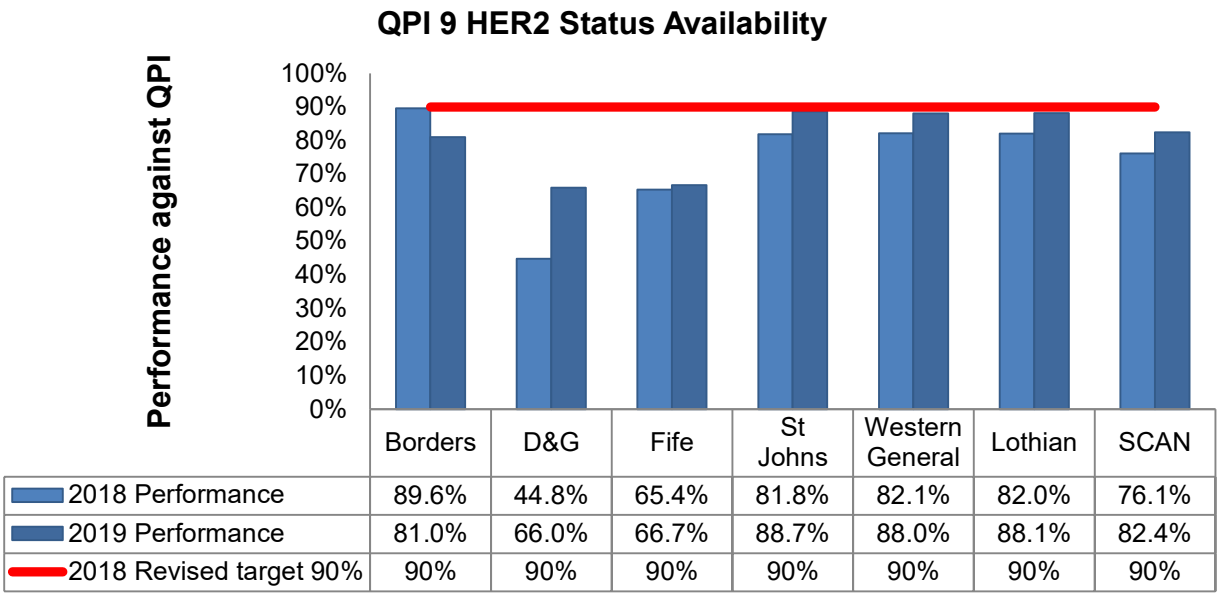
Target = 90%

Numerator = Number of patients with invasive breast cancer for whom the HER2 status (as defined by IHC) is available within 14 days of the core biopsy.

Denominator = All patients with invasive breast cancer.

Exclusions = Patients where no invasion is present in the core biopsy.

Target = 90%	**Borders**	**D&G**	**Fife**	*SJH*	*WGH*	**Lothian**	**SCAN**
2019 cohort	**70**	110	**199**	112	845	**957**	**1336**
Ineligible for QPI	7	16	22	15	163	178	**223**
Numerator	51	62	118	86	600	686	917
Not recorded	0	0	0	0	6	6	6
Denominator	63	94	177	97	682	779	1113
Not Recorded for Exclusions	0	0	0	0	0	0	0
Not Recorded for Denominator	0	0	0	0	0	0	0
% Performance	**81.0%**	**66.0%**	**66.7%**	**88.7%**	**88.0%**	**88.1%**	**82.4%**



Comments

HER2 testing is carried out centrally in Edinburgh for most SCAN Health Boards (but see the Dumfries comment below). An internal audit of HER2 testing undertaken by the Pathology department in Edinburgh found that there is no difference in the time taken to process tissue blocks, regardless of which Health Board sent them. The remaining issue relates to the time taken for the samples to be collected and transported to Edinburgh.

Of the cases not meeting the target of 14 days, many results were noted to be taking only 15 days.

Overall, the more lengthy cases tended to be those requiring a FISH test in addition to the initial IHC test, since this adds an additional stage to the whole process.
Staffing issues have improved within the department since 2019.

Borders: HER2 testing for the Borders is performed by Lothian labs. Time to transport the samples has to be factored in and has resulted in delays for some cases.

Dumfries & Galloway: There were 32 patients outwith the timescale for this QPI ranging from 15 to 40 days (24 within 21 days). Also, some D&G patients will have had HER2 initiated by the Screening service in Glasgow, not Lothian labs, although the majority are Lothian.

Following the sign-off meeting, the Pathology department in Dumfries agreed to send blocks to Edinburgh for HER2 testing before the core biopsy report has been formally authorised. Further discussion with the Edinburgh laboratory staff will take place to finalise the revised process.

Fife: HER2 testing for Fife is performed by Lothian labs. Time to transport the samples has to be factored in. Ashley Graham (in the SCAN Breast group meeting 11/11/2020) referred to known staffing issues within Lothian labs during 2019. Fife are now requesting HER2 as soon as they need it, rather than waiting for the initial MDM discussion.

Lothian: 87 breast cancer patients in Lothian (out of 779 in total eligible for this QPI) did not have their HER2 status available within 14 days of the core biopsy, including 82 patients at WGH. Of the 82 WGH patients, 8 did not have their HER2 status available within thirty days: 2 came from elsewhere; 1 had an unusual FISH result; 1 had a low volume of invasive cancer in the core so HER2 was deferred to the WLE specimen; 1 was missing the core result from screening; and in 3 other cases no obvious reason is apparent.

Action: Not required.

QPI 10: Radiotherapy for Breast Conservation in Older Adults

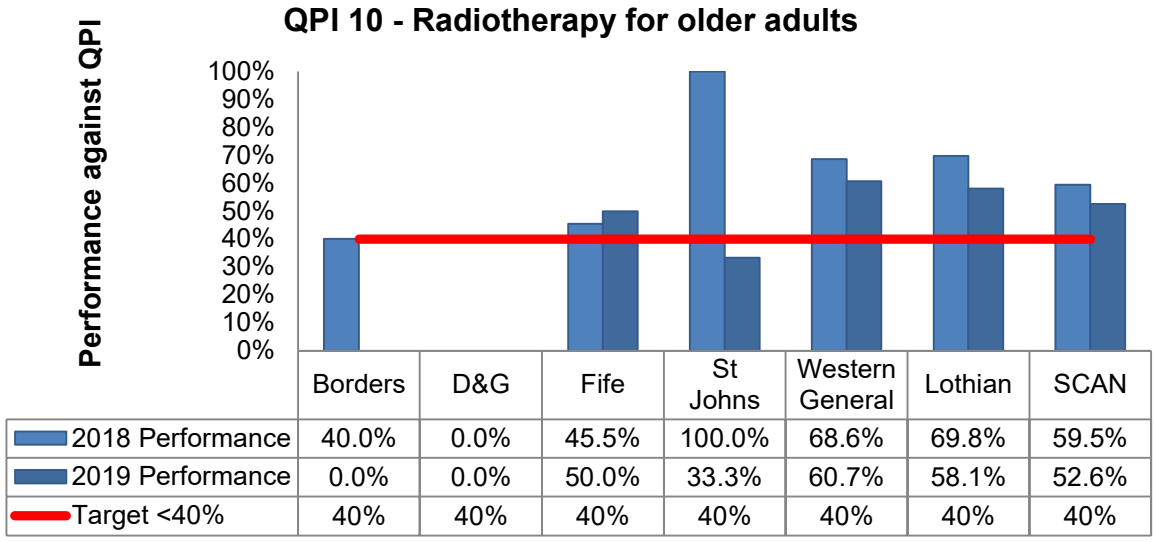
Target <40%

Numerator = Number of patients ≥70 years of age with T1 N0, ER positive, Her2 negative, LVI negative, G1 to G2 breast cancer, undergoing conservation surgery (completely excised with margins ≥1mm) with hormone therapy, who receive radiotherapy.

Denominator = All patients ≥70 years of age with T1 N0, ER positive, Her2 negative, LVI negative, G1 to G2 breast cancer, undergoing conservation surgery (completely excised with margins ≥1mm) with hormone therapy.

Exclusions = All patients with breast cancer taking part in clinical trials of radiotherapy treatment.

Target <40%	**Borders**	**D&G**	**Fife**	*SJH*	*WGH*	**Lothian**	**SCAN**
2019 cohort	**70**	**110**	**199**	112	845	**957**	**1336**
Ineligible for this QPI	70	107	195	109	817	926	**1298**
Numerator	0	0	2	1	17	18	20
Not recorded	0	0	0	0	0	0	0
Denominator	0	3	4	3	28	31	38
Not Recorded for Exclusions	0	0	0	0	0	0	0
Not Recorded for Denominator	0	0	0	0	9	9	9
% Performance	**N/A**	**0.0%**	**50.0%**	**33.3%**	**60.7%**	**58.1%**	**52.6%**



	Borders	D&G	Fife	St Johns	Western General	Lothian	SCAN
2018 Performance	40.0%	0.0%	45.5%	100.0%	68.6%	69.8%	59.5%
2019 Performance	0.0%	0.0%	50.0%	33.3%	60.7%	58.1%	52.6%
Target <40%	40%	40%	40%	40%	40%	40%	40%

Comments

Borders had no patients in this specific category.

Dumfries & Galloway met this QPI.

Fife: 2 Fife patients in the denominator for this QPI received radiotherapy in Lothian. The reasons for treatment being commenced are not recorded.

Lothian: The single outlier at SJH was given radiotherapy to reduce the risk of local recurrence. Of the 17 outliers at WGH, in 12 cases no reason was cited in the correspondence for them being given radiotherapy. In the other 5 cases radiotherapy was given to reduce the risk of recurrence.

Since 2019 fewer of these patients are being referred for discussion of radiotherapy and clinical oncologists believe that practices have changed.

Action: Not required.

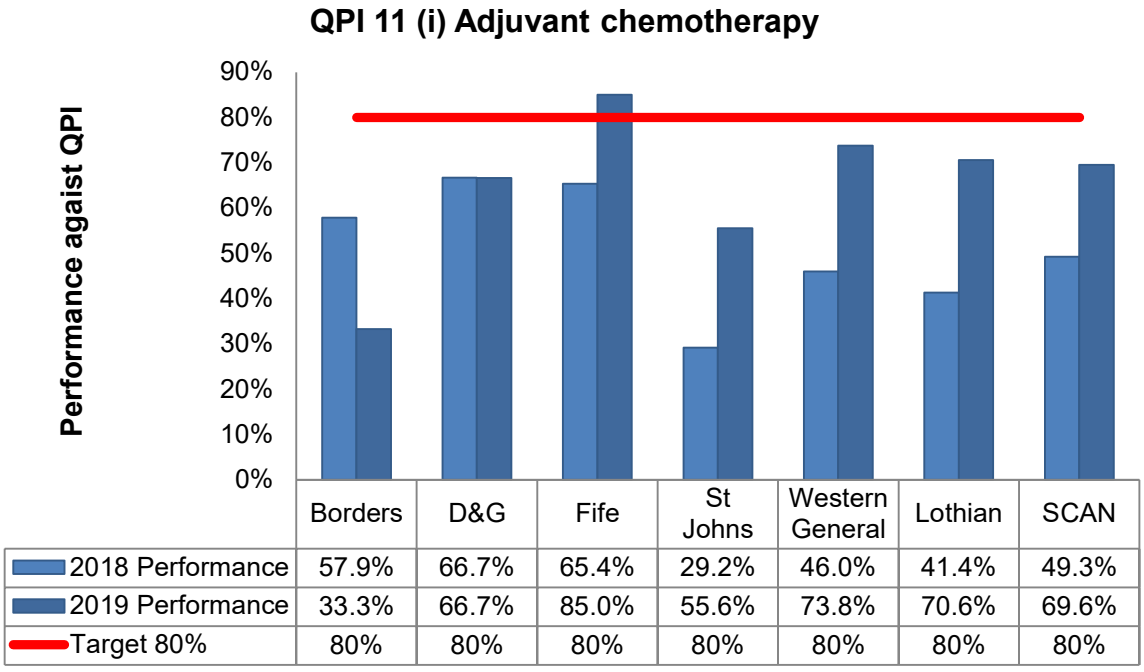
QPI 11 (i): Adjuvant Chemotherapy Target = 80%

Numerator = number of patients with hormone receptor (ER plus/minus PR) 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.

Denominator = All patients with hormone receptor (ER plus/minus PR) 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.

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

Target = 80%	**Borders**	**D&G**	**Fife**	*SJH*	*WGH*	**Lothian**	**SCAN**
2019 cohort	**70**	**110**	**199**	112	845	**957**	**1336**
Ineligible for QPI	61	98	179	103	803	**906**	**1244**
Numerator	3	8	17	5	31	**36**	64
Not recorded	0	0	0	0	0	**0**	0
Denominator	9	12	20	9	42	**51**	92
Not Recorded for	0	0	1	0	2	2	3
Not Recorded for	0	0	2	1	2	3	5
% Performance	**33.3%**	**66.7%**	**85.0%**	**55.6%**	**73.8%**	**70.6%**	**69.6%**



Comments

Borders: 6 patients in the denominator did not undergo adjuvant chemotherapy. 4 were unfit for surgery and 2 declined.

Dumfries & Galloway: Of the 4 outliers, 3 declined and 1 did not have adjuvant chemotherapy due to co-morbidities.

Fife met the QPI target.

Lothian: 15 patients in the denominator did not undergo adjuvant chemotherapy. Of those, 5 declined treatment. 2 further patients had significant co-morbidities. *In the cases of 3 patients, the predicted*

benefit of adjuvant chemotherapy may have been underestimated; 1 patient had residual disease in the axilla therefore it was deemed more appropriate to proceed to radiotherapy. Another patient did not undergo chemotherapy due to a mixture of patient choice, added risk imposed by the COVID-19 pandemic, and a good response to hormone therapy. It is unclear why 3 additional patients did not undergo adjuvant chemotherapy as no reason is cited.

Discussion at the regional sign-off meeting revealed that clinicians using the online version of Predict at the MDMs previously defaulted to selecting 2nd generation chemotherapy whereas SCAN Health Boards now base decision-making around 3rd generation. This is likely to explain some of the differences between the survival predictions recorded and those produced using the locally developed algorithm. In addition, the online version now incorporates the estimated benefit to be gained from 10 years of adjuvant endocrine therapy, which will contribute towards the decision to treat some patients with adjuvant endocrine therapy rather than chemotherapy.

Additional discrepancies in the Predict scores may stem from how the package is being used and we are awaiting feedback from oncologists.

Action: Refer back to medical oncology for decision on how to resolve the discrepancy and ensure Predict is being used accurately.

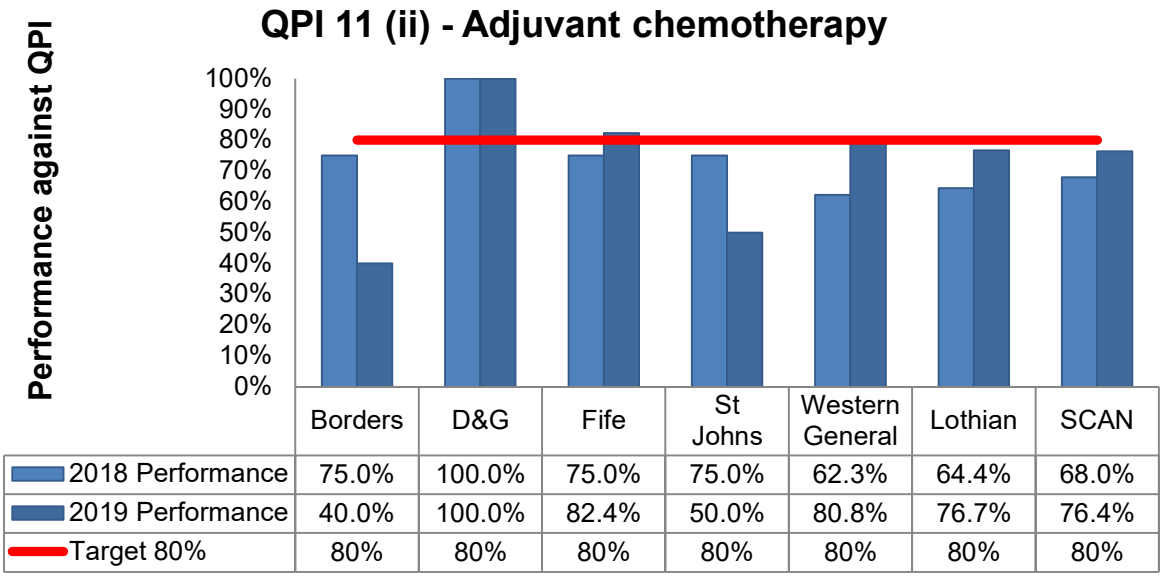
QPI 11 (ii): Adjuvant Chemotherapy Target = 80%

Numerator = Number of patients with triple negative or Her2 positive breast cancer with a >5% overall survival benefit of chemotherapy treatment predicted at 10 years, who undergo adjuvant chemotherapy.

Denominator = All patients with triple negative or Her2 positive breast cancer who have a >5% overall survival benefit of chemotherapy treatment predicted at 10 years.

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

Target = 80%	**Borders**	**D&G**	**Fife**	*SJH*	*WGH*	**Lothian**	**SCAN**
2019 cohort	**70**	**110**	**199**	112	845	**957**	**1336**
Ineligible for QPI	65	107	182	108	819	927	**1281**
Numerator	2	3	14	2	21	23	**42**
Not recorded	0	0	0	0	0	0	**0**
Denominator	5	3	17	4	26	30	**55**
Not Recorded for Exclusions	0	0	2	0	0	0	**2**
Not Recorded for Denominator	0	0	0	1	0	1	**1**
% Performance	**40.0%**	**100.0%**	**82.4%**	**50.0%**	**80.8%**	**76.7%**	**76.4%**



	Borders	D&G	Fife	St Johns	Western General	Lothian	SCAN
2018 Performance	75.0%	100.0%	75.0%	75.0%	62.3%	64.4%	68.0%
2019 Performance	40.0%	100.0%	82.4%	50.0%	80.8%	76.7%	76.4%
Target 80%	80%	80%	80%	80%	80%	80%	80%

Comments

Borders: Of the 3 Borders outliers, 1 patient declined to have adjuvant chemotherapy and 2 others had significant co-morbidities and were deemed unfit.

Dumfries & Galloway met the QPI target.

Fife met the QPI target.

Lothian: 7 patients in the denominator did not undergo adjuvant chemotherapy. 2 declined. 1 had a small lesion and clinicians concluded it was very low risk. 1 was not fit for chemotherapy. In the other 3 cases it is unclear why no adjuvant chemotherapy was given as no reason is cited in the correspondence.

The previous comments regarding Predict also apply here.

It is anticipated that a proportion of patients falling into this group will have been treated with neoadjuvant chemotherapy, and that they will have been excluded from this denominator as a result. The remaining patients may be less fit and less likely to be suitable for treatment with adjuvant chemotherapy.

Action: Further audit requested to establish the number of patient in this group who were excluded due to having neoadjuvant chemotherapy.

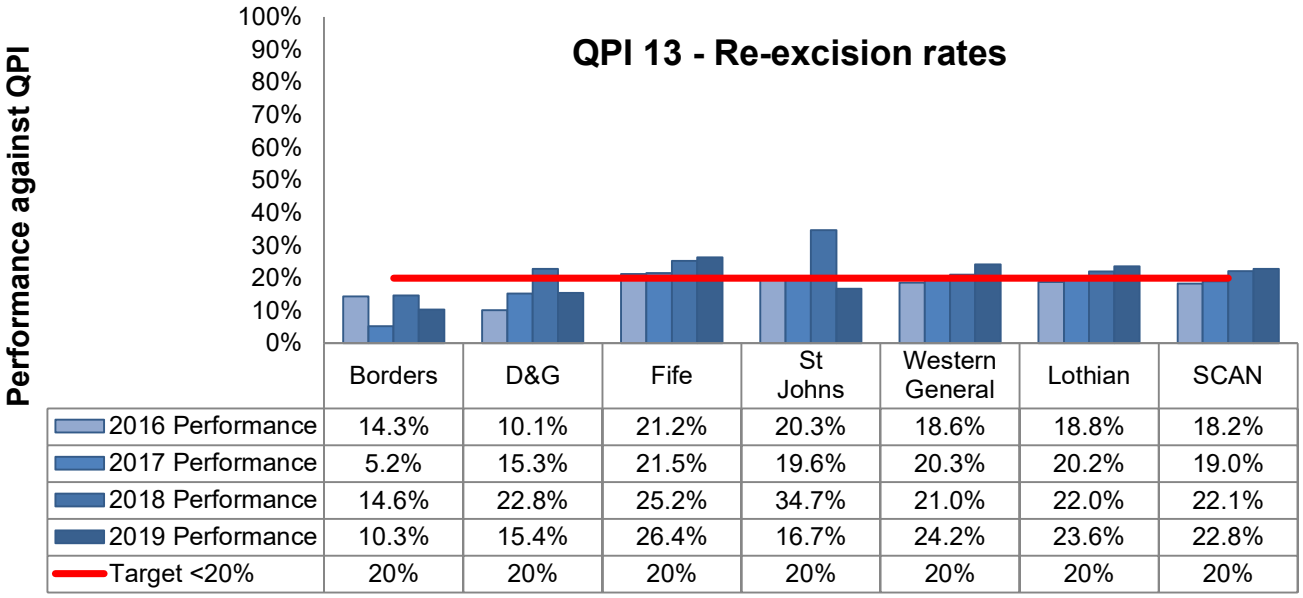
QPI 13: Re-excision Rates Target <20%

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.
(N.B. where the initial surgery is an excision biopsy, a WLE as a second procedure is not counted as a re-excision).

Denominator = All patients with breast cancer (invasive or in situ) having conservation surgery as their initial or only breast surgery.

Exclusions = LCIS only.

Target <20%	Borders	D&G	Fife	*SJH*	*WGH*	Lothian	SCAN
2019 cohort	**70**	**110**	**199**	112	845	**957**	**1336**
Ineligible for QPI	31	58	93	52	209	261	**443**
Numerator	4	8	28	10	154	164	204
Not recorded	0	0	0	0	0	0	0
Denominator	39	52	106	60	636	696	893
Not Recorded for Exclusions	0	0	0	0	0	0	0
Not Recorded for Denominator	0	0	0	0	0	0	0
% Performance	**10.3%**	**15.4%**	**26.4%**	**16.7%**	**24.2%**	**23.6%**	**22.8%**



	Borders	D&G	Fife	St Johns	Western General	Lothian	SCAN
2016 Performance	14.3%	10.1%	21.2%	20.3%	18.6%	18.8%	18.2%
2017 Performance	5.2%	15.3%	21.5%	19.6%	20.3%	20.2%	19.0%
2018 Performance	14.6%	22.8%	25.2%	34.7%	21.0%	22.0%	22.1%
2019 Performance	10.3%	15.4%	26.4%	16.7%	24.2%	23.6%	22.8%
Target <20%	20%	20%	20%	20%	20%	20%	20%

Comments

Borders: Met the target. (Of the 4 Borders patients in the Numerator, 2 had a clearance after initial surgery due to positive nodes, 1 had two re-excisions plus a clearance, and another had a re-excision followed by a mastectomy.)

Dumfries & Galloway met the QPI target.

Fife: Fife was undergoing significant surgical staff changes during 2019 which may have contributed to the number of re-excisions being carried out.
Cavity shaves have been tried but found not to be particularly helpful.

Lothian: Specimen X-rays are used in Lothian with the aim of identifying close margins during surgery. There is a fine balance to be struck between not taking too much tissue (i.e. maintaining cosmesis) and striving to prevent additional procedures for the patient, and not over-burdening the service.

Action: Encourage surgeons to maintain a focus on both the patient experience, as well as the limitations of the service.

QPI 14 (i): Referral for Genetics Testing

Target = 90%

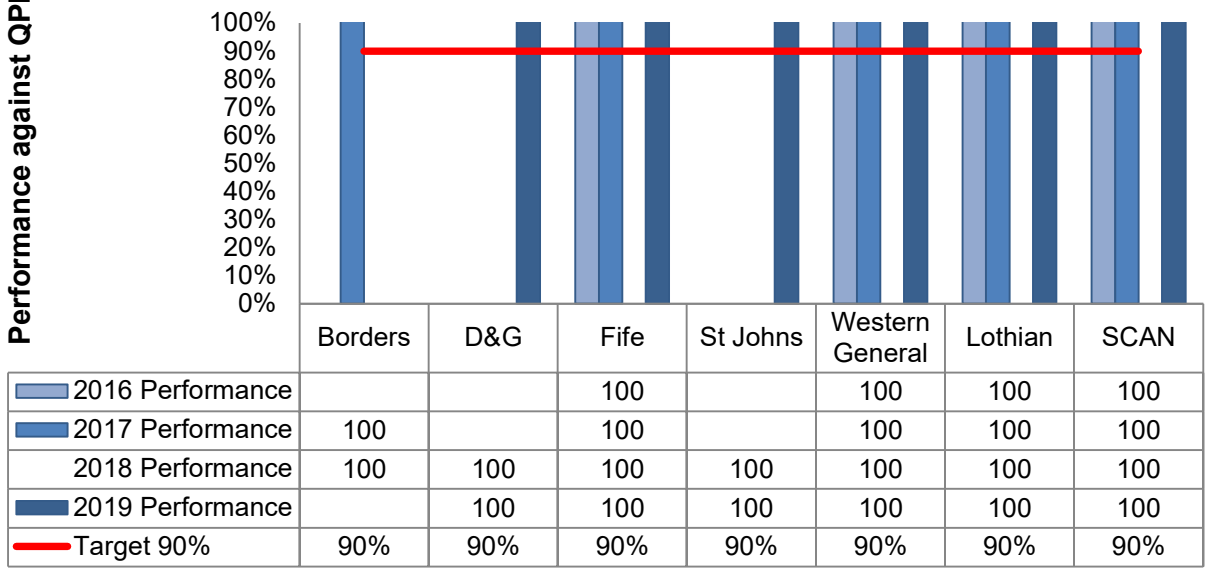
Numerator = Number of patients with breast cancer who are aged under 30 years at diagnosis referred to a specialist clinic for genetics testing.

Denominator = Number of patients with breast cancer who are aged under 30 years at diagnosis.

Exclusions = None.

Target = 90%	**Borders**	**D&G**	**Fife**	*SJH*	*WGH*	**Lothian**	**SCAN**
2019 cohort	**70**	**110**	**199**	112	845	**957**	**1336**
Ineligible for QPI	70	109	196	111	843	954	**1329**
Numerator	0	1	3	1	2	3	7
Not recorded	0	0	0	0	0	0	0
Denominator	0	1	3	1	2	3	7
Not Recorded for Exclusions	0	0	0	0	0	0	0
Not Recorded for Denominator	0	0	0	0	0	0	0
% Performance	**N/A**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

QPI 14 (i) Referral for genetics testing (patients aged <30)



	Borders	D&G	Fife	St Johns	Western General	Lothian	SCAN
2016 Performance			100		100	100	100
2017 Performance	100		100		100	100	100
2018 Performance	100	100	100	100	100	100	100
2019 Performance		100	100	100	100	100	100
Target 90%	90%	90%	90%	90%	90%	90%	90%

(Blank cells in the chart indicate the health board had no patients in this category)

Comments

All 3 Health Boards with patients eligible for this QPI surpassed the target.

All breast cancer patients under 30 years at diagnosis were referred for genetics testing in SCAN.

QPI 14 (ii): Referral for Genetics Testing

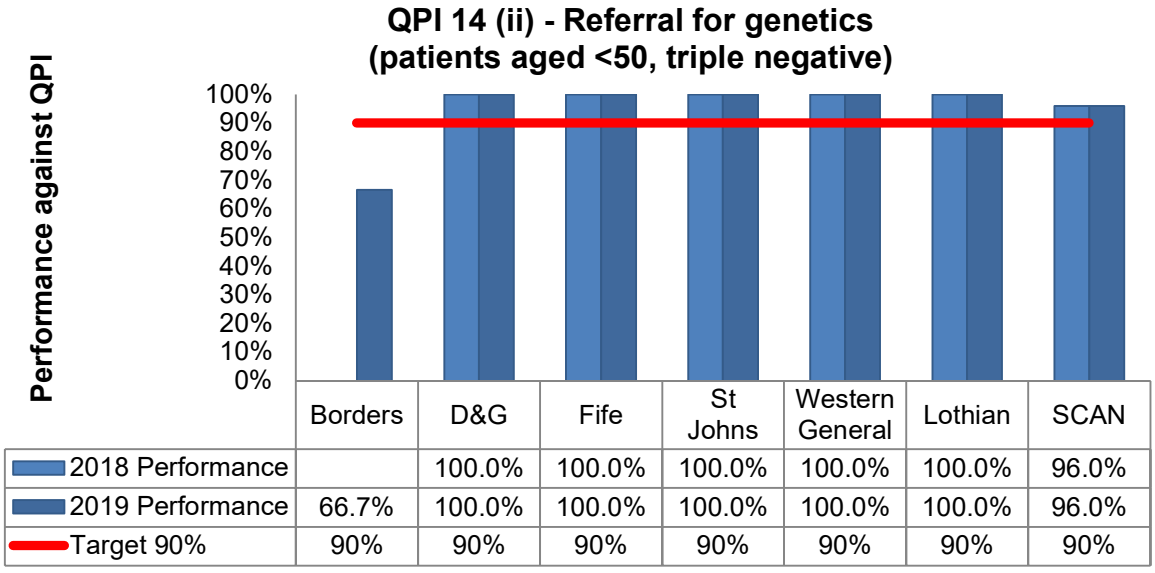
Target = 90%

Numerator = Number of patients with triple negative breast cancer who are aged under 50 years at diagnosis referred to a specialist clinic for genetics testing.

Denominator = Number of patients with triple negative breast cancer who are aged under 50 years at diagnosis.

Exclusions = None.

Target = 90%	**Borders**	**D&G**	**Fife**	*SJH*	*WGH*	**Lothian**	**SCAN**
2019 cohort	**70**	**110**	**199**	112	845	**957**	**1336**
Ineligible for QPI	67	107	194	109	834	943	**1311**
Numerator	2	3	5	3	11	14	24
Not recorded	0	0	0	0	0	0	0
Denominator	3	3	5	3	11	14	25
Not Recorded for Exclusions	0	0	0	0	0	0	0
Not Recorded for Denominator	0	0	0	0	0	0	0
% Performance	**66.7%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**96.0%**



	Borders	D&G	Fife	St Johns	Western General	Lothian	SCAN
2018 Performance		100.0%	100.0%	100.0%	100.0%	100.0%	96.0%
2019 Performance	66.7%	100.0%	100.0%	100.0%	100.0%	100.0%	96.0%
Target 90%	90%	90%	90%	90%	90%	90%	90%

(Change to age specification in 2018. Blank cells in the chart below indicate the health board had no patients in this category)

Comments

Borders: One patient was not referred. No explanation was recorded in the notes for this patient however an oncologist has since written to the patient and offered a genetics referral.

QPI 15: 30 Day Mortality following Chemotherapy

The intention is that these results will be reported through ChemoCare, however these data are not available at the time of reporting.

Oncologists regularly review morbidity following chemotherapy and have requested that these findings are included here.

N.B. It is important to note that the patients under review are not the same group as have been reported elsewhere in this report. They were all treated with chemotherapy during 2019, but their diagnosis date could have been at any time. As it transpires, all 25 patients who died within 30 days of chemotherapy treatment were having palliative treatment for metastatic disease.

2019 SACT 30d mortality	D&G	SJH	ECC	FIFE	BGH	**Total SCAN**
No. of 30 day mortalities	1	1	15	6	2	**25**
Total no. of chemo patients	88	140	503	193	58	**982**
Mortality rate (%)	**1.14**	**0.71**	**2.98**	**3.11**	**3.45**	**2.55**

QPI 16: Clinical Trials and Research Study Access

Target = 15%

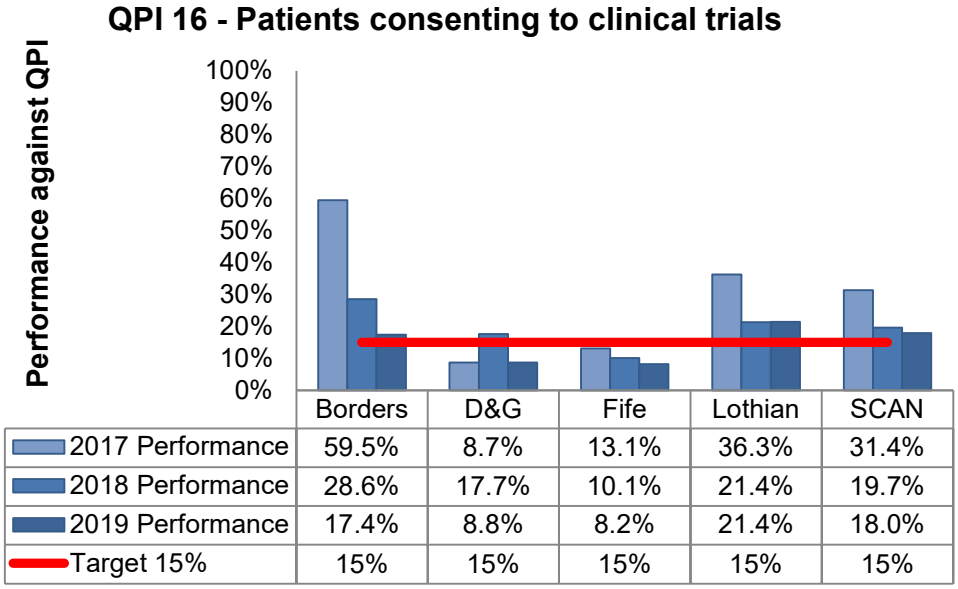
N.B. The denominator for this QPI is identified by using the five-year average of Scottish Cancer Registry data.

Numerator = Number of patients diagnosed with breast cancer who consented to a clinical trial / research study.

Denominator = All patients diagnosed with breast cancer.

Exclusions = None.

Target = 15%	**Borders**	**D&G**	**Fife**	**Lothian**	**SCAN**
Numerator	13	10	17	194	234
Denominator	75	114	208	906	1302
Performance	**17.4%**	**8.8%**	**8.2%**	**21.4%**	**18.0%**



	Borders	D&G	Fife	Lothian	SCAN
2017 Performance	59.5%	8.7%	13.1%	36.3%	31.4%
2018 Performance	28.6%	17.7%	10.1%	21.4%	19.7%
2019 Performance	17.4%	8.8%	8.2%	21.4%	18.0%
Target 15%	15%	15%	15%	15%	15%

(This QPI was re-designed in 2017)

Comments

Data is provided by SCRN (Scottish Cancer Research Network).

The availability of clinical trials represents a considerable resource in terms of staffing and logistics and as such smaller Health Boards find it a greater challenge. The additional input required from Radiology can prove too great for some areas.

NHS Borders were commended for their achievement.

Action: Not required.

See below for list of trials recruiting patients during 2019

Open Trials 2019	Borders	D&G	Fife	Lothian	SCAN
A Phase 1/1b Study of Paclitaxel in Combination with BOS172722, a Monopolar Spindle 1 Kinase Inhibitor, in Patients with Advanced Nonhaematologic Malignancies	0	1	0	0	1
Add-Aspirin Trial	5	0	1	22	28
AGI-134	0	0	1	0	1
AURORA	0	0	0	9	9
Breast Collection	0	0	2	9	11
BYLieve:alpelisib + fulvestrant or letrozole in advanced breast cancer	0	0	0	16	16
CANC - 3490 OLYMPIA	0	0	0	1	1
Cardiac CARE	0	0	0	35	35
Cell Free DNA	0	0	0	1	1
c-TRAK TN	0	0	2	7	9
Does intraoperative Marginprobe use reduce re-excision rates?	0	0	0	6	6
Dummy Fase 1	0	0	1	0	1
ENeRgy Trial	0	0	0	1	1
Evaluation of the prognostic role of ctDNA in metastatic breast cancer patients	0	0	1	34	35
HORIZONS: Understanding the impact of cancer diagnosis and treatment	3	2	0	0	5
IMPassion30	0	0	0	1	1
MO39193 - Atezolizumab + Chemotherapy in early relapsing TNBC	0	0	1	2	3
MO39196 - Atezolizumab In Previously Untreated Breast Cancer	0	0	0	1	1
MonarchE: Phase 3 Study of Abemaciclib in Breast Cancer (JPCF)	0	0	2	5	7
The NEO Study	0	0	0	12	12
OPTIMA	0	1	0	4	5
plasmaMATCH	0	0	1	5	6
POSNOC	0	0	1	0	1
PRIMETIME	3	6	0	0	9
Ribociclib Non-Interventional Study	0	0	3	5	8
ROSCO	2	0	0	4	6
UNIRAD	0	0	0	10	10
VIOLETTE	0	0	1	4	5
Totals	**13**	**10**	**17**	**194**	**234**

QPI 17: Genomic Testing Target = 60%

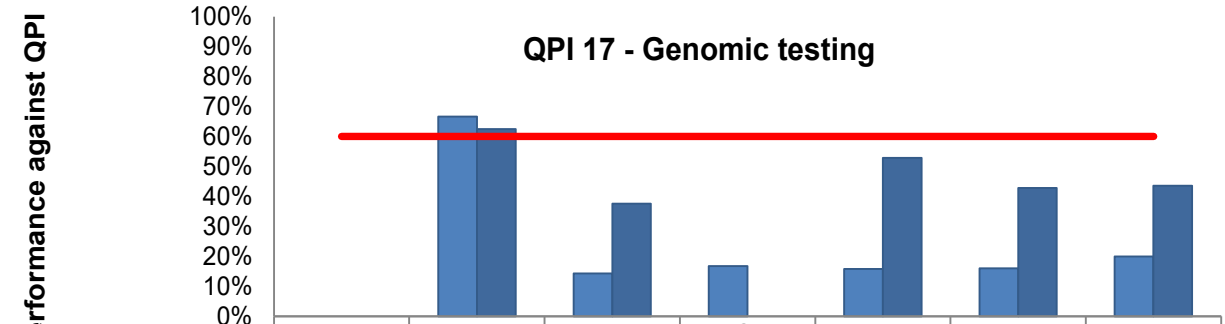
Numerator = Patients with ER positive, HER2 negative, node negative breast cancer who have a 3-5% overall survival benefit of chemotherapy treatment predicted at 10 years that undergo genomic testing.

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 10 years.

Exclusions = Patients with breast cancer taking part in clinical trials of chemotherapy treatment and patients who undergo neoadjuvant therapy.

Target = 60%	Borders	D&G	Fife	*SJH*	*WGH*	Lothian	SCAN
2019 cohort	**70**	**110**	**199**	112	845	**957**	**1336**
Ineligible for QPI	68	102	191	108	828	936	**1297**
Numerator	0	5	3	0	9	9	17
Not recorded	0	0	0	0	0	0	0
Denominator	2	8	8	4	17	21	39
Not Recorded for Exclusions	0	0	1	0	0	0	1
Not Recorded for Denominator	0	0	0	0	0	0	0
% Performance	**0.0%**	**62.5%**	**37.5%**	**0.0%**	**52.9%**	**42.9%**	**43.6%**

The revised PREDICT tool was used to calculate the predicted benefit of adjuvant chemotherapy. Third generation chemotherapy was selected as the default for consistency.



	Borders	D&G	Fife	St Johns	Western General	Lothian	SCAN
2018 Performance		66.7%	14.3%	16.7%	15.8%	16.0%	20.0%
2019 Performance	0.0%	62.5%	37.5%	0.0%	52.9%	42.9%	43.6%
Target 60%	60%	60%	60%	60%	60%	60%	60%

Comments

The denominator is small and these results are therefore to be viewed with caution.

Borders: Of the 2 Borders outliers, 1 was not referred for genomic testing due to having multiple co-morbidities and not being fit enough for chemotherapy. The other patient declined chemotherapy.

Dumfries & Galloway met the QPI target.

Fife: Small numbers are a factor with this result. 5 patients were not tested. In 4 cases the decision not to proceed with an Oncotype test and chemotherapy was made at the MDT. Oncotype testing was discussed with the remaining patient but a clinical decision was made not to pursue this due to the presence of lymphovascular invasion.

Lothian: 12 eligible patients were not referred for genomic testing. 3 of these patients chose not to have chemotherapy, without undergoing a genomic test first. Another patient chose to proceed with chemotherapy, without undergoing a genomic test. In the case of the 8 remaining patients, the MDM decided against adjuvant chemotherapy without genomic testing having been conducted; it is unclear why in all of these cases, as the correspondence does not always note the reasons, however in some of these cases the PREDICT score may have underestimated the benefit of chemotherapy for reasons previously described.

An internal clinical audit carried out on patients diagnosed in 2018 indicated that the use of genomic testing did not significantly reduce treatment with adjuvant chemotherapy. Clinical decision making based around individual patient risk factors remains paramount.

Action: Clinicians to remain mindful of the potential benefit of genomic testing.

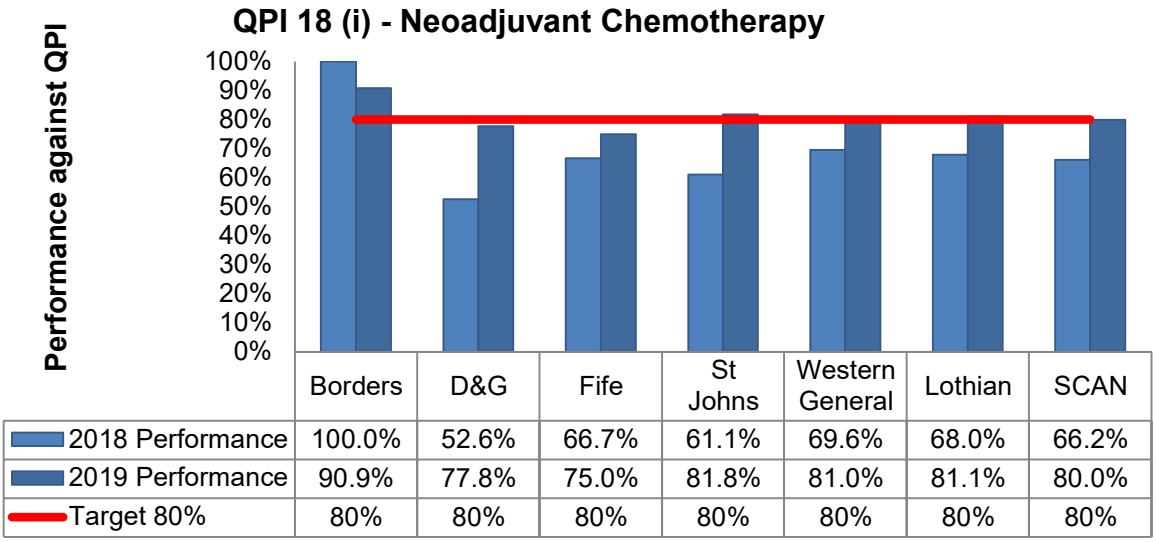
QPI 18 (i): Neoadjuvant Chemotherapy Target = 80%

Numerator = Patients with triple negative or HER2 positive, Stage II or III ductal breast cancer who undergo neo-adjuvant chemotherapy.

Denominator = All patients with triple negative or HER2 positive, Stage II or III ductal breast cancer who receive chemotherapy.

Exclusions = Patients who undergo palliative chemotherapy.

Target = 80%	**Borders**	**D&G**	**Fife**	*SJH*	*WGH*	**Lothian**	**SCAN**
2019 cohort	**70**	**110**	**199**	112	845	**957**	**1336**
Ineligible for QPI	59	101	163	101	782	883	**1206**
Numerator	10	7	27	9	51	60	104
Not recorded	0	0	0	0	0	0	0
Denominator	11	9	36	11	63	74	130
Not Recorded for Exclusions	0	0	0	0	0	0	0
Not Recorded for Denominator	0	0	0	0	0	0	0
% Performance	**90.9%**	**77.8%**	**75.0%**	**81.8%**	**81.0%**	**81.1%**	**80.0%**



	Borders	D&G	Fife	St Johns	Western General	Lothian	SCAN
2018 Performance	100.0%	52.6%	66.7%	61.1%	69.6%	68.0%	66.2%
2019 Performance	90.9%	77.8%	75.0%	81.8%	81.0%	81.1%	80.0%
Target 80%	80%	80%	80%	80%	80%	80%	80%

Comments

Borders met the target; D&G and Fife missed it.

Dumfries & Galloway: Of the 2 Dumfries & Galloway outliers, neoadjuvant chemotherapy was declined by 1 patient and the second patient was frail so the decision was made to give them adjuvant chemotherapy instead.

Fife: Dr Michie has reviewed the 9 (25% of total) cases in which the patient did not undergo neoadjuvant treatment. In 5 of these cases, patient pre-existent co-morbidities/frailty or the diagnosis of a second other primary cancer via staging investigations (2) were the main reasons. Another patient preferred to proceed with surgery first. It is noted that in 2 cases the positive HER2 result was not known at the initial MDT, which was a possible factor. Subsequently a process was put in place to ensure that all HER2 results are specifically discussed at MDT. In 2 further cases the rationale was not entirely clear, and Dr Michie was unable to comment as the decision-making took place during her absence.

Lothian met the target

Action: Not required.

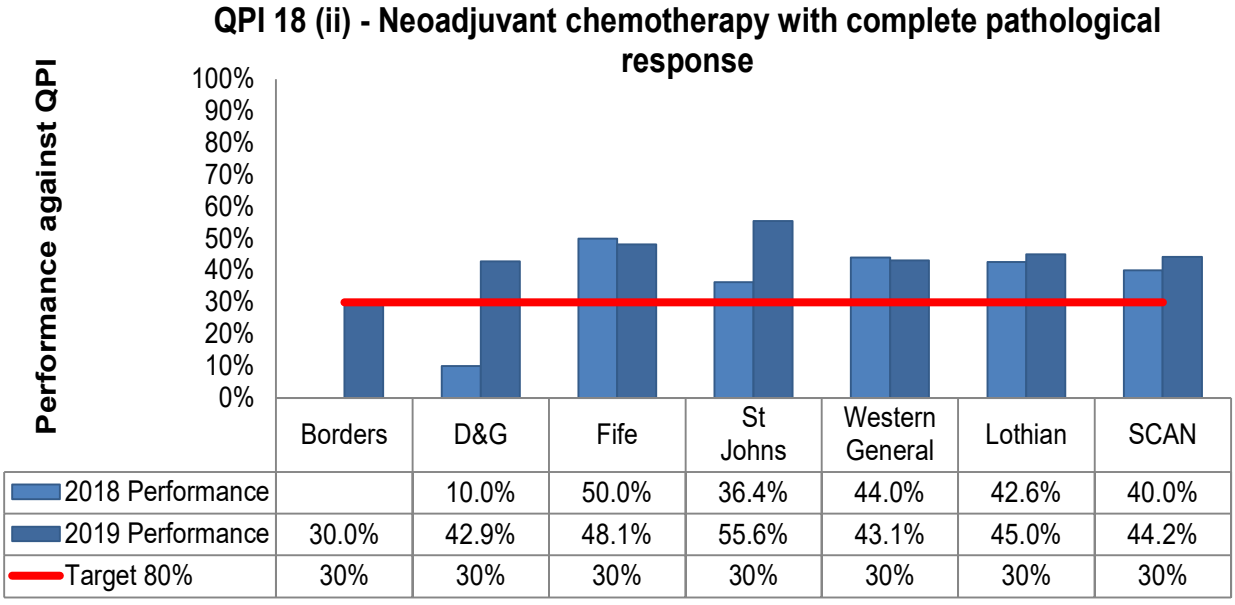
QPI 18 (ii): Neoadjuvant Chemotherapy Target = 30%

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 = None.

Target = 30%	**Borders**	**D&G**	**Fife**	*SJH*	*WGH*	**Lothian**	**SCAN**
2019 cohort	**70**	**110**	**199**	112	845	**957**	**1336**
Ineligible for QPI	60	103	172	103	798	901	**1236**
Numerator	3	3	13	5	22	27	46
Not recorded	0	0	0	0	0	0	0
Denominator	10	7	27	9	51	60	104
Not Recorded for Exclusions	0	0	0	0	0	0	0
Not Recorded for Denominator	0	0	0	0	0	0	0
% Performance	**30.0%**	**42.9%**	**48.1%**	**55.6%**	**43.1%**	**45.0%**	**44.2%**



Comments

All Health Boards met the target.

This is a new QPI and the achievements by all Health Boards are to be celebrated.

Action: Not required.

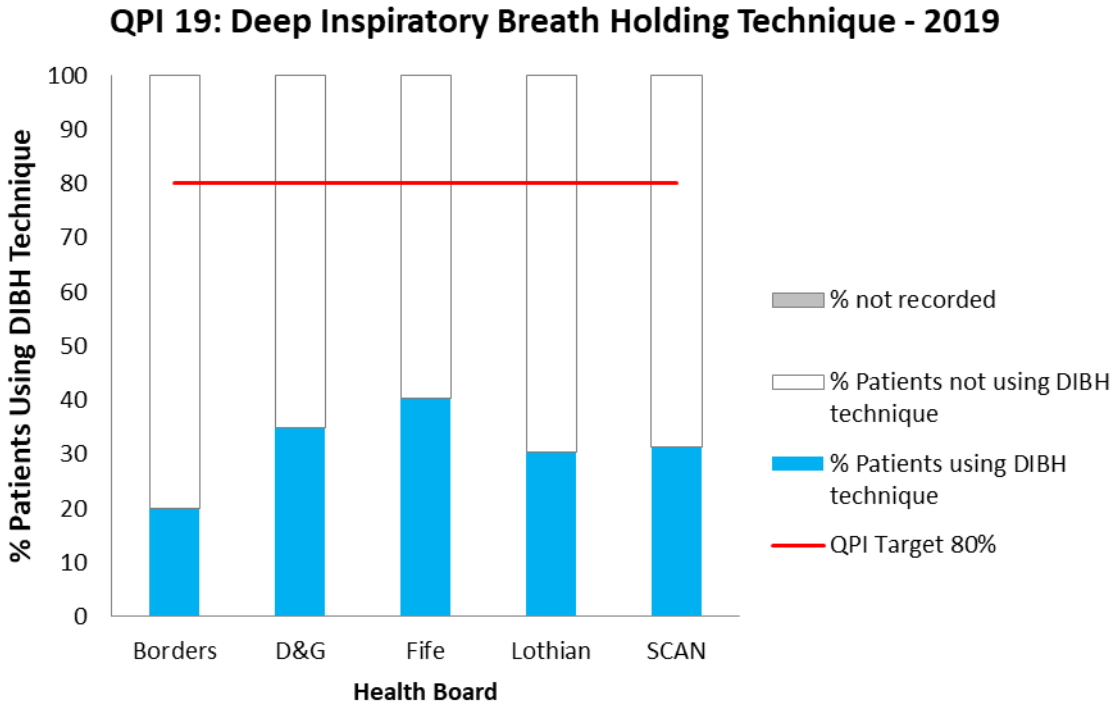
QPI 19: Deep Inspiratory Breath Hold (DIBH) Radiotherapy Target = 80%

Numerator = Patients with left sided breast cancer or DCIS, treated with radiotherapy, including the use of a DIBH technique.

Denominator = All patients with left sided breast cancer or DCIS receiving adjuvant radiotherapy.

Exclusions = None.

Target = 80%	Borders	D&G	Fife	*SJH*	*WGH*	Lothian	SCAN
2019 cohort	**70**	**110**	**199**	112	845	**957**	**1336**
Ineligible for QPI	50	87	142	78	0	78	**357**
Numerator	4	8	23	14	86	100	135
Not recorded	0	0	0	0	0	0	0
Denominator	20	23	57	35	295	330	430
Not Recorded for Exclusions	0	0	0	0	0	0	0
Not Recorded for Denominator	0	0	0	0	1	1	1
% Performance	**20.0%**	**34.8%**	**40.4%**	**40.0%**	**29.2%**	**30.3%**	**31.4%**



Comments

The bar has been set high for this new QPI in the knowledge that it would be a challenge to meet it, requiring commitment from managers along with additional funding, to enable improvements to be made. This technique is important, and undoubtedly offers significant benefits to patients, reducing cardiac morbidity.

Borders: BGH patients do not meet the criteria set by the WGH Radiotherapy unit (under 50 years of age) due to capacity issues of the unit. This has not been a clinical decision to not give these patients DIBH radiotherapy.

Dumfries & Galloway: 15 patients in Dumfries & Galloway did not meet this QPI. Due to capacity issues DIBH was previously used only in those whose cardiac outline was encroaching on High dose volume on initial free breathing planning scans, but part way through 2019 there was a change to the

protocol so that all those under 50, and those over 50 with cardiac risks e.g. chemo should be automatically booked for DIBH. Of the 2 outliers aged under 50, 1 did not get DIBH as this was before the protocol came in and the other patient was treated in another Health Board.

Fife: Fife patients, being treated in Edinburgh Cancer Centre, are subject to Lothian's protocols. Fife was unable to meet this QPI as there is not currently adequate radiotherapy capacity for DIBH in ECC.

Lothian: DIBH wasn't part of Lothian's protocol for the whole of 2019, and some patients needed to have a re-scan. The target was set deliberately high to encourage the use of DIBH, and protocols have subsequently been revised.

Action: Greater use of DIBH to be implemented to reduce cardiac morbidity.

Recurrence

The SCAN Chair, Matthew Barber has proposed a QPI to measure local recurrence rates and distant relapse. The purpose is to demonstrate what can be achieved once processes are in place, using the data fields available in eCase.
Tables below show the data available from current data fields in eCase.

Patients diagnosed during 2013 excluding patients with metastatic disease at diagnosis (M1), patients who have not had surgery, and male patients.

		SCAN Network - 2013 - 5 Year Recurrence reporting Invasive disease									
		Mastectomy Patients					Conservation Patients				
		B	D	F	L	SCAN	B	D	F	L	SCAN
	Invasive disease - all surgery patients	22	30	55	148	**255**	30	44	89	543	**706**
1	No recurrences/disease free	14	23	40	112	**189**	27	40	76	504	**647**
	%	63.6%	76.7%	72.7%	75.7%	**74.1%**	90.0%	90.9%	85.4%	92.8%	**91.6%**
	Death ≤ 5 yrs	2	3	0	32	**37**	2	5	2	39	**48**
2	Local Recurrence only	2	1	1	2	**6**	0	0	1	14	**15**
	%	9.1%	3.3%	1.8%	1.4%	**2.4%**	0.0%	0.0%	1.1%	2.6%	**2.1%**
	Death ≤ 5 yrs	0	1	0	1	**2**	0	0	0	1	**1**
3	Regional recurrence only	1	1	0	1	**3**	0	1	0	0	**1**
	%	4.5%	3.3%	0.0%	0.7%	**1.2%**	0.0%	2.3%	0.0%	0.0%	**0.1%**
	Death ≤ 5 yrs	1	1	0	0	**2**	0	0	0	0	**0**
4	Local + Regional recurrence	1	0	1	2	**4**	0	0	1	1	**2**
	%	4.5%	0.0%	1.8%	1.4%	**1.6%**	0.0%	0.0%	1.1%	0.2%	**0.3%**
	Death ≤ 5 yrs	1	0	0	0	**1**	0	0	0	0	**0**
5	Distant mets alone	2	4	11	21	**38**	1	3	4	14	**22**
	%	9.1%	13.3%	20.0%	14.2%	**14.9%**	3.3%	6.8%	4.5%	2.6%	**3.1%**
	Death ≤ 5 yrs	2	4	10	15	**31**	0	3	3	12	**18**
6	Distant mets + local recurrence	1	1	0	3	**5**	1	0	1	3	**5**
	%	4.5%	3.3%	0.0%	2.0%	**2.0%**	3.3%	0.0%	1.1%	0.6%	**0.7%**
	Death ≤ 5 yrs	0	1	0	3	**4**	0	0	1	3	**4**
7	Distant mets + regional recurrence	1	0	0	2	**3**	1	0	1	7	**9**
	%	4.5%	0.0%	0.0%	1.4%	**1.2%**	3.3%	0.0%	1.1%	1.3%	**1.3%**
	Death ≤ 5 yrs	1	0	0	2	**3**	0	0	1	1	**2**
8	Distant + Regional + local	0	0	0	5	**5**	0	0	0	0	**0**
	%	0.0%	0.0%	0.0%	3.4%	**2.0%**	0.0%	0.0%	0.0%	0.0%	**0.0%**
	Death ≤ 5 yrs	0	0	0	3	**3**	0	0	0	3	**3**
9	(Summary): Any recurrence or mets	8	7	13	36	**64**	3	4	8	39	**54**
	%	36.4%	23.3%	23.6%	24.3%	**25.1%**	10.0%	9.1%	9.0%	7.2%	**7.6%**
	Death ≤ 5 yrs	5	7	10	24	**46**	0	3	5	17	**25**
10	Lost to follow up	1	0	2	0	**3**	0	1	5	9	**15**
	%	4.5%	0.0%	3.6%	0.0%	**1.2%**	0.0%	2.3%	5.6%	1.7%	**2.1%**
11	Insufficient follow up (ie <5 years from diagnosis)	1	0	0	0	**1**	2	0	0	0	**2**
	%	4.5%	0.0%	0.0%	0.0%	**0.4%**	6.7%	0.0%	0.0%	0.0%	**0.3%**

		Invasive disease - all surgery patients				
		B	D	F	L	SCAN
12	How many of these 961 patients had a new primary recorded on the same side as the 2013 cancer, within 5 years?	0	0	0	2	2

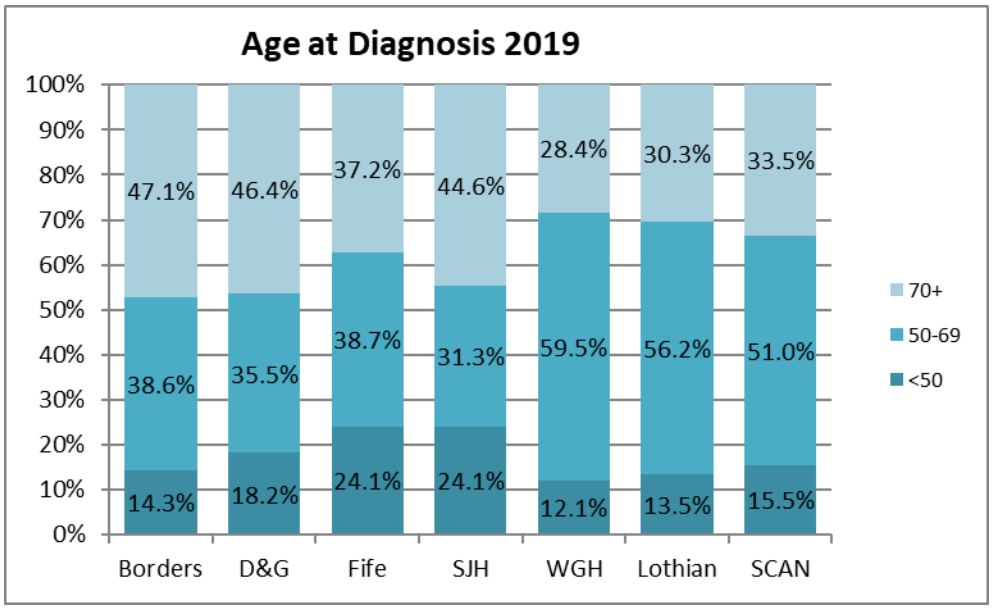
		SCAN Network - 2013 - 5 Year Recurrence reporting DCIS only									
		Mastectomy Patients					Conservation Patients				
		B	D	F	L	SCAN	B	D	F	L	SCAN
	DCIS - all surgery patients	0	0	2	13	**15**	1	5	7	53	**66**
1	No recurrences/disease free	0	0	2	12	**14**	0	5	5	51	**61**
	%	N/A	N/A	100.0%	92.3%	**93.3%**	0.0%	100.0%	71.4%	96.2%	**92.4%**
	Death ≤ 5 yrs	0	0	0	2	**2**	0	0	0	2	**2**
2	Local Recurrence only	0	0	0	1	**1**	0	0	1	2	**3**
	%	N/A	N/A	0.0%	7.7%	**6.7%**	0.0%	0.0%	14.3%	3.8%	**4.5%**
	Death ≤ 5 yrs	0	0	0	0	**0**	0	0	0	0	**0**
3	Regional recurrence only	0	0	0	0	**0**	0	0	0	0	**0**
	%	N/A	N/A	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	**0.0%**
	Death ≤ 5 yrs	0	0	0	0	**0**	0	0	0	0	**0**
4	Local + Regional recurrence	0	0	0	0	**0**	0	0	0	0	**0**
	%	N/A	N/A	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	**0.0%**
	Death ≤ 5 yrs	0	0	0	0	**0**	0	0	0	0	**0**
5	Distant mets alone	0	0	0	0	**0**	0	0	0	0	**0**
	%	N/A	N/A	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	**0.0%**
	Death ≤ 5 yrs	0	0	0	0	**0**	0	0	0	0	**0**
6	Distant mets + local recurrence	0	0	0	0	**0**	0	0	0	0	**0**
	%	N/A	N/A	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	**0.0%**
	Death ≤ 5 yrs	0	0	0	0	**0**	0	0	0	0	**0**
7	Distant mets + regional recurrence	0	0	0	0	**0**	0	0	0	0	**0**
	%	N/A	N/A	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	**0.0%**
	Death ≤ 5 yrs	0	0	0	0	**0**	0	0	0	0	**0**
8	Distant + Regional + local	0	0	0	0	**0**	0	0	0	0	**0**
	%	N/A	N/A	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	**0.0%**
	Death ≤ 5 yrs	0	0	0	0	**0**	0	0	0	0	**0**
9	(Summary): Any recurrence or mets	0	0	0	1	**1**	0	0	1	2	**3**
	%	N/A	N/A	0.0%	7.7%	**6.7%**	0.0%	0.0%	14.3%	3.8%	**4.5%**
	Death ≤ 5 yrs	0	0	0	0	**0**	0	0	0	0	**0**
10	Lost to follow up	0	0	0	0	**0**	1	0	1	0	**2**
	%	N/A	N/A	0.0%	0.0%	**0.0%**	100.0%	0.0%	14.3%	0.0%	**3.0%**
11	Insufficient follow up (ie <5 years from diagnosis)	0	0	0	0	**0**	0	0	0	0	**0**
	%	N/A	N/A	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	**0.0%**
12	How many of these 81 patients had a new primary recorded on the same side as the 2013 cancer, within 5 years?	0	1	0	1	2					

		DCIS - all surgery patients				
		B	D	F	L	SCAN
12	How many of these 81 patients had a new primary recorded on the same side as the 2013 cancer, within 5 years?	0	1	0	1	2

N.B. The SCAN DCIS data reveals a small number (4) of local recurrences only. Sections 3 - 8 have therefore been greyed out.

Appendices

Appendix 1 – Age at Diagnosis



Appendix 2 – Gender

	Borders		Dumfries		Fife		WGH		SJH		SCAN	
Gender		**%**		**%**		**%**		**%**		**%**		**%**
Female	69	99%	108	98%	197	99%	838	99%	110	98%	1322	99.0%
Male	1	1%	2	2%	2	1%	7	1%	2	2%	14	1.0%
Total	70	100%	110	100%	199	100%	845	100%	112	100%	1336	100%

Appendix 3 – Summary of Key Categories – 2019

	Borders		Dumfries		Fife		WGH		St Johns		SCAN	
Referral	№	%	№	%	№	%	№	%	№	%	№	%
Primary Care Clinician	51	72.9%	83	75.5%	160	80.4%	321	38.0%	102	91.1%	717	53.7%
Breast Screening	4	5.7%	9	8.2%	20	10.1%	432	51.1%	1	0.9%	466	34.9%
Incidental/Secondary care	8	11.4%	11	10.0%	15	7.5%	51	6.0%	6	5.4%	91	6.8%
Review patients	4	5.7%	4	3.6%	4	2.0%	22	2.6%	1	0.9%	35	2.6%
Increased Risk Clinic	2	2.9%	3	2.7%	0	0.0%	11	1.3%	1	0.9%	17	1.3%
Ref from private healthcare	1	1.4%	0	0.0%	0	0.0%	8	0.9%	0	0.0%	9	0.7%
Other	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.9%	1	0.1%
Not recorded	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	**70**	**100.0%**	**110**	**100.0%**	**199**	**100.0%**	**845**	**100.0%**	**112**	**100.0%**	**1336**	**100.0%**
T Stage												
T0	0	0.0%	0	0.0%	0	0.0%	1	0.1%	0	0.0%	1	0.1%
T1	25	35.7%	51	46.4%	58	29.1%	400	47.3%	31	27.7%	565	42.3%
T2	29	41.4%	36	32.7%	96	48.2%	217	25.7%	46	41.1%	424	31.7%
T3	1	1.4%	5	4.5%	12	6.0%	35	4.1%	7	6.3%	60	4.5%
T4	10	14.3%	6	5.5%	12	6.0%	41	4.9%	14	12.5%	83	6.2%
Tis (DCIS)	5	7.1%	5	4.5%	19	9.5%	147	17.4%	14	12.5%	190	14.2%
Tx (not assessable)	0	0.0%	3	2.7%	2	1.0%	3	0.4%	0	0.0%	8	0.6%
T9 (not recorded)	0	0.0%	4	3.6%	0	0.0%	1	0.1%	0	0.0%	5	0.4%
Total	**70**	**100.0%**	**110**	**100.0%**	**199**	**100.0%**	**845**	**100.0%**	**112**	**100.0%**	**1336**	**100.0%**
N Stage												
N0	48	68.6%	83	75.5%	145	72.9%	715	84.6%	89	79.5%	1080	80.8%
N1	19	27.1%	17	15.5%	48	24.1%	120	14.2%	21	18.8%	225	16.8%
N2	1	1.4%	2	1.8%	1	0.5%	2	0.2%	0	0.0%	6	0.4%
N3	1	1.4%	0	0.0%	1	0.5%	6	0.7%	1	0.9%	9	0.7%
NX	1	1.4%	3	2.7%	4	2.0%	1	0.1%	0	0.0%	9	0.7%
N9 (not recorded)	0	0.0%	5	4.5%	0	0.0%	1	0.1%	1	0.9%	7	0.5%
Total	**70**	**100.0%**	**110**	**100.0%**	**199**	**100.0%**	**845**	**100.0%**	**112**	**100.0%**	**1336**	**100.0%**

M Stage		Borders		Dumfries		Fife		WGH		St Johns		SCAN
M0	68	97.1%	89	80.9%	184	92.5%	797	94.3%	102	91.1%	1240	92.8%
M1	1	1.4%	11	10.0%	12	6.0%	37	4.4%	8	7.1%	69	5.2%
M9 (not recorded)	1	1.4%	10	9.1%	3	1.5%	11	1.3%	2	1.8%	27	2.0%
Total	**70**	**100.0%**	**110**	**100.0%**	**199**	**100.0%**	**845**	**100.0%**	**112**	**100.0%**	**1336**	**100.0%**
Part of TNM not recorded	1	1.4%	15	13.6%	3	1.5%	12	1.4%	2	1.8%	33	2.5%
Tumour Types	№	%	№	%	№	%	№	%	№	%	№	%
DCIS	2	50.0%	5	100.0%	14	93.3%	104	88.1%	9	75.0%	134	90.5%
LCIS	0	0.0%	0	0.0%	0	0.0%	10	8.5%	1	8.3%	11	7.4%
Pleomorphic ca in-situ	0	0.0%	0	0.0%	0	0.0%	1	0.2%	0	0.0%	1	4.3%
Paget's Disease	0	0.0%	0	0.0%	1	6.7%		0.0%	0	0.0%	1	0.7%
Other non-invasive	2	50.0%	0	0.0%	0	0.0%	3	2.5%	2	16.7%	7	4.7%
Non-invasive total	**4**	**5.7%**	**5**	**4.5%**	**15**	**7.5%**	**118**	**14.0%**	**12**	**10.7%**	**154**	**11.5%**
Ductal carcinoma	50	76.9%	78	77.2%	148	80.9%	533	73.5%	81	81.0%	890	75.8%
Lobular carcinoma	6	9.2%	11	10.9%	25	13.7%	98	13.5%	8	8.0%	148	12.6%
Medullary carcinoma	1	1.5%	0	0.0%	2	1.1%	1	0.1%	1	1.0%	5	0.4%
Mucinous carcinoma	0	0.0%	1	1.0%	0	0.0%	16	2.2%	6	6.0%	23	2.0%
Tubular carcinoma	0	0.0%	1	1.0%	1	0.5%	22	3.0%	0	0.0%	24	2.0%
Mixed (invasive)	3	4.6%	4	4.0%	6	3.3%	28	3.9%	4	4.0%	45	3.8%
Other invasive	5	7.7%	6	5.9%	1	0.5%	27	3.7%	0	0.0%	39	3.3%
Occult, with +ve nodes		0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Invasive total	**65**	**92.9%**	**101**	**91.8%**	**183**	**92.0%**	**725**	**85.8%**	**100**	**89.3%**	**1174**	**87.9%**
Inapplicable (no histology)	1	1.4%	4	3.6%	1	0.5%	2	0.2%	0	0.0%	8	0.6%
Not recorded	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	**70**	**100.0%**	**110**	**100.0%**	**199**	**100.0%**	**845**	**100.0%**	**112**	**100.0%**	**1336**	**100.0%**
ER Status (Invasive tumours)												
High Positive (6-8)	45	69.2%	84	83.2%	134	73.2%	598	82.5%	80	80.0%	941	80.2%
Low positive (3-5)	2	3.1%	4	4.0%	7	3.8%	26	3.6%	5	5.0%	44	3.7%
Negative (0-2)	18	27.7%	12	11.9%	41	22.4%	98	13.5%	15	15.0%	184	15.7%
Not assessable	0	0.0%	1	1.0%	0	0.0%	2	0.3%	0	0.0%	3	0.3%
Not recorded	0	0.0%	0	0.0%	1	0.5%	1	0.1%	0	0.0%	2	0.2%
Total	**65**	**100.0%**	**101**	**100.0%**	**183**	**100.0%**	**725**	**100.0%**	**100**	**100.0%**	**1174**	**100.0%**

	Borders		Dumfries		Fife		WGH		St Johns		SCAN	
Her2 Status (Invasive tumours)												
Her2 positive	6	9.2%	14	13.9%	28	15.3%	71	9.8%	11	11.0%	130	11.1%
Her2 negative	58	89.2%	86	85.1%	153	83.6%	642	88.6%	89	89.0%	1028	87.6%
Not recorded	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Not done / Inconclusive	0	0.0%	0	0.0%	1	0.5%	6	0.8%	0	0.0%	7	0.6%
Not assessable	1	1.5%	1	1.0%	1	0.5%	6	0.8%	0	0.0%	9	0.8%
Total	**65**	**100.0%**	**101**	**100.0%**	**183**	**100.0%**	**725**	**100.0%**	**100**	**100.0%**	**1174**	**100.0%**
First treatment												
Surgery	40	57.1%	66	60.0%	110	55.3%	545	64.5%	64	57.1%	825	61.8%
Hormone therapy	14	20.0%	30	27.3%	48	24.1%	212	25.1%	29	25.9%	333	24.9%
Chemotherapy	14	20.0%	11	10.0%	38	19.1%	74	8.8%	14	12.5%	151	11.3%
Radiotherapy	0	0.0%	1	0.9%	1	0.5%	6	0.7%	1	0.9%	9	0.7%
Biological therapy	0	0.0%	0	0.0%	0	0.0%	1	0.1%	0	0.0%	1	0.1%
No active treatmt/Supportive care)	1	1.4%	2	1.8%	1	0.5%	2	0.2%	1	0.9%	7	0.5%
Died before treatment	0	0.0%	0	0.0%	1	0.5%	3	0.4%	1	0.9%	5	0.4%
Refused all treatment	1	1.4%	0	0.0%	0	0.0%	2	0.2%	2	1.8%	5	0.4%
Not recorded	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	**70**	**100.0%**	**110**	**100.0%**	**199**	**100.0%**	**845**	**100.0%**	**112**	**100.0%**	**1336**	**100.0%**
Final Surgery *(as at Nov 2019)*												
Localising/Excision biopsy	0	0.0%	0	0.0%	1	0.6%	18	2.4%	0	0.0%	19	1.7%
Conservation surgery	37	63.8%	51	62.2%	98	59.4%	577	76.1%	59	68.6%	822	71.5%
Therapeutic mammoplasty	0	0.0%	0	0.0%	1	14.3%	39	5.1%	0	0.0%	40	3.5%
Conservation Total	**37**	**63.8%**	**51**	**62.2%**	**100**	**60.6%**	**634**	**83.6%**	**59**	**68.6%**	**881**	**76.7%**
Mastectomy	18	31.0%	28	34.1%	58	35.2%	69	9.1%	20	23.3%	193	16.8%
Mastectomy + immed. reconstruction	1	1.7%	3	3.7%	7	4.2%	53	7.0%	7	8.1%	71	6.2%
Mastectomy total	**19**	**32.8%**	**31**	**37.8%**	**65**	**39.4%**	**122**	**16.1%**	**27**	**31.4%**	264	**23.0%**
Axillary surgery alone	2	3.4%	0	0.0%	0	0.0%	2	0.3%	0	0.0%	4	0.3%
Other	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Surgery total	**58**	**82.9%**	**82**	**74.5%**	**165**	**82.9%**	**758**	**89.7%**	**86**	**76.8%**	**1149**	**86.0%**
Refused treatment	1	1.4%	0	0.0%	0	0.0%	12	1.4%	7	6.3%	20	1.5%
Not yet/pending	0	0.0%	0	0.0%	7	3.5%	5	0.6%	0	0.0%	12	0.9%
Not applicable	11	15.7%	28	25.5%	27	13.6%	70	8.3%	19	17.0%	155	11.6%
Not recorded	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	**70**	**100.0%**	**110**	**100.0%**	**199**	**113.7%**	**845**	**100.0%**	**112**	**100.0%**	**1336**	**100.0%**

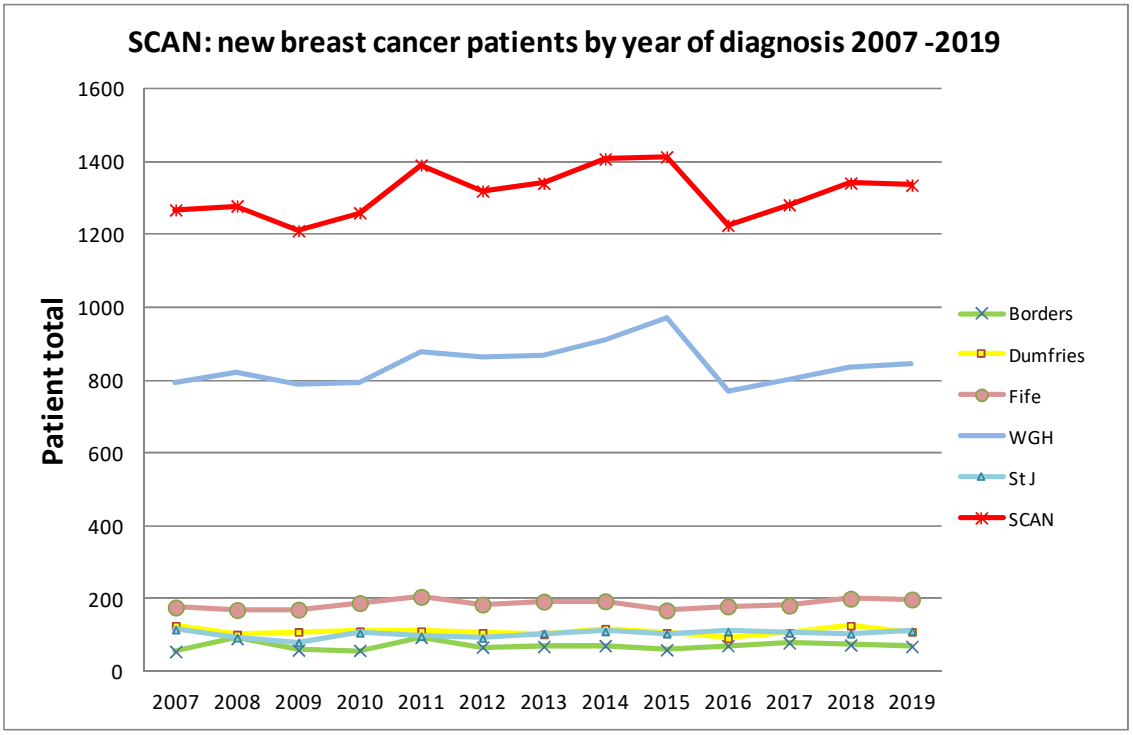
	Borders		Dumfries		Fife		WGH		St Johns		SCAN	
Radiotherapy												
Primary radical	1	1.4%	0	0.0%	0	0.0%	0	0.0%	1	0.9%	2	0.1%
Adjuvant	42	60.0%	47	42.7%	122	61.3%	580	68.6%	64	57.1%	855	64.0%
Palliative	0	0.0%	3	2.7%	6	3.0%	18	2.1%	2	1.8%	29	2.2%
Refused	3	4.3%	3	2.7%	7	3.5%	29	3.4%	4	3.6%	46	3.4%
Inapplicable	23	32.9%	57	51.8%	55	27.6%	210	24.9%	41	36.6%	386	28.9%
Not recorded	0	0.0%	0	0.0%	0	0.0%	2	0.2%	0	0.0%	2	0.1%
Not yet/pending	1	1.4%	0	0.0%	9	4.5%	6	0.7%	0	0.0%	16	1.2%
Total	**70**	**100.0%**	**110**	**100.0%**	**199**	**100.0%**	**845**	**100.0%**	**112**	**100.0%**	**1336**	**100.0%**

	Borders		Dumfries		Fife		WGH		St Johns		SCAN	
	№	%	№	%	№	%	№	%	№	%	№	%
Chemotherapy												
Adjuvant	8	11.4%	16	14.5%	48	24.1%	107	12.7%	16	14.3%	195	14.6%
Neoadjuvant	14	20.0%	9	8.2%	37	18.6%	71	8.4%	12	10.7%	143	10.7%
Palliative	0	0.0%	2	1.8%	2	1.0%	9	1.1%	2	1.8%	15	1.1%
Refused	0	0.0%	4	3.6%	5	2.5%	24	2.8%	7	6.3%	40	3.0%
Inapplicable	47	67.1%	79	71.8%	99	49.7%	629	74.4%	75	67.0%	929	69.5%
Not recorded	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Not yet/pending surgery	1	1.4%	0	0.0%	8	4.0%	5	0.6%	0	0.0%	14	1.0%
Total	**70**	**100.0%**	**110**	**100.0%**	**199**	**100.0%**	**845**	**100.0%**	**112**	**100.0%**	**1336**	**100.0%**
Hormone therapy (1st course)												
Neoadjuvant	1	1.4%	5	4.5%	25	12.6%	100	11.8%	7	6.3%	138	10.3%
Peri-operative	3	4.3%	3	2.7%	0	0.0%	48	5.7%	3	2.7%	57	4.3%
Primary	9	12.9%	24	21.8%	15	7.5%	47	5.6%	15	13.4%	110	8.2%
Palliative	1	1.4%	1	0.9%	9	4.5%	24	2.8%	5	4.5%	40	3.0%
Adjuvant	33	47.1%	56	50.9%	90	45.2%	397	47.0%	50	44.6%	626	46.9%
Inapplicable	22	31.4%	20	18.2%	56	28.1%	212	25.1%	30	26.8%	340	25.4%
Not recorded	0	0.0%	0	0.0%	0	0.0%	2	0.2%	0	0.0%	2	0.1%
Refused	1	1.4%	1	0.9%	2	1.0%	15	1.8%	2	1.8%	21	1.6%
Not yet/pending	0	0.0%	0	0.0%	2	1.0%	0	0.0%	0	0.0%	2	0.1%
Total	**70**	**100.0%**	**110**	**100.0%**	**199**	**100.0%**	**845**	**100.0%**	**112**	**100.0%**	**1336**	**100.0%**

	Borders		Dumfries		Fife		WGH		St Johns		SCAN	
Biological therapy (Her2 positive)												
HER2 positive, invasive	*6*		*14*		*28*		*71*		*11*		*130*	
Herceptin treatment	4	66.7%	8	57.1%	24	85.7%	49	69.0%	10	90.9%	95	73.1%
No biological therapy	2	33.3%	6	42.9%	3	10.7%	21	29.6%	1	9.1%	33	25.4%
Pending surgery	0	0.0%	0	0.0%	1	3.6%	0	0.0%	0	0.0%	1	0.8%
Declined	0	0.0%	0	0.0%	0	0.0%	1	1.4%	0	0.0%	1	0.8%
Total	**6**	**100.0%**	**14**	**100.0%**	**28**	**100.0%**	**71**	100.0%	**11**	**100.0%**	**130**	**100.0%**

Appendix 4 – SCAN: New Breast Cancer Totals by Year of Diagnosis

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Borders	56	92	60	59	95	68	70	72	61	72	80	74	70
Dumfries	127	103	110	112	112	108	103	119	108	92	108	127	110
Fife	177	170	171	189	206	185	193	194	169	180	182	201	199
WGH	792	820	789	793	880	866	869	912	971	771	805	835	845
St J	116	94	81	107	98	93	106	111	105	111	107	105	112
SCAN	**1268**	**1279**	**1211**	**1260**	**1391**	**1320**	**1341**	**1408**	**1414**	**1226**	**1282**	**1342**	**1336**



Appendix 5 – Overall Workload by Health Board

NHS Lothian

Source: Analytical Services Department. Reference: IRS 2005

Attendance and Referral Source to breast cancer services at NHS Lothian Western General Hospital and St John's Hospital at Howden.* Jan-Dec 2019

Western General Hospital

Referral Source	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Accident and Emergency Department	-	1	1	-	1	1	1	1	-	-	-	-	**6**
ASC Assessment	45	55	50	60	59	50	53	59	64	63	63	64	**685**
Community Health Service	1	-	1	-	-	-	-	-	-	-	-	-	**2**
Consultant from another Hospital outwith this Health Board area	-	-	-	1	3	-	-	-	-	-	-	-	**4**
Consultant from another Hospital within Health Board	1	1	-	3	6	1	-	-	-	-	2	-	**14**
Consultant within the Trust	52	41	37	26	38	29	44	38	48	32	31	51	**467**
GP	603	569	606	565	547	515	526	500	541	542	513	435	**6462**
Other Medic (Community)	-	-	1	-	-	-	-	-	-	-	-	-	**1**
Other Nurse (Community)	-	-	1	-	-	-	-	-	-	-	-	-	**1**
Outpatient Department	-	-	-	-	1	-	3	2	-	3	-	2	**11**
Prison/Penal Establishments	-	1	1	-	1	-	-	-	-	-	-	-	**3**
Self-referral	-	-	-	-	-	-	1	-	1	-	-	-	**2**
Ward	-	-	-	-	-	-	-	-	-	-	1	-	**1**
No Referral Source	20	17	14	7	17	21	12	14	14	8	14	11	**169**
Grand Total	**722**	**685**	**712**	**662**	**673**	**617**	**640**	**614**	**668**	**648**	**624**	**563**	**7828**

St John's Hospital

Referral Source	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Accident and Emergency Department	-	-	-	-	-	-	-	-	-	1	-	-	**1**
Consultant from another Hospital outwith this Health Board area	1	-	-	-	-	-	-	-	-	-	-	-	**1**
Consultant from another Hospital within Health Board	-	1	-	2	3	2	-	1	1	1	-	1	**12**
Consultant within the Trust	7	2	3	2	2	2	2	4	1	4	3	4	**36**
GP	168	137	152	137	170	137	131	161	134	161	137	111	**1736**
Other Medic (Community)	-	-	-	-	-	-	-	-	-	-	1	-	**1**
Prison/Penal Establishments	-	-	-	-	-	-	-	-	-	1	1	-	**2**
No Referral Source	-	1	-	-	-	-	-	-	-	-	-	-	**1**
Grand Total	**176**	**141**	**155**	**141**	**175**	**141**	**133**	**166**	**136**	**168**	**142**	**116**	**1790**

**Appointment type: New. Only the first patient attendance has been counted.*

NHS Fife

New outpatient attendance activity, 2014-2019

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2014	221	234	212	235	238	217	253	206	246	245	234	255	**2796**
2015	251	221	248	242	209	237	238	217	255	220	226	269	**2833**
2016	233	219	252	204	207	249	180	274	241	223	250	214	**2746**
2017	216	213	236	221	205	226	116	221	233	251	259	155	**2552**
2018	201	146	158	134	260	178	194	185	287	214	258	223	**2438**
2019	302	293	274	265	297	291	213	271	194	241	232	210	**3083**

Source: Marcus Vosoughi, NHS Fife. Reports: SR IR7143 and 325282

NHS Borders

Referrals to Breast Clinic 2019

Vetted Priority / Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Routine	29	37	36	26	32	32	23	26	25	17	20	26	329
Urgent - Suspected Cancer	28	47	29	26	32	31	37	21	29	35	34	28	377
Grand Total	**57**	**84**	**65**	**52**	**64**	**63**	**60**	**47**	**54**	**52**	**54**	**54**	**706**

New Breast Demand 2019

Vetted Priority / Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Routine	34	42	40	32	45	38	32	30	28	19	21	27	388
Soon	0	0	0	0	0	0	0	0	0	1	0	0	1
Urgent	33	40	47	32	36	39	33	31	37	37	41	26	432
Urgent - Suspected Cancer	29	49	31	27	35	34	38	21	30	38	34	29	395
Urgent - Suspicion of Cancer	1	0	0	0	0	1	0	0	0	0	0	1	3
Grand Total	**97**	**131**	**118**	**91**	**116**	**112**	**103**	**82**	**95**	**95**	**96**	**83**	**1219**

NHS Dumfries & Galloway

New outpatient attendance activity, 2019

Location	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
D&G	183	121	108	158	171	195	123	124	124	150	146	98	1701

Appendix 6 – Attainment Summary 2018

Breast Cancer QPI Attainment Summary 2018			Target %	Borders		D&G		Fife		Lothian		SCAN	
QPI 6 (i) Immediate reconstruction			20	N 4 D 19	21.1%	N 2 D 46	4.3%	N 10 D 52	19.2%	N 47 D 154	30.5%	N 63 D 271	23.2%
QPI 8 (i) Day case surgery (Conservation surgery)	By HB surgery		60	N 32 D 45	71.1%	N 58 D 67	86.6%	N 109 D 157	69.4%	N 712 D 853	83.5%	N 911 D 1122	81.2%
	By HB residence		60	N 32 D 45	71.1%	N 58 D 67	86.6%	N 109 D 157	69.4%	N 50 D 51	98.0%	N 662 D 802	82.5%
QPI 8 (ii) Minimising Hospital Stay (Mastectomy without reconstruction) by HB of treatment			60	N 0 D 20	0%	N 40 D 48	83.3%	N 24 D 37	64.9%	N 18 D 144	12.5%	N 82 D 249	32.9%
QPI 8 (ii) Minimising Hospital Stay (Mastectomy without reconstruction) by HB of Residence			60	N 0 D 21	0%	N 40 D 48	83.3%	N 33 D 58	56.9%	N 16 D 137	11.7%	N 89 D 264	33.7%
QPI 9 Her2 status for decision making			90	N 60 D 67	89.6%	N 52 D 116	44.8%	N 121 D 185	65.4%	N 657 D 801	82.0%	N 890 D 1169	76.1%
QPI 10 Radiotherapy for conservation in Older Adults			<40	N 2 D 5	40.0%	N 0 D 5	0.0%	N 2 D 2	100%	N 37 D 53	69.8%	N 44 D 74	59.5%
QPI 11(i) Adjuvant chemotherapy			80	N 11 D 19	57.9%	N 4 D 6	66.7%	N 17 D 27	63.0%	N 36 D 87	41.4%	N 68 D 139	48.9%
QPI 11(ii) Adjuvant chemotherapy			80	N 3 D 4	75%	N 4 D 4	100%	N 11 D 16	68.8%	N 47 D 73	64.4%	N 65 D 97	67.0%
QPI 13 Re-excision rates			<20	N 6 D 41	14.6%	N 13 D 57	22.8%	N 27 D 107	25.2%	N 150 D 683	22.0%	N 196 D 888	22.1%
QPI 14 Referral for genetics testing	Patients under 30		90	N 1 D 1	100%	N 1 D 1	100%	N 2 D 2	100%	N 3 D 3	100%	N 7 D 7	100%
	Patients under 50 (triple negative)		90	N 0 D 0		N 3 D 3	100%	N 5 D 5	100%	N 23 D 24	95.8%	N 31 D 32	96.9%
QPI 15 30 day mortality following chemotherapy		Neoadjuvant	<1	N D		N D		N D		N D		N D	
Data to be reported using Chemocare Methodology not yet available		Adjuvant	<1	N D		N D		N D		N D		N D	

Breast Cancer QPI Attainment Summary 2018		Target %	**Borders**		**D&G**		**Fife**		**Lothian**		**SCAN**	
	Palliative	<5	N D		N D		N D		N D		N D	
QPI 16 Clinical trials & Research Study access – patients consented to any trial (SCRN data)		15	N 22 D 77	28.6%	N 20 D 113	17.7%	N 21 D 207	10.1%	N 188 D 877	21.4%	N 251 D 1274	19.7%
QPI 17 Genomic testing		60	N 0 D 0		N 4 D 6	66.7%	N 2 D 14	14.3%	N 8 D 50	16.0%	N 14 D 70	20%
QPI 18(i) Neoadjuvant chemotherapy		80	N 2 D 2	100%	N 10 D 19	52.6%	N 14 D 20	70%	N 66 D 97	68%	N 92 D 138	66.7%
QPI 18(ii) Neoadjuvant chemotherapy		30	N 0 D 0		N 1 D 10	10%	N 7 D 14	50%	N 26 D 61	42.6%	N 34 D 85	40%
QPI 19 Deep Inspiratory Hold (DIBH) Radiotherapy*		80	N D		N D		N D		N D		N D	

Required new data item therefore 2018 data was not reported

Numerator	% performance
Denominator	

Target met	Not met

Appendix 7 – Glossary

Adjuvant therapy/ treatment
Additional cancer treatment given after the primary treatment to lower the risk that the cancer will come back. Adjuvant therapy may include chemotherapy, radiation therapy, hormone therapy, targeted therapy or biological therapy.

Audit
The measuring and evaluation of care against best practice with a view to improving current practice and care delivery.

Axilla
The armpit.

Biopsy
Removal of a sample of tissue from the body to assist in diagnosis of a disease.

Case ascertainment
Number of cases recorded as a proportion of those expected using the average of the most recent available five years reported in the Scottish Cancer Registry.

Chemotherapy
The use of drugs that destroy cancer cells, or prevent or slow their growth.

Co-morbidity
The condition of having two or more diseases at the same time.

DIBH (Deep Inspiration Breath Hold)
A radiation therapy technique where patients take a deep breath during treatment, and hold this breath while the radiation is delivered, reducing the dose to the heart and the lung, whilst ensuring the breast / chest wall area receives the full dose as prescribed.

Diagnosis
The process of identifying disease from its signs and symptoms.

ECC
Edinburgh Cancer Centre.

Histology/Histological
The study of cells and tissue on the microscopic level.

IBR
Immediate Breast Reconstruction.

Lymph nodes
Small bean shaped organs located along the lymphatic system. Nodes filter bacteria or cancer cells that might travel through the lymphatic system. In breast cancer, particular attention is focussed on the axillary lymph nodes.

Malignant
Cancerous. Malignant cells can invade and destroy nearby tissue and spread to other parts of the body.

MDM
The Multi-Disciplinary Meeting of the MDT. See **MDT**.

MDT: Multi-Disciplinary Team
A multi-professional group of people from different disciplines (both healthcare and non-healthcare) who work together to provide care for patients with a particular condition. The composition of multi-disciplinary teams will vary according to many factors. These include: the specific condition, the scale of the service being provided; and geographical/ socio-economic factors in the local area.

Metastatic disease (metastases)
Spread of cancer away from the primary site to somewhere else, e.g. via the bloodstream or the lymphatic system.

Neo-adjuvant chemotherapy
Drug treatment which is given before the treatment of a primary tumour with the aim of improving the results of surgery and preventing the development of metastases.

One-Stop Clinic
A service in which patients with a known lesion (e.g. a woman with a breast mass identified by her GP) of an unascertained nature (benign vs. malignant) undergo a multimodality (physical examination, imaging and fine-needle aspiration cytology and biopsy) evaluation during the same visit and in most (average 96%) cases leave the clinic with a definitive diagnosis, already booked for further therapy if needed.

Palliative care
Palliative care is the active total care of patients and their families by a multi-professional team when the patient's disease is no longer responsive to curative treatment. The aim is to alleviate symptoms and improve quality of life.

Palliative Radiotherapy
When it is not possible to cure a cancer, radiotherapy can be given to alleviate symptoms. Lower doses are given than for curative or radical radiotherapy and generally over a shorter period of time.

Pathological diagnosis
The microscopic examination (histological or cytological) of the specimen by a pathologist to determine the presence of malignancy and the classification of the malignant tumour.

PREDICT
PREDICT, or nhs.predict, is a tool used across NHS Scotland to calculate PREDICT scores (the predicted 10-year survival benefit of adjuvant chemotherapy) for patients. The latest version was released in October 2020.

Primary Tumour
Original site of the cancer. The mass of tumour cells at the original site of abnormal tissue growth.

Quality Performance Indicators (QPIs)
A set of quality measures developed collaboratively with the three Scottish Regional Cancer Networks, Information Services Division (ISD), and Healthcare Improvement Scotland. The Breast Cancer QPIs were first reported for patients diagnosed during 2012.

Radical Radiotherapy
Radiotherapy is given with the aim of destroying cancer cells to attain cure.

Radiotherapy
The use of radiation, usually X-rays or gamma rays, to kill tumour cells.

Resection
Surgical removal of a portion of any part of the body.

SCAN
South East Scotland Cancer Network: 1 of 3 regional cancer networks in Scotland, covering a population of 1.4 million across 4 Health Boards (Borders, Dumfries & Galloway, Fife and Lothian). A multidisciplinary, patient-focused network of professionals aiming to improve cancer care by facilitating communication and partnership working.

Sentinel Lymph Node Biopsy (SNB)
A surgical procedure used to determine if cancer has spread beyond a primary tumor into the lymphatic system, via the axilla.

SESBSP
South East Scotland Breast Screening Programme.

Staging
The process of determining whether cancer has spread. Staging involves clinical, surgical, radiological and pathological assessment.

TNM Classification
TNM classification provides a system for staging the extent of cancer. T refers to the size and position of the primary tumour. N refers to the involvement of the lymph nodes. M refers to the existence of metastatic disease

Tumour
An abnormal mass of tissue. A tumour may be either benign (not cancerous) or malignant. Also known as a neoplasm.

USS
Ultrasound – a type of imaging used in the investigation of breast abnormalities.

WLE (Wide Local Excision)
Breast conserving surgery – removal of the tumour with a margin of normal looking tissue around it. It may also be referred to as a lumpectomy.