SOUTH EAST SCOTLAND CANCER NETWORK (SCAN) PROSPECTIVE CANCER AUDIT

BREAST CANCER 2021

COMPARATIVE AUDIT REPORT

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Report no: SA B04/22

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Document History

Version	Circulation	Date	Comments
Version 1	SCAN Breast Sign-Off Group	21/10/2022	Draft 1 of report sent to sign-off group ahead of sign-off meeting
Version 2	Lead clinician	04/11/2022	For Lead clinician's commentary
Version 3	SCAN Breast Group	08/11/2022	Draft 3 of report sent to SCAN Breast Group for final checking and comments
Version 4	SCAN Group SCAN Governance Framework SCAN Action Plan Board Leads	30/11/2022	Comments updated for final circulation
Version 4W	Published to the SCAN website	16/03/2023	Patient-identifiable data removed

Introduction by Chair of the SCAN Breast Group

Welcome to the SCAN region audit report for 2021.

The last year has seen a bounce back in numbers of breast cancers treated after a drop the previous year, largely due to suspension of screening during the COVID pandemic. Despite unprecedented pressures, teams are to be congratulated for largely maintaining and improving standards.

There have been stepwise improvements in those having an overnight stay after mastectomy, in reporting of HER2 status, low risk patients receiving radiotherapy, adjuvant chemotherapy use and use of DIBH radiotherapy.

In particular, Fife and Dumfries are to be congratulated for improvements in the proportion with HER2 status available after changes in practice and the Borders and Dumfries are to be congratulated on trial enrolment.

Thanks are due, once again, to audit staff who have also managed to produce recurrence data which we look forward to being adopted nationally.

There are still areas where we hope to make more progress and we look forward to the adoption of revisions to the QPIs currently out for consultation.

Matthew Barber
SCAN Breast Group Chair
November 2022

Action Points for 2021

QPI	Action required	Lead	Date for update
6ii	SCAN Chair to raise the issue of delays within the Plastics department at St. Johns Hospital, with NHS Lothian managers. Update: Issue has now been raised with Plastic surgery department based at St John's Hospital. Procedures do require two plastic surgeons, a breast surgeon and a high dependency bed, creating logistical challenges.	Mathew Barber	Completed
8ii	Borders surgical team to look at protocols to improve outcomes.	Shareef AlSabounchi	Completed
18i	Recording of clinical TNM should be routinely undertaken for all patients with breast cancer who are discussed at MDMs in Dumfries and Galloway. Borders has also been asked to review cases to ensure no underlying treatment issue.	Maria Bews-Hair Shareef AlSabounchi	Completed

Action Points for 2020

QPI	Action required	Lead	Date for update
6i	None identified however it was noted during the sign-off meeting that this QPI requires revision at formal review.	Mathew Barber	Formal review
6ii	No action identified and Matthew Barber commented that his recommendation at the formal review will be for this QPI to stay in.	Mathew Barber	Formal review
8i	No action identified. It may be possible to archive this measure at the formal review.	Mathew Barber	Formal review
8ii	Borders and Lothian to keep focused on maximising early discharge.	Shareef Al –Sabounchi Matthew Barber	SCAN Group 9th March 2022

11i	No action identified but points noted for consideration during the formal review: lower the target to 70 or 75%; remove patients who have low-risk Oncotype scores from the denominator. The cohort covered by this QPI also represents those left over from QPI 18 deemed not to be appropriate for neoadjuvant chemotherapy so the QPI may require revision to address this.	Mathew Barber	Formal review
13	Better ways to assess margins in theatre would help reduce the need for re-excision. Continue efforts to highlight the issue among the surgical teams	Shareef Al –Sabounchi Christopher Cartlidge Matthew Barber	SCAN Group 9th March 2022
14	No action identified however, it was recommended that this QPI be archived at the formal review.	Mathew Barber	Formal review
19	Continue focus to increase the use of the use of DIBH technique in radiotherapy.	Clinical Oncologists	SCAN Group 9th March 2022

Action Points for 2019

QPI	Action required	Lead	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	Completed. The data has been received and confirms that D&G patients have access to a reconstruction service. Symptomatic patients still have to travel a long distance to come to Lothian however this is unlikely to change.
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	Completed. Christine sent the data to Matthew and it confirmed his suspicions that it is the patients requiring the involvement of a plastic surgeon (Diep flaps) who wait the longest.
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	Completed
QPI 11 (i) & (ii) Adjuvant chemotherapy	Oncologists to look into discrepancies in Predict scores and ensure Predict is being used accurately.	Peter Hall	Completed. A detailed audit has been carried out. Final summary statement has been provided by 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	Completed.
QPI 17 Genomic testing	Clinicians to remain mindful of the potential benefit of genomic testing.	Oncologists All	Ongoing
QPI 19 Use of DIBH technique in radiotherapy	Greater use of DIBH to be implemented to reduce cardiac morbidity.	Clinical oncologists All	Completed. SCAN protocol now updated to include using this technique for all patients with left sided breast cancer aged <60 years. Updated advice from Radiotherapy National body suggests that 90% of relevant cases should be offered this technique.

Breast Cancer QPI Attainment Summary 2021			Target %	Borders		D&G		Fife		Lothian		SCAN	
QPI 6 Immediate reconstruction	(i) Immediate reconstruction		20	N 3 D 25	12%	N 6 D 39	15.4%	N 5 D 46	10.9%	N 33 D 142	23.2%	N 47 D 252	18.7%
	(ii) Immediate reconstruction within 42 days		90	N 2 D 3	66.7%	N 4 D 4	100%	N 5 D 5	100%	N 14 D 23	60.9%	N 25 D 35	71.4%
QPI 8 Minimising Hospital Stay	(i) Day case surgery (conservation)	By HB of surgery	60	N 51 D 65	78.5%	N 61 D 72	84.7%	N 138 D 151	91.4%	N 723 D 823	87.8%	N 973 D 1111	87.6%
		By HB of residence	60	N 70 D 84	83.3%	N 97 D 138	70.3%	N 225 D 252	89.3%	N 543 D 612	88.7%	N 935 D 1086	86.1%
	(ii) Mastectomy without reconstruction	By HB of surgery	60	N 0 D 23	0%	N 29 D 37	78.4%	N 41 D 57	71.9%	N 73 D 135	54.1%	N 143 D 252	56.7%
		By HB of residence	60	N 2 D 26	7.7%	N 33 D 42	78.6%	N 48 D 67	71.6%	N 68 D 125	54.4%	N 151 D 260	58.1%
QPI 9 HER2 status for decision making			90	N 78 D 83	94%	N 96 D 112	85.7%	N 175 D 196	89.3%	N 794 D 877	90.5%	N 1143 D 1268	90.1%
QPI 10 Radiotherapy for conservation in older adults			<40	N 2 D 2	100%	N 3 D 4	75%	N 0 D 5	0%	N 13 D 30	43.3%	N 18 D 41	43.9%
QPI 11 Adjuvant chemotherapy	(i) Hormone receptor (ER plus/minus PR) positive, HER2 negative breast cancer		80	N 8 D 10	80%	N 7 D 11	63.6%	N 20 D 24	83.3%	N 53 D 65	81.5%	N 88 D 110	80%
	(ii) Triple negative or HER2 positive breast cancer		80	N 4 D 8	50%	N 2 D 4	50%	N 12 D 19	63.2%	N 34 D 44	77.3%	N 52 D 75	69.3%
QPI 13 Re-excision rates			<20	N 13 D 56	23.2%	N 10 D 67	14.9%	N 27 D 101	26.7%	N 143 D 736	19.4%	N 193 D 960	20.1%
QPI 14 Referral for genetics testing	(i) Patients under 30		90	N 0 D 0	N/A	N 0 D 0	N/A	N 0 D 0	N/A	N 2 D 2	100%	N 2 D 2	100%
	(ii) Patients under 50 (triple negative)		90	N 1 D 1	100%	N 4 D 4	100%	N 4 D 5	80%	N 20 D 20	100%	N 29 D 30	96.7%
QPI 15 30 day mortality following chemotherapy *Data to be reported using ChemoCare - National Standardised 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 2021		Target %	Borders		D&G		Fife		Lothian		SCAN	
QPI 16 Clinical trials & Research Study access – patients consented to any trial (SCRN data)		15	N	14	N	29	N	14	N	309	N	366
			D	74	D	99	D	204	D	877	D	1231
				18.9%		29.3%		6.9%		35.2%		29.7%
QPI 17 Genomic testing		60	N	3	N	2	N	3	N	18	N	26
			D	4	D	4	D	6	D	30	D	44
				75%		50%		50%		60%		59.1%
QPI 18 Neoadjuvant chemotherapy (triple negative or HER2 positive, Stage II or III ductal breast cancer)	(i) Patients receiving neoadjuvant chemo	80	N	6	N	13	N	14	N	62	N	95
			D	9	D	14	D	20	D	77	D	120
				66.7%		92.9%		70%		80.5%		79.2%
	(ii) Patients with pathological complete response	30	N	1	N	7	N	6	N	24	N	38
			D	6	D	12	D	14	D	62	D	94
				16.7%		58.3%		42.9%		38.7%		40.4%
QPI 19 Deep Inspiratory Hold (DIBH) Radiotherapy		80	N	19	N	23	N	46	N	211	N	299
			D	37	D	35	D	65	D	352	D	489
				51.4%		65.7%		70.8%		59.9%		61.1%

Introduction and Methods

Cohort
This report covers patients newly diagnosed with breast cancer in SCAN between 01/01/2021 and 31/12/2021. 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, 2019 and 2022. The findings of the latest formal review are expected to be released in 2023.

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.	

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[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	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: 2016 to 2020.

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.

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

	Borders	D&G	Fife	Lothian	SCAN
2016	71	99	185	872	1227
2017	85	95	194	916	1290
2018	70	111	207	957	1346*
2019	68	96	203	960	1327
2020	75	92	230	682	1079
Total	369	493	1019	4387	6269
5-year average	73.8	98.6	203.8	877.4	1253.8

Includes 1 patient of unknown SCAN HB in 2018

Number of cases recorded in audit: breast cancer patients diagnosed 01/01/2021 to 31/12/2021

	Borders	D&G	Fife	Lothian	SCAN
2021	96	123	211	1012	1442
2021 (as % of 5-year average)	130.1%	124.7%	103.5%	115.3%	115.0%

Case ascertainment methodology

Data tables were provided by the Cancer Registry for the years 2016 – 2020 for all residents of the SCAN region with a diagnosis of a new primary breast cancer. The PHS 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 (sometimes as a result of patient preference) means that the overall estimate of case ascertainment for SCAN should be regarded as more reliable than the individual figure for each Board.

The overall number of women diagnosed through S. E. Scotland Breast Screening Programme was lower during the Covid-19 pandemic. This is the most likely reason for reduced case ascertainment during 2020. SCAN data indicates that the number of patients referred through non-Screening routes was slightly higher during this period.

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 21/10/2022.
- The final draft of this SCAN regional comparative report was circulated to members of the SCAN Breast Group on 08/11/2022 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 = Patients with M1 disease and males

	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2021 cohort	96	123	211	108	904	1012	1442
Ineligible for QPI	71	84	165	88	782	870	1190
Numerator	3	6	5	3	30	33	47
Denominator	25	39	46	20	122	142	252
Not recorded for numerator	0	0	0	0	0	0	0
Not recorded for exclusion	0	11	1	0	1	1	13
Not recorded for denominator	0	0	1	0	0	0	1
Target = 20%	20%	20%	20%	20%	20%	20%	20%
% Performance	12%	15.4%	10.9%	15%	24.6%	23.2%	18.7%

QPI 6 (i): Immediate Reconstruction Rate Historical Summary

	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2018	21.1%	4.3%	19.2%	13.5%	35.9%	30.5%	23.2%
2019	5.6%	10.7%	11.1%	24.0%	45.7%	41.8%	28.0%
2020	8.3%	13.3%	14.9%	5.0%	26.5%	23.3%	18.5%
2021	12.0%	15.4%	10.9%	15.0%	24.6%	23.2%	18.7%
2018 revised target	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%

Comments

Overall, results are similar to last year, despite ongoing capacity issues at the Western General. As the proportion of patients having therapeutic mammoplasty increases, it is observed that the remaining mastectomy group is more likely to consist of less fit patients who will require radiotherapy. These patients are therefore more suited to delayed reconstruction after their radiotherapy. As a result of this change, it is argued that the target is now too high.

Borders: Did not meet the target. 22 patients did not have immediate reconstruction at the time of mastectomy. 20 declined reconstruction, 1 had comorbidities and 1 had previously had radiotherapy on that side.

Dumfries & Galloway: Did not meet the target. 33 patients did not have immediate reconstruction. 14 were offered immediate reconstruction but declined. 2 were seen by plastics but opted for a delayed reconstruction. 8 patients were over 75 and either not interested in undergoing reconstruction or not fit enough. 9 patients did not have immediate reconstruction due to co-morbidities or inflammatory or locally advanced cancers.

Residents of Dumfries and Galloway who are diagnosed through the breast screening service in Glasgow, and thought suitable for mastectomy and immediate reconstruction, are referred for surgery to Ayrshire and Arran. They are subsequently registered in the Ayrshire and Arran audit, which inevitably impacts Dumfries and Galloway's attainment against this target. Numbers are as follows:

	D&G (SCAN)	A&A (WOSCAN)	Total
Numerator	6	2	8
Denominator	39	5	44
% Performance	15.4	40.0	18.2

Fife: Did not meet the target. 41 patients did not have immediate reconstruction. The main reasons were: patient choice; the potential for post-mastectomy radiotherapy; co-morbidities/risk; and smoking history. The patient not recorded for the denominator was at time of analysis receiving adjuvant chemotherapy prior to being considered for further surgery. The patient not recorded for exclusion had an indeterminate lesion therefore M staging remained unrecorded.

Lothian: Met the target. 92 patients at WGH did not have immediate reconstruction; it has not been possible to investigate each one. 17 SJH patients did not have immediate reconstruction: 10 declined; 6 were advised against it due to likely radiotherapy; and 1 had significant comorbidities. 14/17 did proceed to radiotherapy.

Action: No action identified.

QPI 6 (ii): Immediate Reconstruction Rate (Within 6 Weeks of Treatment Decision)
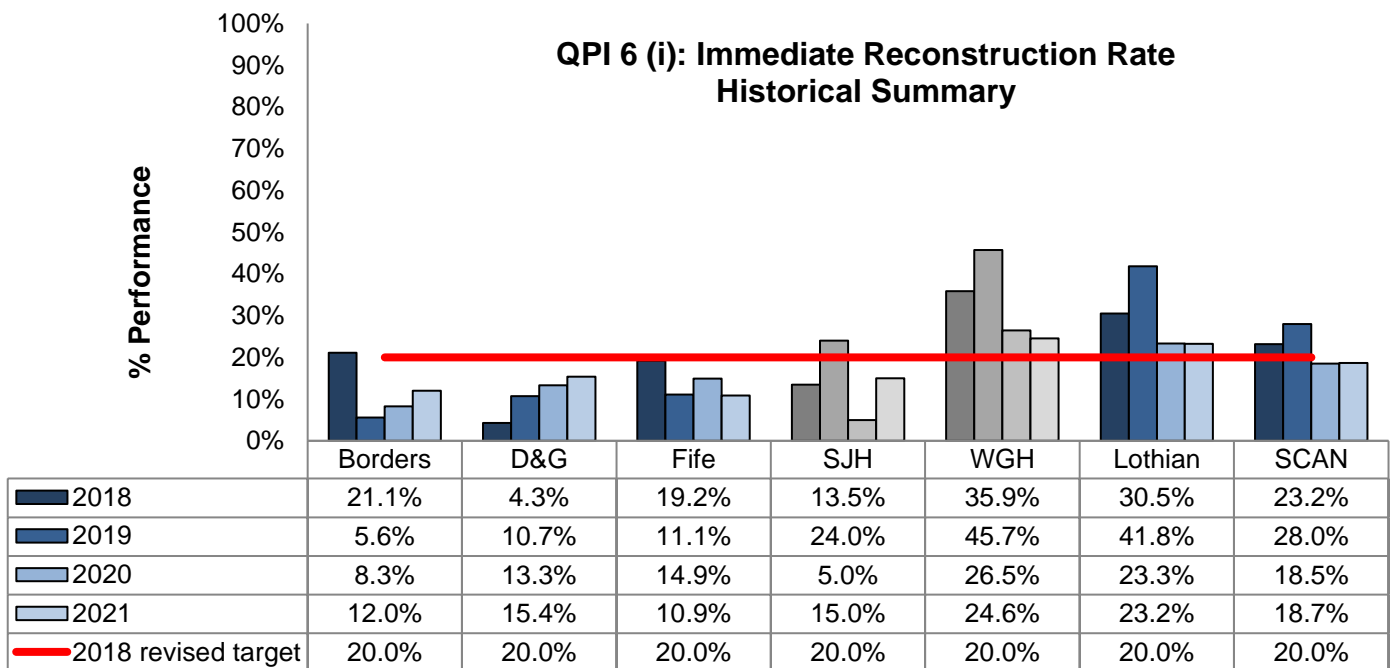Target = 90%

Numerator = Number of patients with breast cancer undergoing immediate breast reconstruction at the 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 = Patients with M1 disease, males, and patients undergoing neoadjuvant chemotherapy

	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2021 cohort	96	123	211	108	904	1012	1442
Ineligible for QPI	93	119	206	106	883	989	1407
Numerator	2	4	5	2	12	14	25
Denominator	3	4	5	2	21	23	35
Not recorded for numerator	0	0	0	0	0	0	0
Not recorded for exclusion	1	1	0	0	0	0	2
Not recorded for denominator	0	0	1	0	0	0	1
Target = 90%	**90%**	**90%**	**90%**	**90%**	**90%**	**90%**	**90%**
% Performance	66.7%	100%	100%	100%	57.1%	60.9%	71.4%

QPI 6 (ii): Immediate Reconstruction Rate
(Within 6 Weeks of Treatment Decision)
Historical Summary

	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2019		100.0%	71.4%	66.7%	81.0%	79.2%	79.3%
2020	0.0%	100.0%	100.0%	100.0%	81.8%	82.6%	84.8%
2021	66.7%	100.0%	100.0%	100.0%	57.1%	60.9%	71.4%
Target = 90%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%
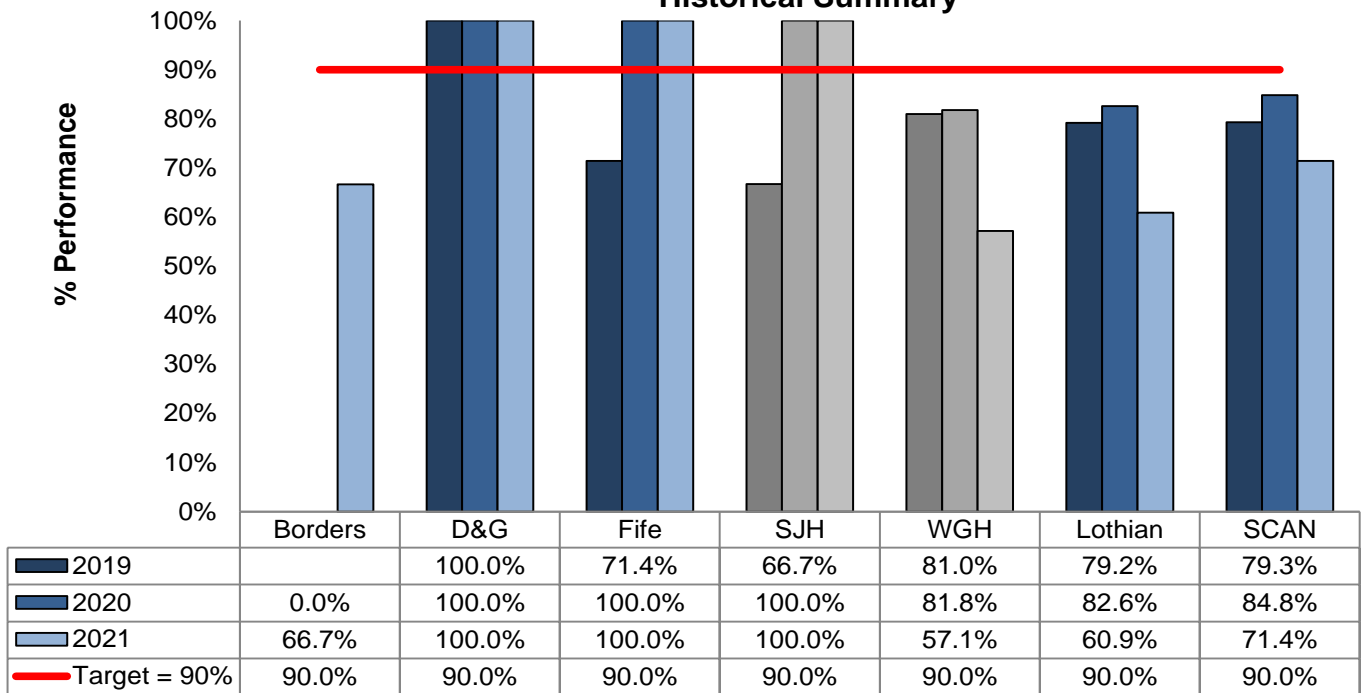
Comments

There is concern that patients referred to plastic surgery services are waiting longer than the target 6 weeks from the decision date. There are known waiting list problems for plastic surgery however this group of patients requires their cancer surgery to be carried out in a timely manner.

Borders: Did not meet the target. 1 patient underwent immediate reconstruction with a DIEP flap reconstruction, which was carried out 46 days after the treatment decision.

Dumfries & Galloway: Met the target. All 4 patients eligible for this QPI underwent immediate reconstruction within 6 weeks of the treatment decision.

Fife: Met the target. Of the 5 immediate reconstructions, 3 were prepectoral implants with mesh/ADM, 1 was a subpectoral implant with mesh/ADM and 1 was a DIEP abdominal flap. The patient not recorded for the denominator was at time of analysis receiving adjuvant chemotherapy prior to being considered for further surgery.

Lothian: Did not meet the target although SJH with the 2 patients it treated in this category achieved 100%. 9 WGH patients waited over 6 weeks from the treatment decision to immediate reconstruction. All of these had free flaps with plastics. Another had implant reconstruction but was put on Letrozole for a few months to allow them time to stop smoking.

Action: NHS Lothian to address delays within the Plastics department at St. Johns Hospital.

QPI 8 (i): Minimising Hospital Stay (WLE and/or an Axillary Sampling Procedure)

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	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
Numerator	51	61	138	80	643	723	973
Denominator	65	72	151	80	743	823	1111
Target = 60%	**60%**	**60%**	**60%**	**60%**	**60%**	**60%**	**60%**
% Performance	78.5%	84.7%	91.4%	100%	86.5%	87.8%	87.6%

By Health Board of Residence	Borders	D&G	Fife	Lothian	SCAN
Numerator	70	97	225	77	466
Denominator	84	138	252	77	535
Target = 60%	**60%**	**60%**	**60%**	**60%**	**60%**
% Performance	83.3%	70.3%	89.3%	100%	87.1%

QPI 8 (i): Minimising Hospital Stay - Day Case Surgery Historical Summary

	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2017	70.3%	71.9%	75.2%	90.7%	76.3%	77.3%	76.4%
2018	71.1%	86.6%	69.4%	98.0%	82.5%	83.5%	81.2%
2019	100.0%	87.0%	80.3%	90.2%	84.7%	85.0%	85.0%
2020	71.4%	72.2%	91.6%	96.6%	81.3%	82.8%	82.4%
2021	78.5%	84.7%	91.4%	100.0%	86.5%	87.8%	87.6%
Target	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%
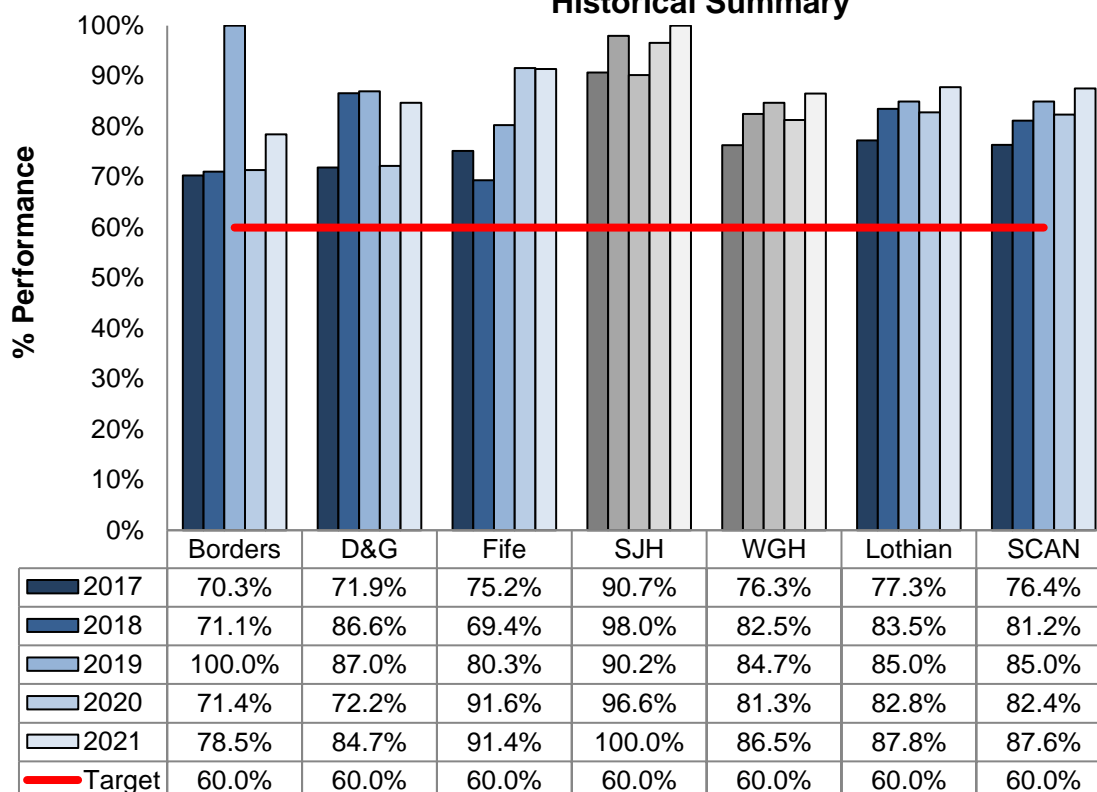
Comments

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

Action: No action identified. Results are consistently good. QPI likely to be archived following review.

QPI 8 (ii): Minimising Hospital Stay (Mastectomy Without Reconstruction)
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 their procedure

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

Exclusions = All patients undergoing breast reconstruction

By Health Board of Surgery	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
Numerator	0	29	41	16	57	73	143
Denominator	23	37	57	24	111	135	252
Target = 60%	**60%**	**60%**	**60%**	**60%**	**60%**	**60%**	**60%**
% Performance	0%	78.4%	71.9%	66.7%	51.4%	54.1%	56.7%

By Health Board of Surgery	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
Numerator	2	33	48	15	53	68	151
Denominator	26	42	67	23	102	125	260
Target = 60%	**60%**	**60%**	**60%**	**60%**	**60%**	**60%**	**60%**
% Performance	7.7%	78.6%	71.6%	65.2%	52%	54.4%	58.1%

QPI 8 (ii): Minimising Hospital Stay (Mastectomy Without Reconstruction) Historical Summary

	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2018	0.0%	83.3%	64.9%	15.6%	2.9%	12.5%	32.9%
2019	5.6%	79.5%	64.2%	21.0%	3.0%	16.5%	37.7%
2020	14.3%	67.9%	79.5%	51.5%	32.4%	37.0%	46.9%
2021	0.0%	78.4%	71.9%	66.7%	51.4%	54.1%	56.7%
Target	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%
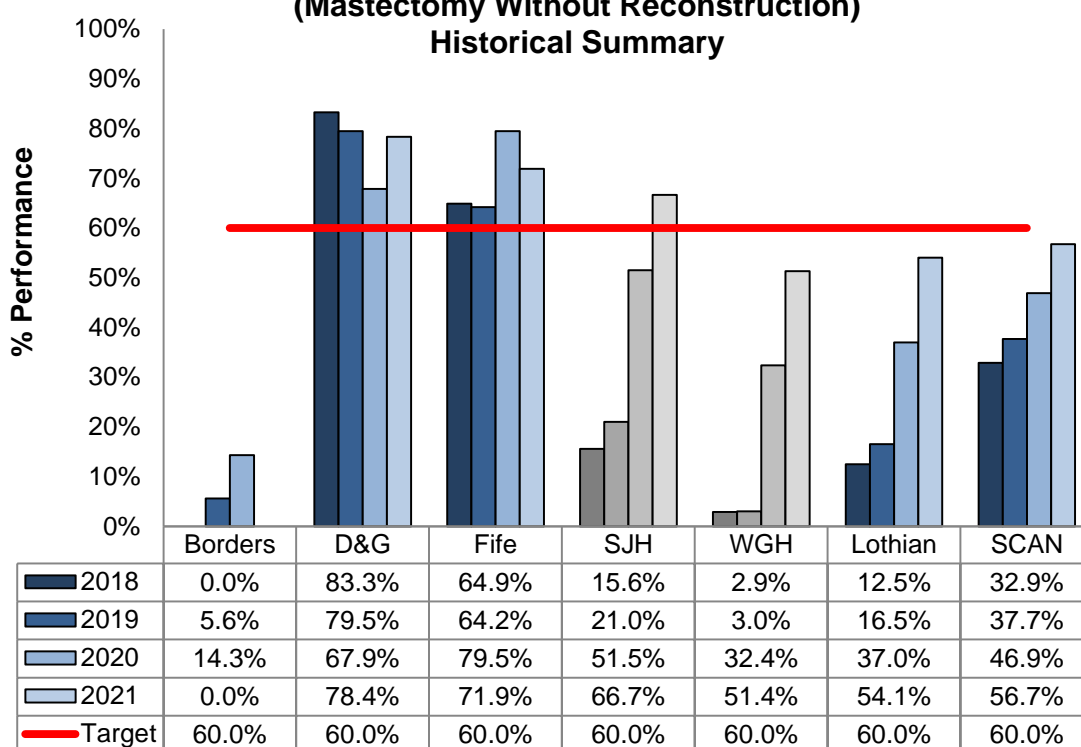
Comments

Dumfries and Galloway and Fife are to be congratulated for their excellent performances, and Lothian continues to improve. Borders are aware of this challenge and are reviewing current practices to enable them to discharge patients earlier where appropriate.

Borders: Did not meet the target. The geographical distances which affect many patients being discharged following surgery can be very significant, making it less appropriate for them to be discharged with drains still in situ. Borders are conducting a more detailed audit of this area, with widespread discussions taking place.

Dumfries & Galloway: Met the target.

Fife: Met the target.

Lothian: Did not meet the target overall however SJH did. There was an issue with the calculation using SMR01 by PHS, which was clarified by Matthew Barber. Patients are usually admitted the day before surgery, have preadmission paperwork done, go home and return the next day for surgery.

Action: The issue has been raised with Borders surgical team who are planning to look at protocols to improve outcomes.

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 for whom no invasion is present in the core biopsy

	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2021 cohort	96	123	211	108	904	1012	1442
Ineligible for QPI	13	11	15	8	127	135	174
Numerator	78	96	175	94	700	794	1143
Denominator	83	112	196	100	777	877	1268
Not recorded for numerator	0	0	0	0	6	6	6
Not recorded for exclusion	1	0	0	0	0	0	1
Not recorded for denominator	0	0	0	0	0	0	0
Target = 90%	**90%**	**90%**	**90%**	**90%**	**90%**	**90%**	**90%**
% Performance	94%	85.7%	89.3%	94%	90.1%	90.5%	90.1%

QPI 9: HER2 Status for Decision Making
Historical Summary

	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2018	89.6%	44.8%	65.4%	81.8%	82.1%	82.0%	76.1%
2019	81.0%	66.0%	66.7%	88.7%	88.0%	88.1%	82.4%
2020	95.9%	66.7%	81.3%	93.3%	92.4%	92.5%	88.4%
2021	94.0%	85.7%	89.3%	94.0%	90.1%	90.5%	90.1%
Target = 90%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%
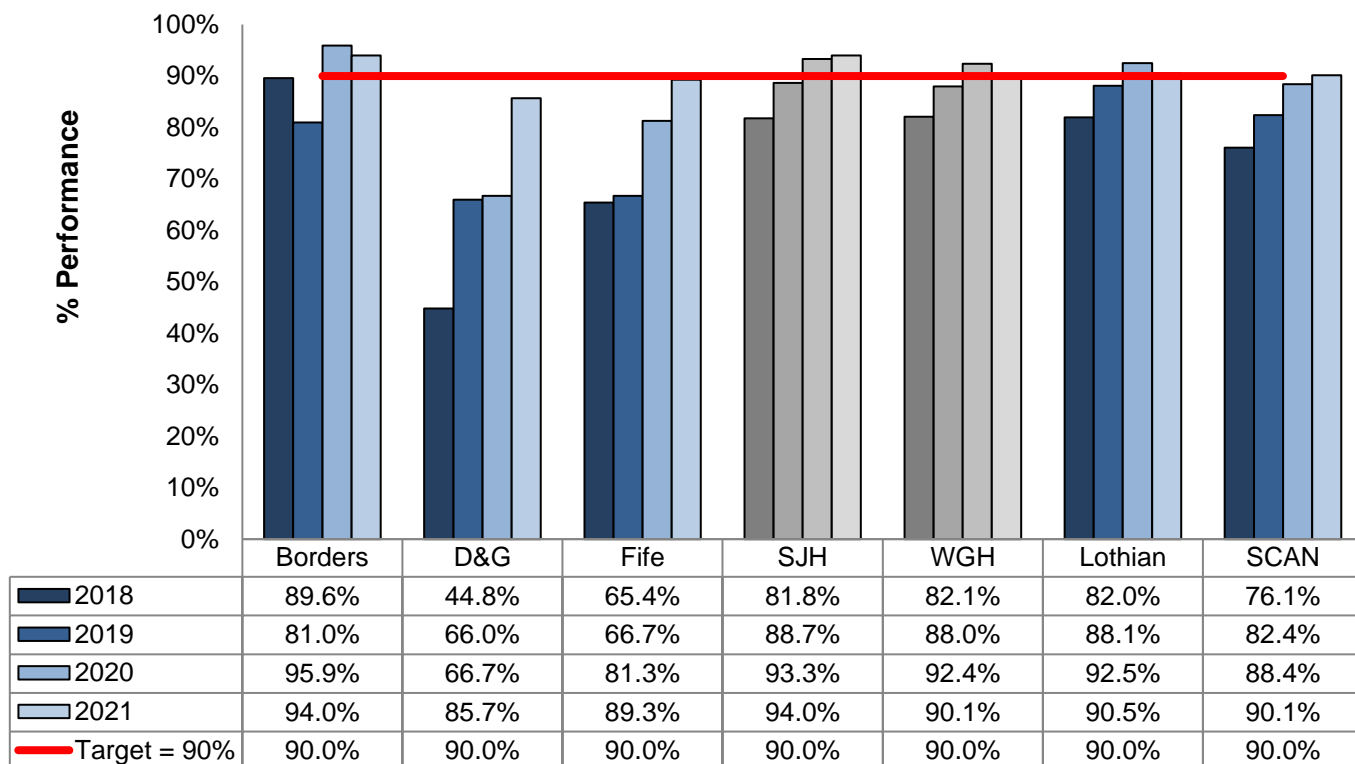
Comments

Changes in process by both clinicians and pathology departments have resulted in steady progress across the region, and this target has been met by SCAN overall despite an increase in patient numbers.

Borders: Met the target. The HER2 status for 4 patients was delayed due to FISH analysis (16-20 days). For 1 patient the HER2 status report date was not recorded as the patient's initial diagnosis and investigations were carried out privately.

Dumfries & Galloway: Did not meet the target. In 16 cases the HER2 status was reported within 15 to 62 days of the core biopsy, 11 of them within 21 days.

Fife: Did not meet the target. In 21 cases the patient did not have their HER2 status reported within 14 days. Of these, 17 were delayed due to the need for FISH analysis and in 1 case a HER2 test was performed on the surgical specimen rather than a biopsy. For the remaining 3 there was a delay in the sample initially being sent to Lothian which meant the overall timeframe exceeded 2 weeks. The change in practice introduced in Fife in late 2020 has helped improve the results for 2021.

Lothian: Met the target.

Action: No action identified.

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

	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2021 cohort	96	123	211	108	904	1012	1442
Ineligible for QPI	94	119	206	106	876	982	1401
Numerator	2	3	0	1	12	13	18
Denominator	2	4	5	2	28	30	41
Not recorded for numerator	0	0	0	0	0	0	0
Not recorded for exclusion	0	0	0	0	0	0	0
Not recorded for denominator	0	0	0	0	0	0	0
Target <40%	<40%	<40%	<40%	<40%	<40%	<40%	<40%
% Performance	100%	75%	0%	50%	42.9%	43.3%	43.9%

QPI 10: Radiotherapy for Breast Conservation in Older Adults Historical Summary

	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2018	40.0%	0.0%	45.5%	100.0%	68.6%	69.8%	59.5%
2019		0.0%	50.0%	33.3%	60.7%	58.1%	52.6%
2020		0.0%	50.0%	66.7%	50.0%	51.7%	46.5%
2021	100.0%	75.0%	0.0%	50.0%	42.9%	43.3%	43.9%
Target <40%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%
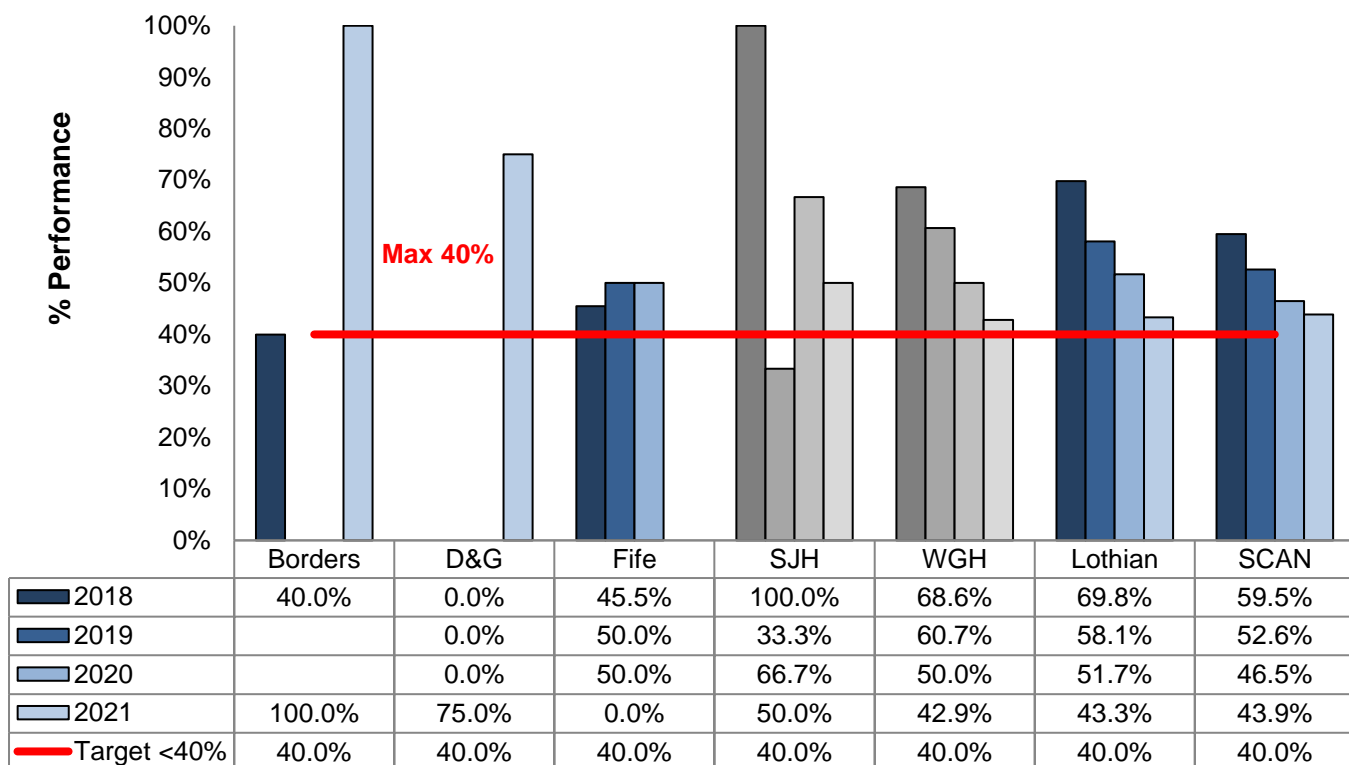
Comments

Although the target was not met, there was a clear year-on-year decrease in the overall percentage having radiotherapy. Where treatment is discussed and the patient is keen to proceed, oncologists do not believe it would be appropriate to deny them the opportunity for reduced risk of local recurrence. However, this QPI has been effective in reducing the proportion of older patients having adjuvant radiotherapy, and it is now due to be retired.

Borders: Did not meet the target. Both outliers were aged 70 years and both chose to proceed with radiotherapy following discussion with oncology.

Dumfries & Galloway: Did not meet the target. In all 3 outlier cases it was documented that there was potential to avoid radiotherapy but the decision was made to proceed from a local-control point of view.

Fife: Met the target. All 5 patients under the purview of this QPI did not receive radiotherapy. In 3 cases the patient was seen by an oncologist and the decision was agreed then. 1 patient confirmed she did not wish to have radiotherapy so was not referred to oncology. The final patient was deemed by the MDT to be unlikely to require radiotherapy.

Lothian: Did not meet the target. 13 of the 30 patients in this category received radiotherapy, ranging in age from 70 to 83 years old. In 9 cases it was documented that the radiotherapy was given in order to reduce the risk of recurrence. 2 other patients were deemed to have higher-risk cancers therefore a greater need for radiotherapy: 1 had bilateral lesions; another had had previous contralateral breast cancer as well as endometrial cancer. 2 further patients received radiotherapy as it was their express wish, despite one of them having significant comorbidities. For the 2 remaining patients, the reason for them undergoing radiotherapy is not recorded.

Action: No action identified.

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 = Patients taking part in trials of chemotherapy treatment, patients who have had neo-adjuvant chemotherapy, and patients with M1 disease

	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2021 cohort	96	123	211	108	904	1012	1442
Ineligible for QPI	86	112	187	101	846	947	1332
Numerator	8	7	20	5	48	53	88
Denominator	10	11	24	7	58	65	110
Not recorded for numerator	0	0	0	0	0	0	0
Not recorded for exclusion	0	3	0	0	0	0	3
Not recorded for denominator	0	4	1	0	1	1	6
Target = 80%	**80%**	**80%**	**80%**	**80%**	**80%**	**80%**	**80%**
% Performance	80%	63.6%	83.3%	71.4%	82.8%	81.5%	80%

QPI 11 (i): Adjuvant Chemotherapy (Hormone Receptor Positive, HER2 Negative & High nhs.predict or Oncotype Scores)
Historical Summary

	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2018	57.9%	66.7%	65.4%	29.2%	46.0%	41.4%	49.3%
2019	33.3%	66.7%	85.0%	55.6%	73.8%	70.6%	69.6%
2020	50.0%	75.0%	88.0%	66.7%	73.5%	71.4%	74.5%
2021	80.0%	63.6%	83.3%	71.4%	82.8%	81.5%	80.0%
Target = 80%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%
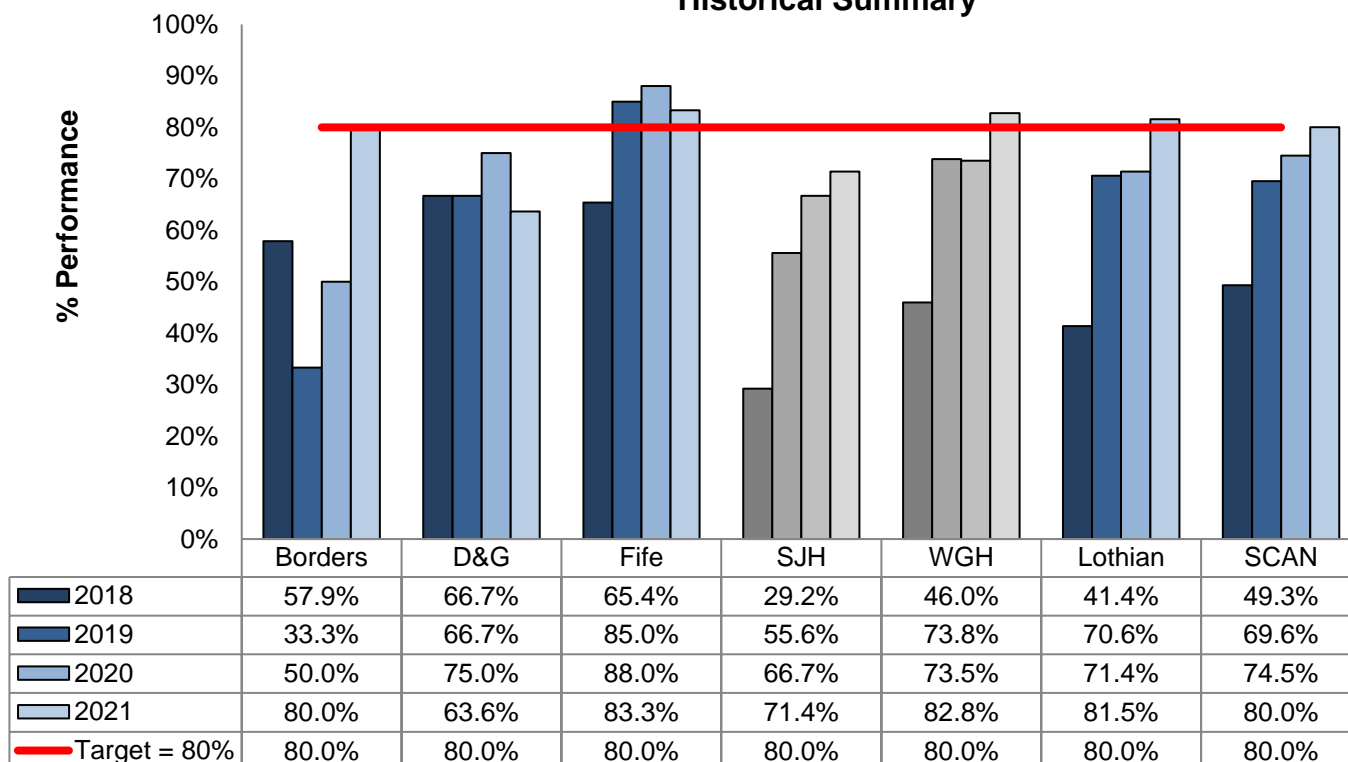
Comments

In addition to the patients who are explicitly excluded from the denominator in the definition, some patients are implicitly excluded from the denominator as they are ineligible for the nhs.predict algorithm used to calculate the denominator. The R Studio version of nhs.predict used to calculate scores for the audit was developed by Dr Peter Hall and colleagues. The algorithm excludes:

•   patients younger than 25 and older than 85

•   patients who have in-situ disease only

•   patients whose tumour size or involved node count is not applicable, not assessable or not recorded

•   patients who have received neo-adjuvant or peri-operative hormone therapy, since nhs.predict has not been validated for use in these cases, relying as it does on pathological tumour size for the calculation. The changes brought on by pre-operative chemo/hormone therapy don't sit well with the calculations. For numbers of patients having neoadjuvant or peri-operative therapy, please see the Key Categories tab.

Borders: Met the target. 2 patients declined chemotherapy.

Dumfries & Galloway: Did not meet the target. 4 patients did not undergo adjuvant chemotherapy; 1 patient declined chemo and in the other 3 cases chemo was deemed not appropriate due to the patients' co-morbidities.

Fife: Met the target.

Lothian: Met the target.

Action: No action identified.

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 = Patients taking part in trials of chemotherapy treatment, patients who have had neo-adjuvant chemotherapy, and patients with M1 disease.

	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2021 cohort	96	123	211	108	904	1012	1442
Ineligible for QPI	88	119	192	102	866	968	1367
Numerator	4	2	12	3	31	34	52
Denominator	8	4	19	6	38	44	75
Not recorded for numerator	0	0	0	0	0	0	0
Not recorded for exclusion	1	3	0	0	1	1	5
Not recorded for denominator	0	0	0	0	1	1	1
Target = 80%	**80%**	**80%**	**80%**	**80%**	**80%**	**80%**	**80%**
% Performance	50%	50%	63.2%	50%	81.6%	77.3%	69.3%

QPI 11 (ii): Adjuvant Chemotherapy (Triple Negative or HER2 Positive & High nhs.predict Score)
Historical Summary

	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2018	75.0%	100.0%	75.0%	75.0%	62.3%	64.4%	68.0%
2019	40.0%	100.0%	82.4%	50.0%	80.8%	76.7%	76.4%
2020	100.0%	83.3%	80.0%	66.7%	57.9%	58.5%	68.7%
2021	50.0%	50.0%	63.2%	50.0%	81.6%	77.3%	69.3%
Target = 80%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%
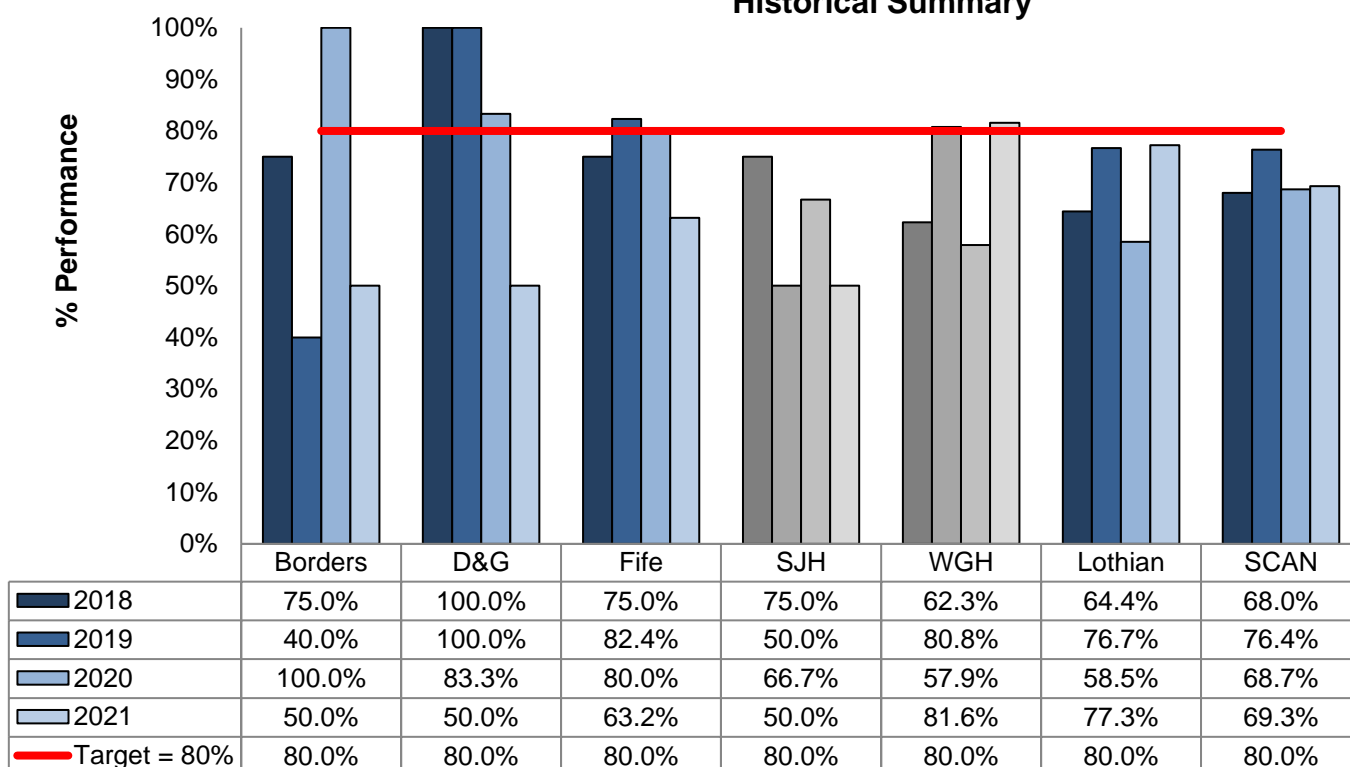
Comments

Small numbers are a factor in some areas (see previous note regarding nhs.predict exclusions). Overall, not much change is seen. Where all of the outliers have been examined (Dumfries and Fife) there are legitimate reasons for not giving chemotherapy.

It should also be noted that this group covers those patients who have not received neoadjuvant chemotherapy for higher-risk disease (see QPI 18). They are therefore already patients for whom a decision has been made not to give chemotherapy in the neoadjuvant setting and who are more likely to have contraindications to adjuvant treatment.

Borders: Did not meet the target. 4 patients eligible for this QPI did not receive adjuvant chemotherapy. 1 patient declined it. 2 patients had significant co-morbidities. The 4th patient's adjuvant treatment is not recorded as they chose to have it privately.

Dumfries & Galloway: Did not meet the target. 1 patient had comorbidities so chemo was deemed inappropriate. Another patient had comorbidities therefore was not a candidate for adjuvant chemotherapy.

Fife: Did not meet the target. 7 patients covered by the QPI did not undergo adjuvant chemotherapy: 4 declined chemo; 2 had co-morbidities; and in 1 case the reason was a clinical decision coupled with the patient's preference not to have chemo.

Lothian: Did not meet the target. 10/44 patients did not undergo adjuvant chemotherapy. 3 patients declined it (2 of these had concerns regarding their quality of life). 2 patients were not suitable for treatment due to significant comorbidities. 1 patient was not put forward for chemo as their cancer was small in size and screen-detected. 1 patient had a lower nhs.predict score calculated in the MDM than the one calculated during audit. In the 3 remaining cases no reason is given for why the patients did not receive post-operative chemotherapy.

Action: No action identified.

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

	Borders	**D&G**	**Fife**	**SJH**	**WGH**	**Lothian**	**SCAN**
2021 cohort	96	123	211	108	904	1012	1442
Ineligible for QPI	40	56	110	48	228	276	482
Numerator	13	10	27	14	129	143	193
Denominator	56	67	101	60	676	736	960
Not recorded for numerator	0	0	0	0	0	0	0
Not recorded for exclusion	0	0	0	0	0	0	0
Not recorded for denominator	0	0	0	0	0	0	0
Target <20%	**<20%**	**<20%**	**<20%**	**<20%**	**<20%**	**<20%**	**<20%**
% Performance	23.2%	14.9%	26.7%	23.3%	19.1%	19.4%	20.1%

QPI 13: Re-excision Rates
Historical Summary

	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2017	5.2%	15.3%	21.5%	19.6%	20.3%	20.2%	19.0%
2018	14.6%	22.8%	25.2%	34.7%	21.0%	22.0%	22.1%
2019	10.3%	15.4%	26.4%	16.7%	24.2%	23.6%	22.8%
2020	20.0%	16.7%	23.6%	9.8%	23.5%	22.0%	21.7%
2021	23.2%	14.9%	26.7%	23.3%	19.1%	19.4%	20.1%
Target <20%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
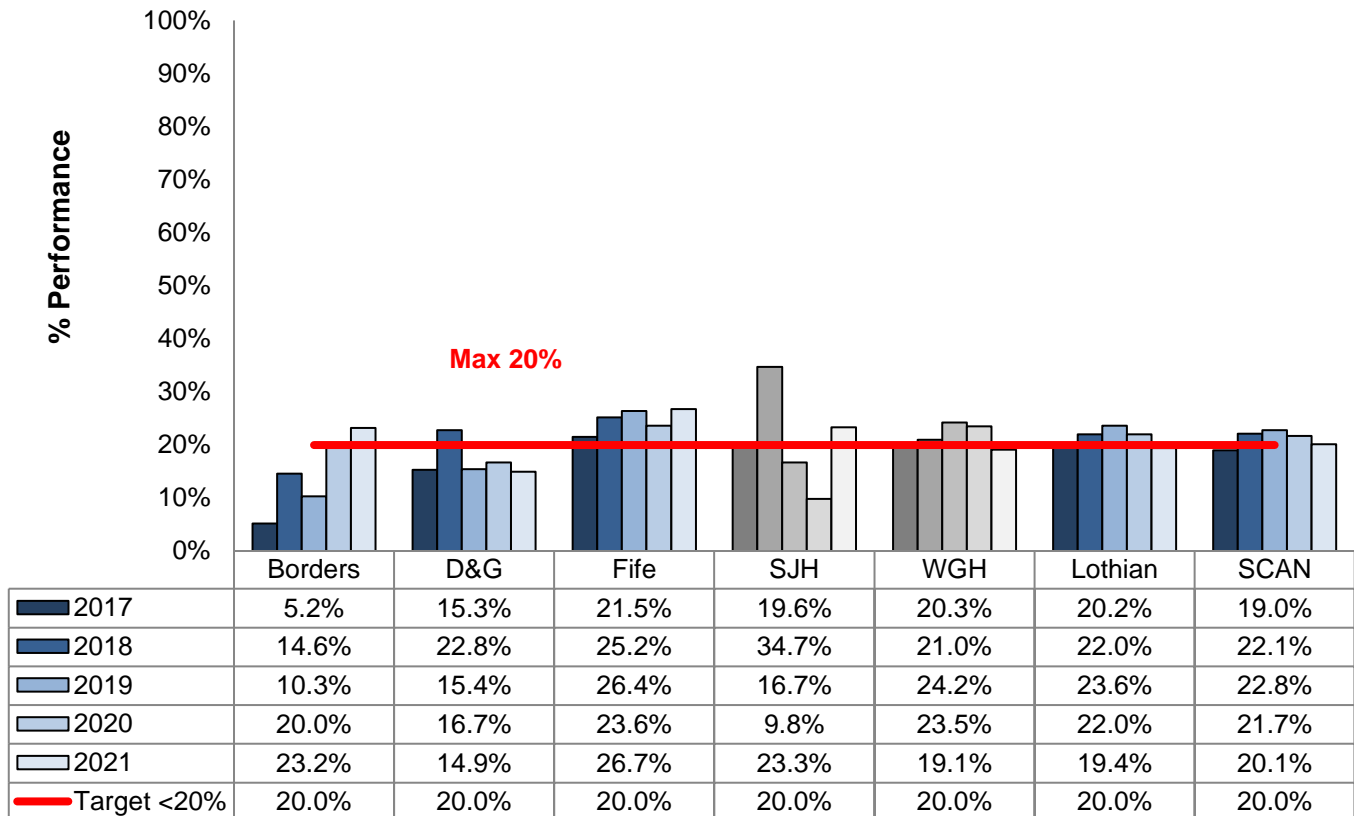
Comments

Results are similar to previous years. The main challenge is that there is no reliable way to assess surgical margins in theatre. Most of the outliers are lobular cancers, which are particularly difficult to excise fully. There is always an important balance to be struck between full excision and not removing too much tissue, which would compromise cosmesis. These results compare favourably with UK published data. Fife are aware of the challenge and planning to discuss their results with all surgeons concerned.

Borders: Did not meet the target. 13/56 patients underwent a re-excision.

Dumfries & Galloway: Met the target.

Fife: Did not meet the target. In each case of further surgery there were positive margins following the first surgical procedure.

Lothian: Met the target.

Action: No action identified.

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

	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2021 cohort	96	123	211	108	904	1012	1442
Ineligible for QPI	96	123	211	108	902	1010	1440
Numerator	0	0	0	0	2	2	2
Denominator	0	0	0	0	2	2	2
Not recorded for numerator	0	0	0	0	0	0	0
Not recorded for exclusion	0	0	0	0	0	0	0
Not recorded for denominator	0	0	0	0	0	0	0
Target = 90%	90%	90%	90%	90%	90%	90%	90%
% Performance	N/A	N/A	N/A	N/A	100%	100%	100%

QPI 14 (i): Referral for Genetics Testing (Patients <30 Years of Age) Historical Summary
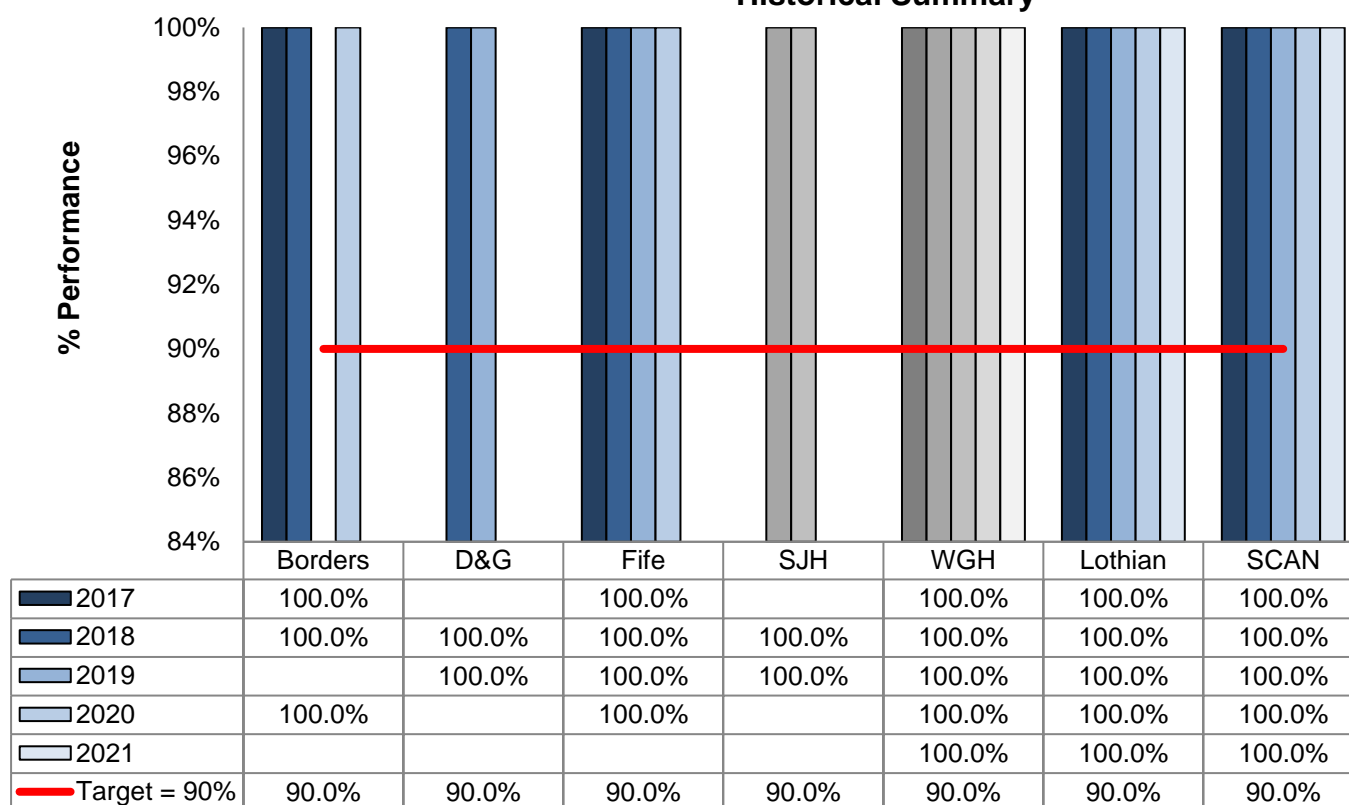
	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2017	100.0%		100.0%		100.0%	100.0%	100.0%
2018	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
2019		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
2020	100.0%		100.0%		100.0%	100.0%	100.0%
2021					100.0%	100.0%	100.0%
Target = 90%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%

(Blank cells in the chart indicate the Health Board had no patients in this category)

Comments

All Health Boards in SCAN with breast cancer patients aged under 30 years at diagnosis consistently referred them for genetics testing.

Action: No action identified

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

	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2021 cohort	96	123	211	108	904	1012	1442
Ineligible for QPI	95	119	206	104	888	992	1412
Numerator	1	4	4	4	16	20	29
Denominator	1	4	5	4	16	20	30
Not recorded for numerator	0	0	0	0	0	0	0
Not recorded for exclusion	0	0	0	0	0	0	0
Not recorded for denominator	0	0	0	0	1	1	1
Target = 90%	**90%**	**90%**	**90%**	**90%**	**90%**	**90%**	**90%**
% Performance	100%	100%	80%	100%	100%	100%	96.7%

QPI 14 (ii): Referral for Genetics Testing (Triple Negative Patients <50 Years of Age) Historical Summary
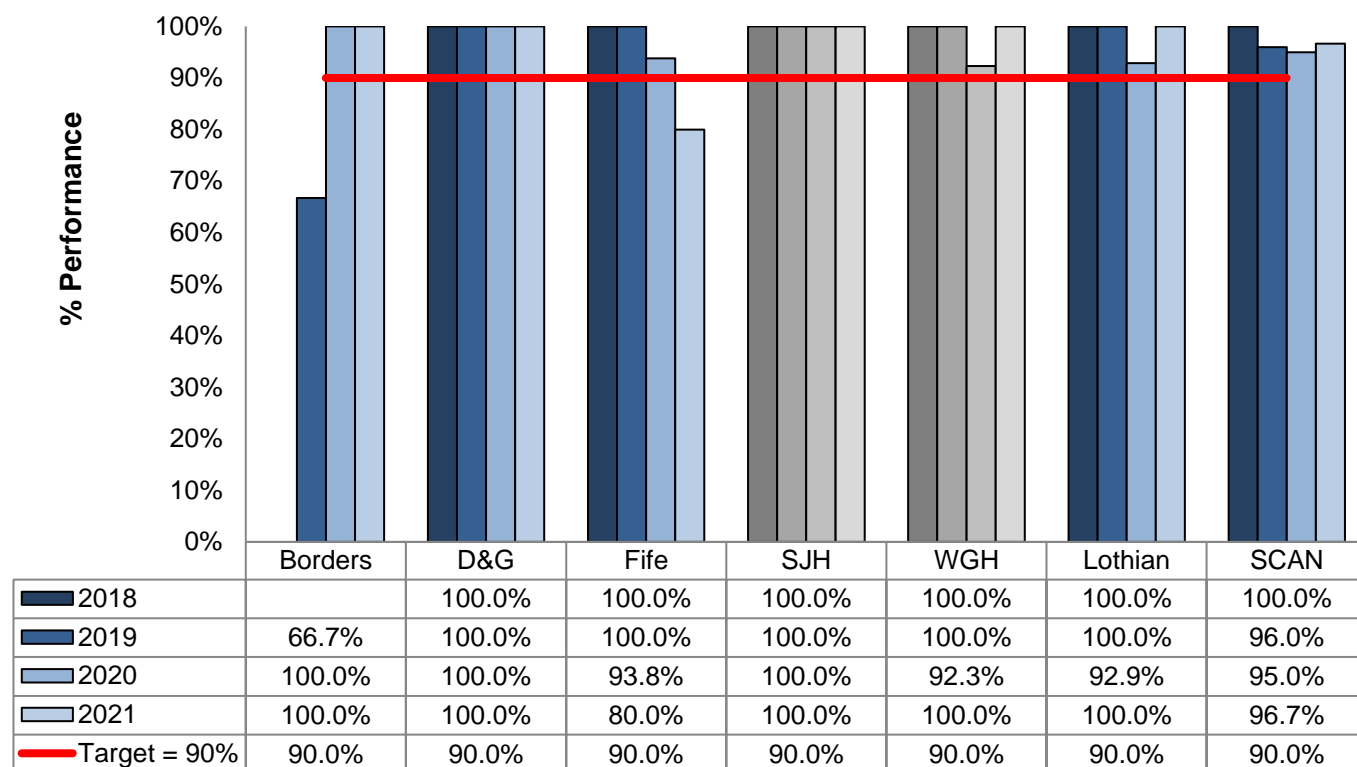
	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2018		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
2019	66.7%	100.0%	100.0%	100.0%	100.0%	100.0%	96.0%
2020	100.0%	100.0%	93.8%	100.0%	92.3%	92.9%	95.0%
2021	100.0%	100.0%	80.0%	100.0%	100.0%	100.0%	96.7%
Target = 90%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%

(Blank cells in the chart indicate the Health Board had no patients in this category)

Comments

Excellent results, as in previous years. Fife's patient would have been eligible for testing in the Health Board where she moved. This QPI is likely to be archived.

Borders: Met the target.

Dumfries & Galloway: Met the target.

Fife: Did not meet the target. 1 patient was not referred for genetic testing. This patient, although diagnosed in Fife, moved to another health board area after the initial biopsy and all further investigations and treatment were carried out there. The new MDT did not refer the patient for genetic testing and declined to record the patient in their audit so she was retained in Fife's audit instead.

Lothian: Met the target.

Action: No action identified.

QPI 15: 30 Day Mortality following Chemotherapy

This QPI has been replaced with a standardised 30 day SACT Mortality QPI across all the tumour types covered by the QPI program.

Measurement is being revised to use data from Chemocare (electronic chemotherapy prescribing system) for reporting in order to utilise existing data and provide an accurate picture of all patients with breast cancer undergoing chemotherapy, rather than the subset of all diagnosed in the audit year cohort only.

The development of a National reporting tool is currently underway through a collaboration with Public Health Scotland and the 3 Cancer Networks; NCA, SCAN and WoSCAN. This is to ensure that reporting in consistent throughout Scotland.

Progress has been complicated by the differences in the 5 instances of Chemocare across Scotland and a date for initial reporting is yet to be confirmed at the time of writing this report.

It should be noted that SCAN oncologists regularly review relevant cases at departmental Morbidity and Mortality meetings, with fully documented outcomes.

Comments

It is disappointing that figures for this QPI remain unavailable.

QPI 16: Clinical Trials and Research Study Access

Target = 15%

Numerator = Number of patients diagnosed with breast cancer who consented to a clinical trial / research study. Data is provided by SCRN (Scottish Cancer Research Network)

Denominator = All patients diagnosed with breast cancer. The denominator for this QPI is identified by using the five-year average of Scottish Cancer Registry data

Exclusions = None

	Borders	D&G	Fife	Lothian	SCAN
Numerator	14	29	14	309	366
Denominator	74	99	204	877	1231
Target = 15%	**15%**	**15%**	**15%**	**15%**	**15%**
% Performance	18.9%	29.3%	6.9%	35.2%	29.7%

QPI 16: Clinical Trial & Research Study Access Historical Summary

	Borders	D&G	Fife	Lothian	SCAN
2017	59.5%	8.7%	13.1%	36.3%	31.4%
2018	28.6%	17.7%	10.1%	21.4%	19.7%
2019	17.4%	8.8%	8.2%	21.4%	18.0%
2020	24.7%	1.9%	2.4%	32.5%	24.7%
2021	18.9%	29.3%	6.9%	35.2%	29.7%
Target = 15%	15.0%	15.0%	15.0%	15.0%	15.0%
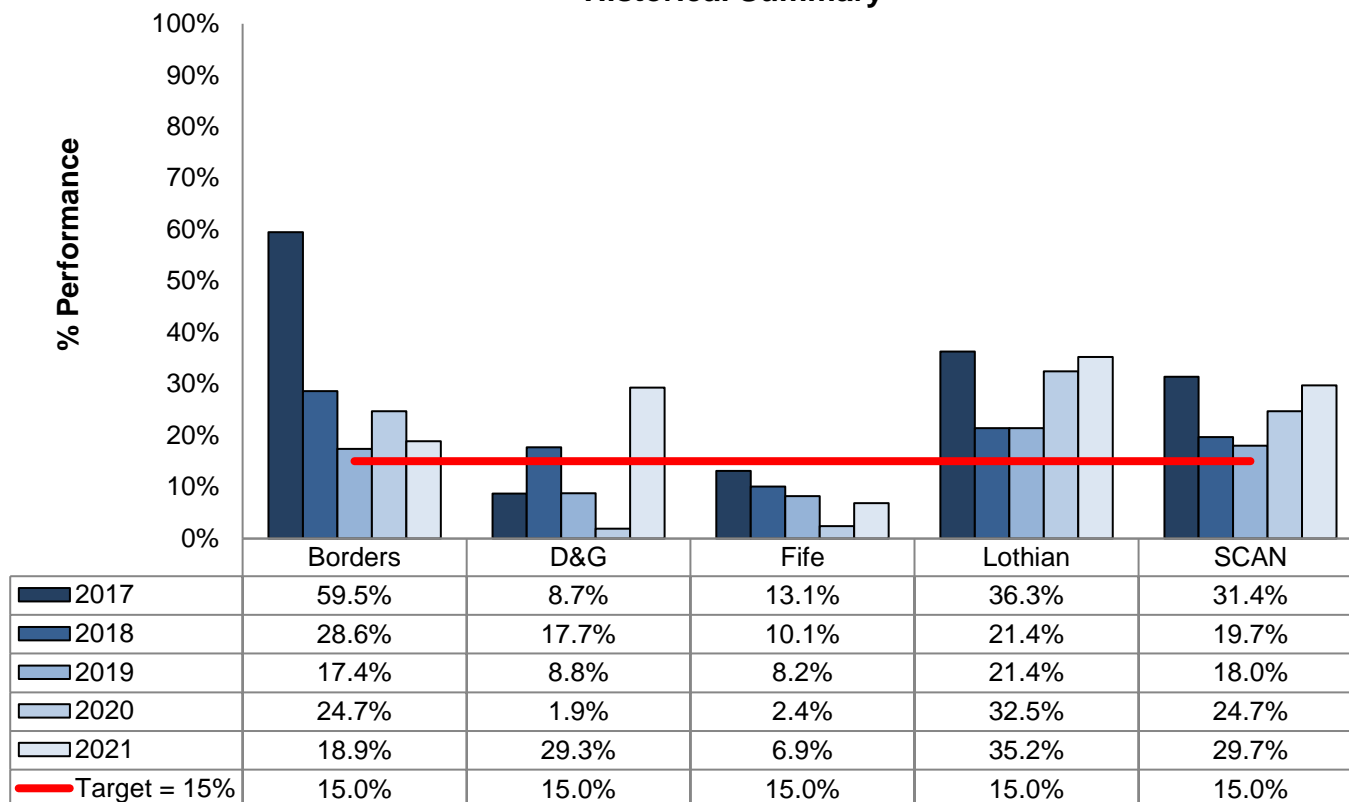
Number of breast cancer patients participating in open trials in 2021

Name of trial	Borders	D&G	Fife	Lothian	SCAN
A study of NUC-7738 for the treatment of solid cancers or lymphoma	0	0	0	1	1
Add-Aspirin	3	0	0	17	20
APPALACHES (EORTC 1745-ETF-BCG)	2	0	0	2	4
AURORA	0	0	1	2	3
Biobank SR1418	0	0	0	98	98
CAPItello-290	0	0	0	2	2
Cardiac CARE	0	0	0	30	30
CCP-Cancer UK	5	0	0	0	5
Cell Free DNA	0	0	0	1	1
DESTINY-06	0	0	0	1	1
EFC15935	0	0	0	6	6
Evaluation of the prognostic role of ctDNA in metastatic breast cancer patients.	0	0	0	22	22
HER2CLIMB-02	1	0	2	5	8
IMPACTOR	0	0	0	1	1
MEDICI	0	0	0	6	6
Mint5	0	0	2	6	8
MO39193 - Atezolizumab + Chemotherapy in early relapsing TNBC	0	0	1	1	2
NOSTRA-Feasibility Study, Version 1.0, 30 July 2018	0	1	0	1	2
OPTIMA	0	2	0	3	5
Phase III study of Niraparib vs placebo in patients with Breast Cancer	0	0	0	3	3
POETIC-A	0	5	0	0	5
POSNOC.	0	0	0	1	1
PRIMETIME	3	16	1	23	43
Revolution Study - Lothian St Columba's Hospice	0	0	0	3	3
ROSCO	0	5	0	1	6
ROSY-O	0	0	1	0	1
SCCAMP V1.0	0	0	0	53	53
SERD 2/3L	0	0	0	1	1
TENACITY	0	0	5	3	8
The NEO Study	0	0	0	16	16
WP42627: RO7300490 +/- ATEZOLIZUMAB IN SOLID TUMORS	0	0	1	0	1
Totals	**14**	**29**	**14**	**309**	**366**

Comments

Borders: Met the target. The COVID pandemic, delays from trial co-ordinating centres and internal work pressures have delayed the opening of the ATNEC and EUCHARIS trials. Borders are still to open the HER-2 Radical trial. Recruitment to Add Aspirin closed in November 2021, local recruitment to ROSCO was stopped in October 2021 as standard treatment is now superior to the trial and Primetime also closed to recruitment.

Dumfries & Galloway: Met the target.

Fife: Did not meet the target.

Lothian: Met the target.

SCAN: No action identified. Results overall are very good. Borders and Dumfries and Galloway are to be congratulated for their results.

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 taking part in clinical trials of chemotherapy treatment and patients who undergo neoadjuvant therapy

	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2021 cohort	96	123	211	108	904	1012	1442
Ineligible for QPI	92	119	205	104	878	982	1398
Numerator	3	2	3	3	15	18	26
Denominator	4	4	6	4	26	30	44
Not recorded for numerator	0	0	0	0	0	0	0
Not recorded for exclusion	0	0	0	0	0	0	0
Not recorded for denominator	0	1	0	0	1	1	2
Target = 60%	**60%**	**60%**	**60%**	**60%**	**60%**	**60%**	**60%**
% Performance	75%	50%	50%	75%	57.7%	60%	59.1%

The R Studio version of nhs.predict was used to calculate the predicted benefit of adjuvant chemotherapy.

QPI 17: Genomic Testing
Historical Summary

	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2018		66.7%	14.3%	16.7%	15.8%	16.0%	20.0%
2019	0.0%	62.5%	37.5%	0.0%	52.9%	42.9%	43.6%
2020	20.0%	50.0%	90.0%	85.7%	69.2%	75.0%	68.3%
2021	75.0%	50.0%	50.0%	75.0%	57.7%	60.0%	59.1%
Target = 60%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%
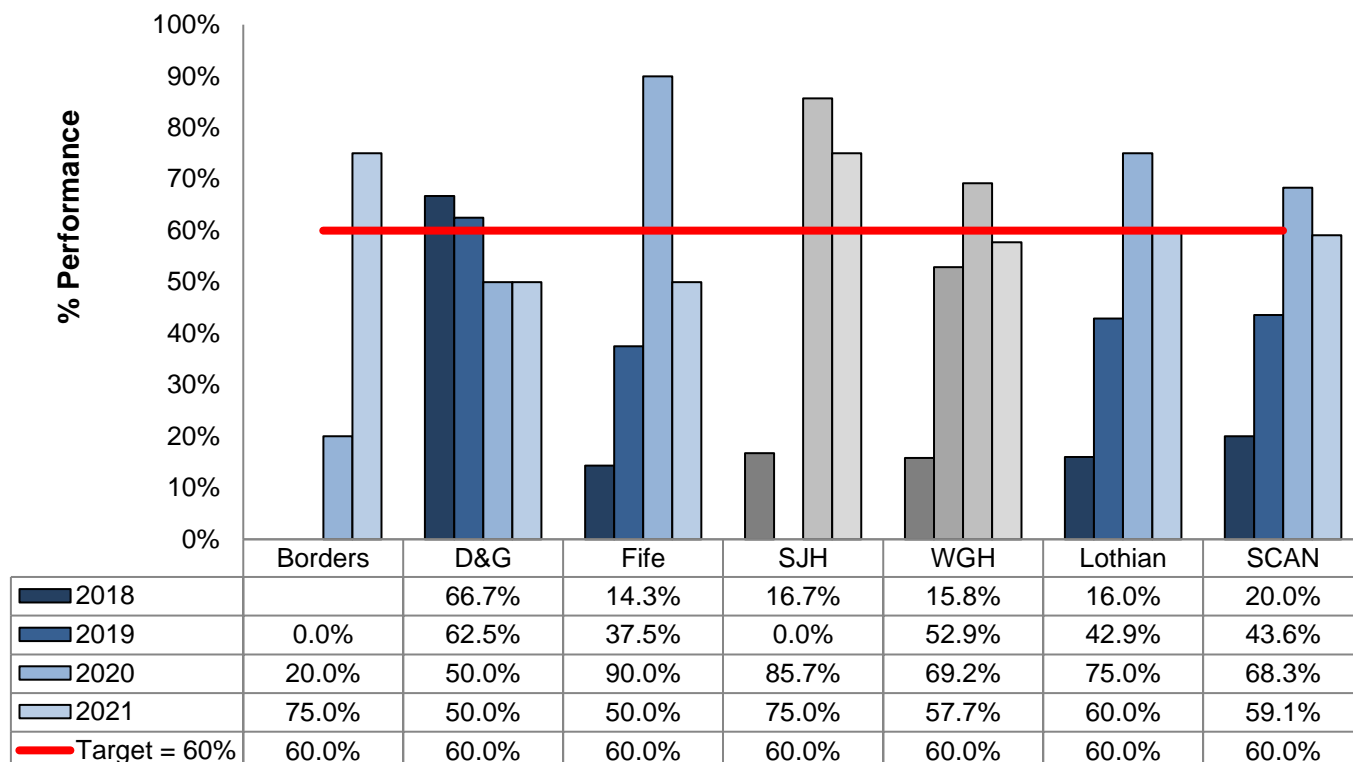
Comments

Numbers are small, due in part to the exclusion of all patients starting hormone therapy prior to surgery. Unfortunately it has proved difficult this year for auditors to obtain a list of patients being tested. Dumfries are particularly reliant on receiving the list in order to complete their data collection.

Borders: Met the target. The 1 patient who was not referred for genomic testing had lobular cancer and an nhs.predict score of 3.6%. Nhs.predict can overestimate for lobular cancer and this patient would not have been a candidate for chemotherapy, according to the oncologist.

Dumfries & Galloway: Did not meet the target. 1 patient was not referred due to frailty and comorbidities. In the other case the reason was not documented however the patient also had comorbidities and low performance status.

Fife: Did not meet the target. 1 patient was not suitable for chemo, 1 did not wish to pursue it so no genomic tests were performed, and 1 patient declined the test.

Lothian: Met the target.

Action: No action identified.

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

	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2021 cohort	96	123	211	108	904	1012	1442
Ineligible for QPI	87	109	191	94	841	935	1322
Numerator	6	13	14	13	49	62	95
Denominator	9	14	20	14	63	77	120
Not recorded for numerator	0	0	0	0	0	0	0
Not recorded for exclusion	0	0	0	0	0	0	0
Not recorded for denominator	0	5	1	0	0	0	6
Target = 80%	**80%**	**80%**	**80%**	**80%**	**80%**	**80%**	**80%**
% Performance	66.7%	92.9%	70%	92.9%	77.8%	80.5%	79.2%

QPI 18 (i): Neoadjuvant Chemotherapy (Triple Negative or HER2 Positive, Stage II or III) Historical Summary

	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2018	100.0%	52.6%	66.7%	61.1%	69.6%	68.0%	66.2%
2019	90.9%	77.8%	75.0%	81.8%	81.0%	81.1%	80.0%
2020	68.8%	81.8%	80.4%	80.0%	83.6%	83.1%	80.8%
2021	66.7%	92.9%	70.0%	92.9%	77.8%	80.5%	79.2%
Target = 80%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%
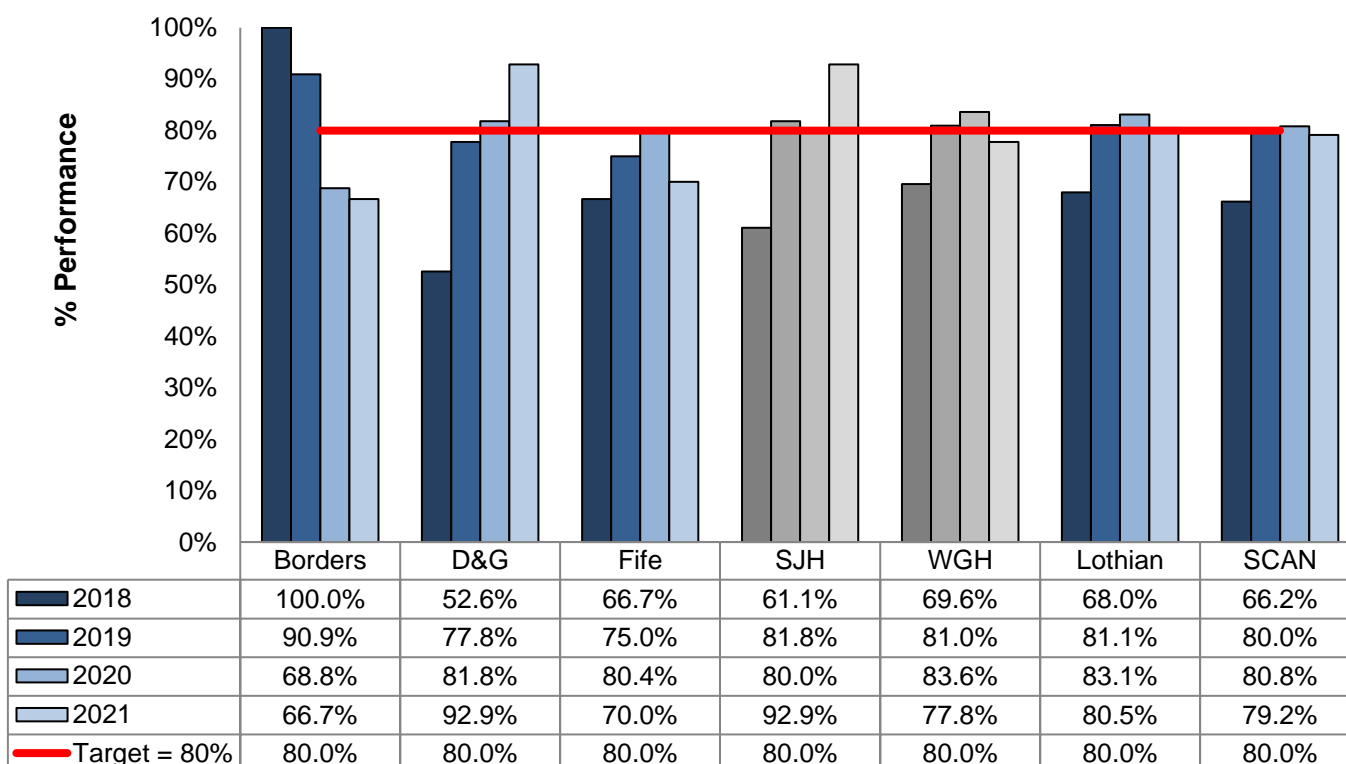
Comments

The issue here is almost entirely that of patient comorbidities. Denominators are reliant, amongst other data items, on accurate recording of clinical M stage. Dumfries and Galloway audit team has reported difficulties in accessing information relating to clinical TNM as it is not always documented at the MDM.

Borders: Did not meet the target. 3 patients did not undergo neoadjuvant chemo. 1 declined; 1 had required a mastectomy; neoadjuvant chemotherapy would not have altered the surgical outcome. 1 patient proceeded straight to surgery in view of their age, in case they did not tolerate chemotherapy well and this delayed their definitive treatment.

Dumfries & Galloway: Met the target.

Fife: Did not meet the target. 6 patients covered by the QPI did not undergo neoadjuvant chemotherapy. 5 were considered for it at the MDT or the oncology clinic but proceeded straight to surgery due to poor fitness/co-morbidities/high risk. 1 patient was given a cancellation slot for surgery, which was done prior to her (positive) HER2 status being reviewed at the MDT. The patient not recorded for the denominator had an indeterminate lesion therefore M staging was not recorded.

Lothian: Met the target.

Action: Dumfries and Galloway to ensure recording of clinical TNM is routinely undertaken by the MDT. Borders to review cases to ensure no underlying treatment issue.

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

	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2021 cohort	96	123	211	108	904	1012	1442
Ineligible for QPI	90	111	197	95	855	950	1348
Numerator	1	7	6	5	19	24	38
Denominator	6	12	14	13	49	62	94
Not recorded for numerator	0	0	0	0	0	0	0
Not recorded for exclusion	0	0	0	0	0	0	0
Not recorded for denominator	0	2	1	0	0	0	3
Target = 30%	**30%**	**30%**	**30%**	**30%**	**30%**	**30%**	**30%**
% Performance	16.7%	58.3%	42.9%	38.5%	38.8%	38.7%	40.4%

QPI 18 (ii): Neoadjuvant Chemotherapy (Triple Negative or HER2 Positive, Stage II or III Who Achieve a PCR)
Historical Summary

	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2018		10.0%	50.0%	36.4%	44.0%	42.6%	40.0%
2019	30.0%	42.9%	48.1%	55.6%	43.1%	45.0%	44.2%
2020	33.3%	55.6%	40.5%	37.5%	50.8%	49.3%	45.7%
2021	16.7%	58.3%	42.9%	38.5%	38.8%	38.7%	40.4%
Target = 30%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
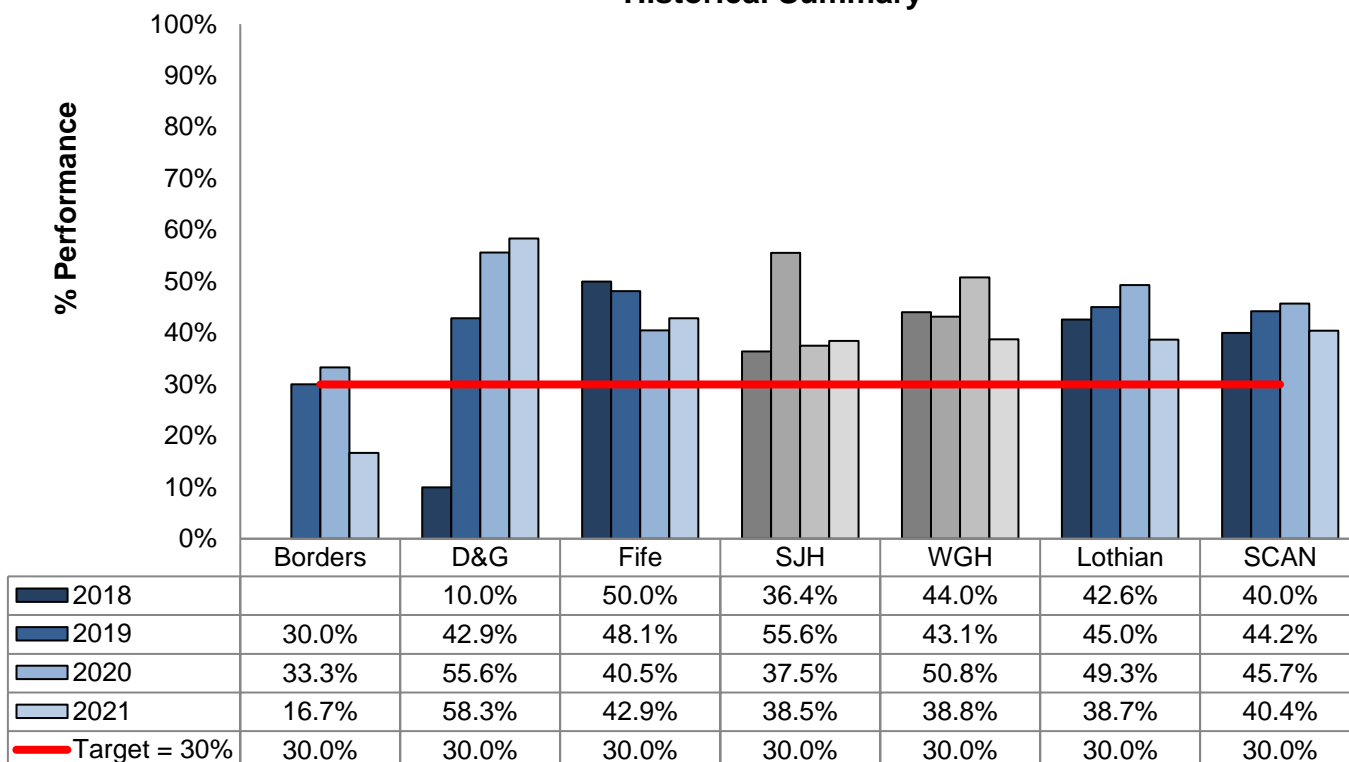
Comments

All Health Boards bar Borders met the target. It should be noted that, of the patients who did not have a complete response to neoadjuvant chemotherapy, a number saw partial responses, including near-complete eradication of disease.

Action: No action identified.

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

	Borders	**D&G**	**Fife**	**SJH**	**WGH**	**Lothian**	**SCAN**
2021 cohort	96	123	211	108	904	1012	1442
Ineligible for QPI	59	88	146	73	587	660	953
Numerator	19	23	46	25	186	211	299
Denominator	37	35	65	35	317	352	489
Not recorded for numerator	0	0	1	0	0	0	1
Not recorded for exclusion	0	0	0	0	0	0	0
Not recorded for denominator	0	0	0	0	0	0	0
Target = 80%	**80%**	**80%**	**80%**	**80%**	**80%**	**80%**	**80%**
% Performance	51.4%	65.7%	70.8%	71.4%	58.7%	59.9%	61.1%

QPI 19: Deep Inspiratory Breath Hold (DIBH) Radiotherapy
Historical Summary

	Borders	D&G	Fife	SJH	WGH	Lothian	SCAN
2019	20.0%	34.8%	40.4%	40.0%	29.2%	30.3%	31.4%
2020	27.6%	51.6%	57.1%	55.6%	45.0%	46.3%	47.4%
2021	51.4%	65.7%	70.8%	71.4%	58.7%	59.9%	61.1%
Target = 80%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%
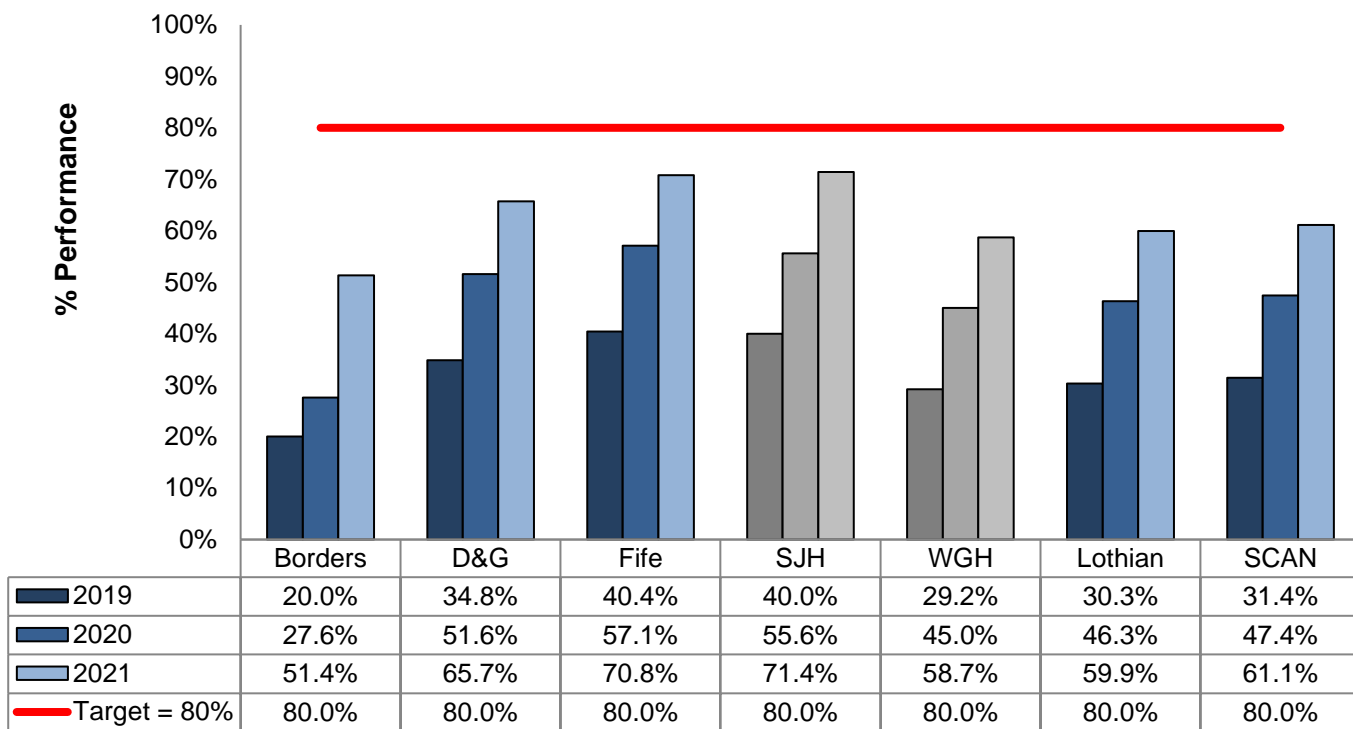
Comments

For all Health Boards, the usage of DIBH has increased year on year since it was introduced, and is getting closer to reaching the target.

Borders: Did not meet the target. 51.4% of patients (19/37) undergoing adjuvant radiotherapy used DIBH. The number of patients undergoing DIBH has increased year-on-year for NHS Borders patients.

Dumfries & Galloway: Did not meet the target. 12 patients did not receive DIBH. In most cases this was due to the patient's age, as capacity means DIBH is only currently offered to under-60s and those on chemo. 1 younger patient did not use DIBH as they underwent radiotherapy before DIBH was adopted for nodal treatments.

Fife: Did not meet the target. All radiotherapy for Fife patients takes place in Lothian and it is noted that the figures for this QPI have improved from 2020. At the time of analysis, confirmation of DIBH technique was only available for patients who had commenced their radiotherapy treatment up to the end of July 2022 and 1 patient treated after this date was included in the denominator but not recorded for the numerator.

Lothian: Did not meet the target. As for the other Health Boards, the number of patients using DIBH increased, with 59.9% of patients (211/352) undergoing adjuvant radiotherapy using DIBH. Josie Cameron, Advanced Practitioner at WGH, commented, 'We don't have the capacity to scan and treat all left-sided breast patients in DIBH, so our initial criteria is: <60 years, cardiac history and chest wall patients (who have had a mastectomy). However, if a left-sided breast patient who hasn't had a DIBH scan is found to need it then we would bring them back to get this done. The jump may also be partially explained by the fact that during 2022 we have Tayside patients as well as our own, so there are larger numbers being scanned.'

Action: No action required.

Draft QPI: Recurrence

The SCAN Chair, Matthew Barber has proposed this draft 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.

The cohort for analysis = Patients diagnosed during 2015.

Exclusions = Patients with metastatic disease at diagnosis (M1), patients who have not had surgery, and male patients.

		SCAN Network - 2015 - 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	17	17	37	166	**237**	31	60	74	578	**743**
1	**No recurrences/disease free**	15	15	28	130	**188**	28	56	68	512	**664**
	%	88.2%	88.2%	75.7%	78.3%	**79.3%**	90.3%	93.3%	91.9%	88.6%	**89.4%**
	Death ≤ 5 yrs	0	2	4	0	**6**	0	2	0	0	**2**
2	**Local Recurrence only**	0	0	2	0	**2**	0	0	2	8	**10**
	%	0.0%	0.0%	5.4%	0.0%	**0.8%**	0.0%	0.0%	2.7%	1.4%	**1.3%**
	Death ≤ 5 yrs	0	0	0	0	**0**	0	0	1	0	**1**
3	**Regional recurrence only**	0	0	0	0	**0**	0	0	0	0	**0**
	%	0.0%	0.0%	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	2	**2**
	%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.3%	**0.3%**
	Death ≤ 5 yrs	0	0	0	0	**0**	0	0	0	0	**0**
5	**Distant mets alone**	1	2	5	22	**30**	2	3	3	18	**26**
	%	5.9%	11.8%	13.5%	13.3%	**12.7%**	6.5%	5.0%	4.1%	3.1%	**3.5%**
	Death ≤ 5 yrs	1	1	5	14	**21**	1	3	2	11	**17**

	SCAN Network - 2015 - 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	17	17	37	166	**237**	31	60	74	578	**743**
6	**Distant mets + local recurrence**	0	0	0	3	**3**	1	0	1	5	**7**
	%	0.0%	0.0%	0.0%	1.8%	**1.3%**	3.2%	0.0%	1.4%	0.9%	**0.9%**
	Death ≤ 5 yrs	0	0	0	2	**2**	0	0	1	3	**4**
7	**Distant mets + regional recurrence**	1	0	0	2	**3**	0	0	0	3	**3**
	%	5.9%	0.0%	0.0%	1.2%	**1.3%**	0.0%	0.0%	0.0%	0.5%	**0.4%**
	Death ≤ 5 yrs	0	0	0	1	**1**	0	0	0	3	**3**
8	**Distant + Regional + local**	0	0	2	2	**4**	0	1	0	0	**1**
	%	0.0%	0.0%	5.4%	1.2%	**1.7%**	0.0%	1.7%	0.0%	0.0%	**0.1%**
	Death ≤ 5 yrs	0	0	1	2	**3**	0	1	0	0	**1**
9	**(Summary): Any recurrence or mets**	2	2	9	29	**42**	3	4	6	36	**49**
	%	11.8%	11.8%	24.3%	17.5%	**17.7%**	9.7%	6.7%	8.1%	6.2%	**6.6%**
	Death ≤ 5 yrs	1	1	6	0	**8**	1	4	4	0	**9**
10	**Lost to follow up**	0	0	1	0	**1**	0	1	0	6	**7**
	%	0.0%	0.0%	2.7%	0.0%	**0.4%**	0.0%	1.7%	0.0%	1.0%	**0.9%**
11	**Insufficient follow up**	0	1	0	7	**0**	0	11	0	24	**35**
	%	0.0%	5.9%	0.0%	4.2%	**0.0%**	0.0%	18.3%	0.0%	4.2%	**4.7%**
12	**How many of these 980 patients had a new primary recorded on the same side as the 2015 cancer, within 5 years?**	Not yet completed.									

		SCAN Network - 2015 - 5 Year Recurrence reporting DCIS only									
		Mastectomy Patients					**Conservation Patients**				
		B	D	F	L	SCAN	B	D	F	L	SCAN
	DCIS - all surgery patients	1	1	5	22	**29**	5	3	5	84	**97**
1	No recurrences/disease free	0	1	5	20	**26**	4	3	4	75	**86**
	%	N/A	100.0%	100.0%	90.9%	**89.7%**	80.0%	100.0%	80.0%	89.3%	**88.7%**
	Death ≤ 5 yrs	0	0	0	0	**0**	0	0	0	0	**0**
2	Local Recurrence only	0	0	0	0	**0**	1	0	0	5	**6**
	%	N/A	N/A	0.0%	0.0%	**0.0%**	20.0%	0.0%	0.0%	6.0%	**6.2%**
	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	1	**1**	0	0	1	0	**1**
	%	N/A	N/A	0.0%	4.5%	**3.4%**	0.0%	0.0%	20.0%	0.0%	**1.0%**
	Death ≤ 5 yrs	0	0	0	0	**0**	0	0	1	0	**1**

*2 patients had previous invasive cancers

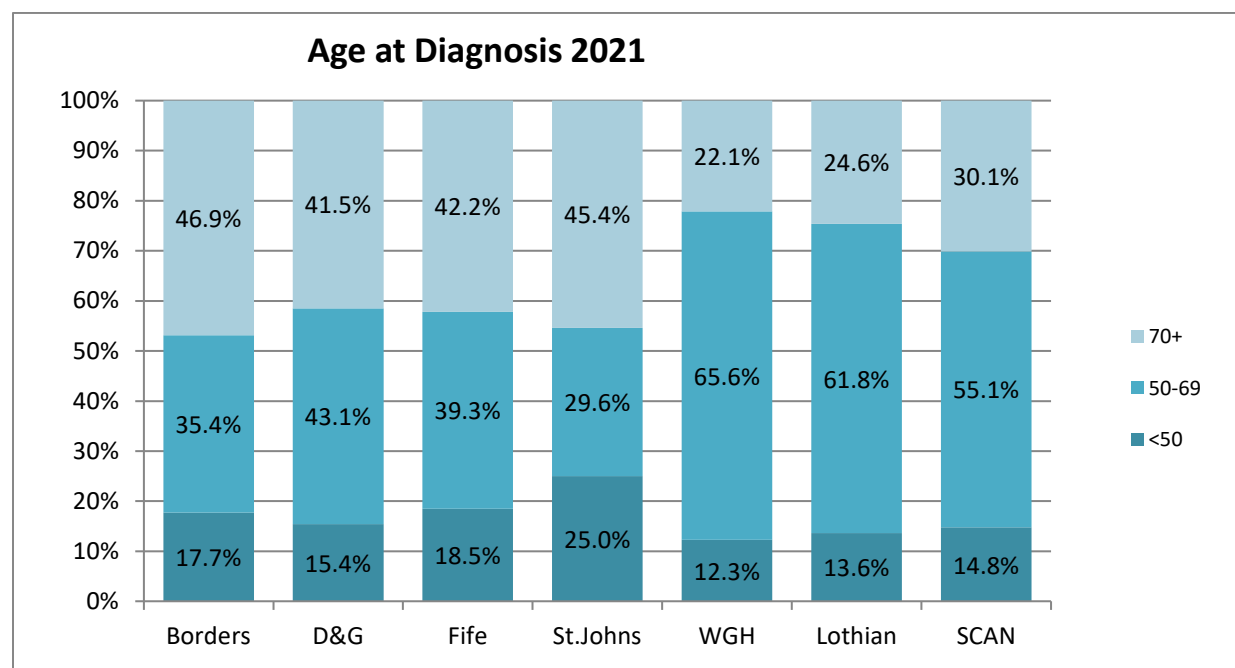|	SCAN Network - 2015 - 5 Year Recurrence reporting DCIS only									
		Mastectomy Patients					Conservation Patients				
		B	D	F	L	SCAN	B	D	F	L	SCAN
	DCIS - all surgery patients	1	1	5	22	**29**	5	3	5	84	**97**
6	Distant mets + local recurrence	0	0	0	0	**0**	0	0	0	0	**0**
	%	N/A	N/A	0.0%	0.0%	**0.0%**	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	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	0	0	0	1	**1**	1	0	1	5	**7**
	%	N/A	N/A	0.0%	4.5%	**3.4%**	20.0%	0.0%	20.0%	6.0%	**7.2%**
	Death ≤ 5 yrs	0	0	0	0	0	0	0	1	0	1
10	Lost to follow up	0	0	0	0	**0**	0	0	0	2	**2**
	%	N/A	N/A	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	2.4%	**2.1%**
11	Insufficient follow up	1	0	0	1	**2**	0	0	0	2	**2**
	%		N/A	0.0%	4.5%	**6.9%**	0.0%	0.0%	0.0%	2.4%	**2.1%**
12	How many of these 126 patients had a new primary recorded on the same side as the 2015 cancer, within 5 years?	Not yet completed.									

Appendices

Appendix 1 – Age at Diagnosis

Age at Diagnosis 2021

Centre	70+	50-69	<50
Borders	46.9%	35.4%	17.7%
D&G	41.5%	43.1%	15.4%
Fife	42.2%	39.3%	18.5%
St.Johns	45.4%	29.6%	25.0%
WGH	22.1%	65.6%	12.3%
Lothian	24.6%	61.8%	13.6%
SCAN	30.1%	55.1%	14.8%

Appendix 2 – Gender

2021	Borders		Dumfries		Fife		WGH		St John's		SCAN	
Gender		%		%		%		%		%		%
Female	96	100%	123	100%	208	99%	900	100%	108	100%	1435	99.5%
Male	0	0%	0	0%	3	1%	4	0%	0	0%	7	0.5%
Total	96	100%	123	100%	211	100%	904	100%	108	100%	1442	100%

Appendix 3 – Summary of Key Categories – 2021

Referral	Borders №	%	Dumfries №	%	Fife №	%	WGH №	%	St John's №	%	SCAN №	%
Primary Care Clinician	73	76.0%	80	65.0%	170	80.6%	373	41.3%	77	71.3%	773	53.6%
Breast Screening	15	15.6%	28	22.8%	12	5.7%	441	48.8%	13	12.0%	509	35.3%
Incidental/Secondary care	5	5.2%	13	10.6%	23	10.9%	58	6.4%	13	12.0%	112	7.8%
Review patients	3	3.1%	2	1.6%	4	1.9%	25	2.8%	4	3.7%	38	2.6%
Increased Risk Clinic		0.0%	0	0.0%	2	0.9%	1	0.1%	0	0.0%	3	0.2%
Ref from private healthcare		0.0%	0	0.0%	0	0.0%	5	0.6%	1	0.9%	6	0.4%
Other		0.0%	0	0.0%	0	0.0%	1	0.1%	0	0.0%	1	0.1%
Not recorded		0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	96	100.0%	123	100.0%	211	100.0%	904	100.0%	108	100.0%	1442	100.0%

T Stage	Borders №	%	Dumfries №	%	Fife №	%	WGH №	%	St John's №	%	SCAN №	%
T0	0	0.0%	0	0.0%	0	0.0%	1	0.1%	0	0.0%	1	0.1%
T1	33	34.4%	29	23.6%	71	33.6%	461	51.0%	35	32.4%	629	43.6%
T2	40	41.7%	27	22.0%	93	44.1%	234	25.9%	53	49.1%	447	31.0%
T3	8	8.3%	4	3.3%	11	5.2%	45	5.0%	6	5.6%	74	5.1%
T4	3	3.1%	4	3.3%	25	11.8%	44	4.9%	9	8.3%	85	5.9%
Tis (DCIS)	12	12.5%	3	2.4%	9	4.3%	116	12.8%	4	3.7%	144	10.0%
Tx (not assessable)	0	0.0%	0	0.0%	2	0.9%	3	0.3%	1	0.9%	6	0.4%
T9 (not recorded)	0	0.0%	56	45.5%	0	0.0%	0	0.0%	0	0.0%	56	3.9%
Total	96	100.0%	123	100.0%	211	100.0%	904	100.0%	108	100.0%	1442	100.0%

N Stage	Borders №	%	Dumfries №	%	Fife №	%	WGH №	%	St John's №	%	SCAN №	%
N0	81	84.4%	52	42.3%	148	70.1%	757	83.7%	86	79.6%	1124	77.9%
N1	10	10.4%	14	11.4%	49	23.2%	126	13.9%	17	15.7%	216	15.0%
N2	1	1.0%	0	0.0%	7	3.3%	1	0.1%	0	0.0%	9	0.6%
N3	2	2.1%	0	0.0%	4	1.9%	13	1.4%	3	2.8%	22	1.5%
NX	2	2.1%	0	0.0%	3	1.4%	7	0.8%	1	0.9%	13	0.9%
N9 (not recorded)	0	0.0%	57	46.3%	0	0.0%	0	0.0%	1	0.9%	58	4.0%
Total	96	100.0%	123	100.0%	211	100.0%	904	100.0%	108	100.0%	1442	100.0%

M Stage	Borders		Dumfries		Fife		WGH		St John's		SCAN	
M0	90	93.8%	74	60.2%	175	82.9%	856	94.7%	95	88.0%	1290	89.5%
M1	6	6.3%	5	4.1%	31	14.7%	35	3.9%	8	7.4%	85	5.9%
M9 (not recorded)	0	0.0%	44	35.8%	5	2.4%	13	1.4%	5	4.6%	67	4.6%
Total	**96**	**100.0%**	**123**	**100.0%**	**211**	**100.0%**	**904**	**100.0%**	**108**	**100.0%**	**1442**	**100.0%**
Part of TNM not recorded	0	0.0%	62	50.4%	5	2.4%	13	1.4%	6	5.6%	86	6.0%

Tumour Types	№	%	№	%	№	%	№	%	№	%	№	%
DCIS	7	100.0%	3	100.0%	6	100.0%	84	83.2%	3	100.0%	103	52.3%
LCIS	0	0.0%	0	0.0%	0	0.0%	12	11.9%	0	0.0%	12	6.1%
Paget's Disease	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Other non-invasive	0	0.0%	0	0.0%	0	0.0%	5	5.0%	0	0.0%	5	2.5%
Non-invasive total	**7**	**7.3%**	**3**	**2.4%**	**6**	**2.8%**	**101**	**11.2%**	**3**	**2.8%**	**120**	**8.3%**
Ductal carcinoma	66	74.2%	92	78.0%	156	77.6%	591	73.6%	75	72.8%	980	74.6%
Lobular carcinoma	14	15.7%	15	12.7%	28	13.9%	122	15.2%	18	17.5%	197	15.0%
Medullary carcinoma	0	0.0%	0	0.0%	1	0.5%	0	0.0%	0	0.0%	1	0.1%
Mucinous carcinoma	1	1.1%	2	1.7%	4	2.0%	15	1.9%	2	1.9%	24	1.8%
Tubular carcinoma	0	0.0%	0	0.0%	0	0.0%	23	2.9%	1	1.0%	24	1.8%
Mixed (invasive)	8	9.0%	7	5.9%	6	3.0%	31	3.9%	1	1.0%	53	4.0%
Other invasive	0	0.0%	2	1.7%	4	2.0%	19	2.4%	6	5.8%	31	2.4%
Occult, with +ve nodes	0	0.0%	0	0.0%	2	1.0%	1	0.1%	0	0.0%	3	0.2%
Malignant cells, cytology NOS	0	0.0%	0	0.0%	0	0.0%	1	0.1%	0	0.0%	1	12.5%
Invasive total	**89**	**92.7%**	**118**	**95.9%**	**201**	**95.3%**	**803**	**88.8%**	**103**	**95.4%**	**1314**	**91.1%**
Inapplicable (no histology)	0	0.0%	2	1.6%	4	1.9%	0	0.0%	2	1.9%	8	0.6%
Not recorded	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	**96**	**100.0%**	**123**	**100.0%**	**211**	**100.0%**	**904**	**100.0%**	**108**	**100.0%**	**1442**	**100.0%**

ER Status (Invasive tumours)												
High Positive (6-8)	70	78.7%	91	77.1%	149	74.1%	669	83.3%	76	73.8%	1055	80.3%
Low positive (3-5)	2	2.2%	4	3.4%	6	3.0%	28	3.5%	7	6.8%	47	3.6%
Negative (0-2)	17	19.1%	23	19.5%	46	22.9%	104	13.0%	20	19.4%	210	16.0%
Not assessable	0	0.0%	0	0.0%	0	0.0%	1	0.1%	0	0.0%	1	0.1%
Not recorded	0	0.0%	0	0.0%	0	0.0%	1	0.1%	0	0.0%	1	0.1%
Inapplicable	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	**89**	**100.0%**	**118**	**100.0%**	**201**	**100.0%**	**803**	**100.0%**	**103**	**100.0%**	**1314**	**100.0%**

	Borders		Dumfries		Fife		WGH		St John's		SCAN	
Her2 Status (Invasive tumours)												
Her2 positive	13	14.6%	13	11.0%	28	13.9%	95	11.8%	16	15.5%	165	12.6%
Her2 negative	75	84.3%	105	89.0%	172	85.6%	704	87.7%	87	84.5%	1143	87.0%
Not recorded	0	0.0%	0	0.0%	0	0.0%	1	0.1%	0	0.0%	1	0.1%
Not done / Inconclusive	1	1.1%	0	0.0%	0	0.0%	2	0.2%	0	0.0%	3	0.2%
Not assessable	0	0.0%	0	0.0%	1	0.5%	1	0.1%	0	0.0%	2	0.2%
Total	**89**	**100.0%**	**118**	**100.0%**	**201**	**100.0%**	**803**	**100.0%**	**103**	**100.0%**	**1314**	**100.0%**
First treatment												
Surgery	51	53.1%	59	48.0%	104	49.3%	569	62.9%	53	49.1%	836	58.0%
Hormone therapy	32	33.3%	41	33.3%	67	31.8%	233	25.8%	35	32.4%	408	28.3%
Chemotherapy	12	12.5%	21	17.1%	29	13.7%	87	9.6%	19	17.6%	168	11.7%
Radiotherapy	1	1.0%	1	0.8%	3	1.4%	7	0.8%	0	0.0%	12	0.8%
Biological therapy	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
No active treatmt (Supportive care)	0	0.0%	1	0.8%	4	1.9%	3	0.3%	0	0.0%	8	0.6%
Died before treatment	0	0.0%	0	0.0%	3	1.4%	2	0.2%	1	0.9%	6	0.4%
Refused all treatment	0	0.0%	0	0.0%	1	0.5%	2	0.2%	0	0.0%	3	0.2%
Not recorded	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**1**	**0.1%**	**0**	**0.0%**	**1**	**0.1%**
Final Surgery												
Localising/Excision biopsy	0	0.0%	0	0.0%	0	0.0%	16	2.0%	0	0.0%	16	1.3%
Conservation surgery	45	57.0%	61	59.2%	93	63.7%	598	74.6%	60	75.0%	857	70.8%
Therapeutic mammoplasty	8	10.1%	1	1.0%	2	25.0%	61	7.6%	0	0.0%	72	6.0%
Conservation Total	**53**	**67.1%**	**62**	**60.2%**	**95**	**65.1%**	**675**	**84.2%**	**60**	**75.0%**	**945**	**78.1%**
Mastectomy alone	23	29.1%	34	33.0%	44	30.1%	96	12.0%	17	21.3%	214	17.7%
Mastectomy + immed. reconstruction	3	3.8%	6	5.8%	5	3.4%	30	3.7%	3	3.8%	47	3.9%
Mastectomy total	**26**	**32.9%**	**40**	**38.8%**	**49**	**33.6%**	**126**	**15.7%**	**20**	**25.0%**	**261**	**21.6%**
Axillary surgery alone	0	0.0%	1	1.0%	1	0.7%	0	0.0%	0	0.0%	2	0.2%
Other	0	0.0%	0	0.0%	1	0.7%	1	0.1%	0	0.0%	2	0.2%
Surgery total	**79**	**82.3%**	**103**	**83.7%**	**146**	**69.2%**	**802**	**88.7%**	**80**	**74.1%**	**1210**	**83.9%**
Refused treatment	5	5.2%	1	0.8%	0	0.0%	9	1.0%	1	0.9%	16	1.1%
Not yet/pending	0	0.0%	0	0.0%	8	3.8%	2	0.2%	0	0.0%	10	0.7%
Not applicable	12	12.5%	19	15.4%	57	27.0%	91	10.1%	27	25.0%	206	14.3%
Not recorded	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	**96**	**100.0%**	**123**	**100.0%**	**211**	**123.6%**	**904**	**100.0%**	**108**	**100.0%**	**1442**	**100.0%**

	Borders		Dumfries		Fife		WGH		St John's		SCAN	
Radiotherapy												
Primary radical		0.0%	1	0.8%	1	0.5%	2	0.2%	2	1.9%	6	0.4%
Adjuvant	60	62.5%	65	52.8%	114	54.0%	653	72.2%	64	59.3%	956	66.3%
Palliative	1	1.0%	2	1.6%	14	6.6%	10	1.1%	0	0.0%	27	1.9%
Refused	3	3.1%	6	4.9%	8	3.8%	26	2.9%	3	2.8%	46	3.2%
Inapplicable	31	32.3%	45	36.6%	64	30.3%	212	23.5%	38	35.2%	390	27.0%
Not recorded	0	0.0%	0	0.0%	0	0.0%	1	0.1%	0	0.0%	1	0.1%
Not yet/pending	1	1.0%	4	3.3%	10	4.7%	0	0.0%	1	0.9%	16	1.1%
Total	**96**	**100.0%**	**123**	**100.0%**	**211**	**100.0%**	**904**	**100.0%**	**108**	**100.0%**	**1442**	**100.0%**
Chemotherapy												
Adjuvant	17	17.7%	13	10.6%	40	19.0%	152	16.8%	18	16.7%	240	16.6%
Neoadjuvant	14	14.6%	20	16.3%	21	10.0%	82	9.1%	19	17.6%	156	10.8%
Palliative	0	0.0%	2	1.6%	10	4.7%	12	1.3%	1	0.9%	25	1.7%
Refused	0	0.0%	0	0.0%	9	4.3%	25	2.8%	6	5.6%	40	2.8%
Inapplicable	64	66.7%	88	71.5%	123	58.3%	632	69.9%	64	59.3%	971	67.3%
Not recorded	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Not yet/pending	1	1.0%	0	0.0%	8	3.8%	1	0.1%	0	0.0%	10	0.7%
Total	**96**	**100.0%**	**123**	**100.0%**	**211**	**100.0%**	**904**	**100.0%**	**108**	**100.0%**	**1442**	**100.0%**
Hormone therapy (1st course)												
Neoadjuvant	0	0.0%	18	14.6%	17	8.1%	49	5.4%	3	2.8%	87	6.0%
Peri-operative	19	19.8%	2	1.6%	13	6.2%	110	12.2%	8	7.4%	152	10.5%
Primary	13	13.5%	21	17.1%	25	11.8%	64	7.1%	20	18.5%	143	9.9%
Palliative	2	2.1%	0	0.0%	15	7.1%	22	2.4%	8	7.4%	47	3.3%
Adjuvant	36	37.5%	50	40.7%	81	38.4%	426	47.1%	42	38.9%	635	44.0%
Inapplicable	22	22.9%	26	21.1%	56	26.5%	208	23.0%	26	24.1%	338	23.4%
Not recorded	0	0.0%	1	0.8%	0	0.0%	7	0.8%	0	0.0%	8	0.6%
Refused	4	4.2%	1	0.8%	4	1.9%	16	1.8%	1	0.9%	26	1.8%
Not yet/pending	0	0.0%	4	3.3%	0	0.0%	2	0.2%	0	0.0%	6	0.4%
Total	**96**	**100.0%**	**123**	**100.0%**	**211**	**100.0%**	**904**	**100.0%**	**108**	**100.0%**	**1442**	**100.0%**

Biological therapy (Her2 positive)	Borders		Dumfries		Fife		WGH		St John's		SCAN	
Her2 positive, invasive											*0*	
Herceptin treatment	9	69.2%	10	76.9%	22	78.6%	70	73.7%	11	68.8%	122	73.9%
No biological therapy	3	23.1%	3	23.1%	6	21.4%	25	26.3%	5	31.3%	42	25.5%
No decision yet	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Not recorded	1	7.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.6%
Other	13	100.0%	13	100.0%	28	100.0%	95	100.0%	16	100.0%	165	100.0%
Total	**9**	**69.2%**	**10**	**76.9%**	**22**	**78.6%**	**70**	**73.7%**	**11**	**68.8%**	**122**	**73.9%**

Appendix 4 – New Breast Cancer Patients by Year of Diagnosis

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Borders	56	92	60	59	95	68	70	72	61	72	80	74	70	81	96
Dumfries	127	103	110	112	112	108	103	119	108	92	108	127	110	98	123
Fife	177	170	171	189	206	185	193	194	169	180	182	201	199	233	211
WGH	792	820	789	793	880	866	869	912	971	771	805	835	845	695	904
St John's	116	94	81	107	98	93	106	111	105	111	107	105	112	100	108
SCAN	1268	1279	1211	1260	1391	1320	1341	1408	1414	1226	1282	1342	1336	1207	1442

New Breast Cancer Patients by Year of Diagnosis, 2007 - 2021
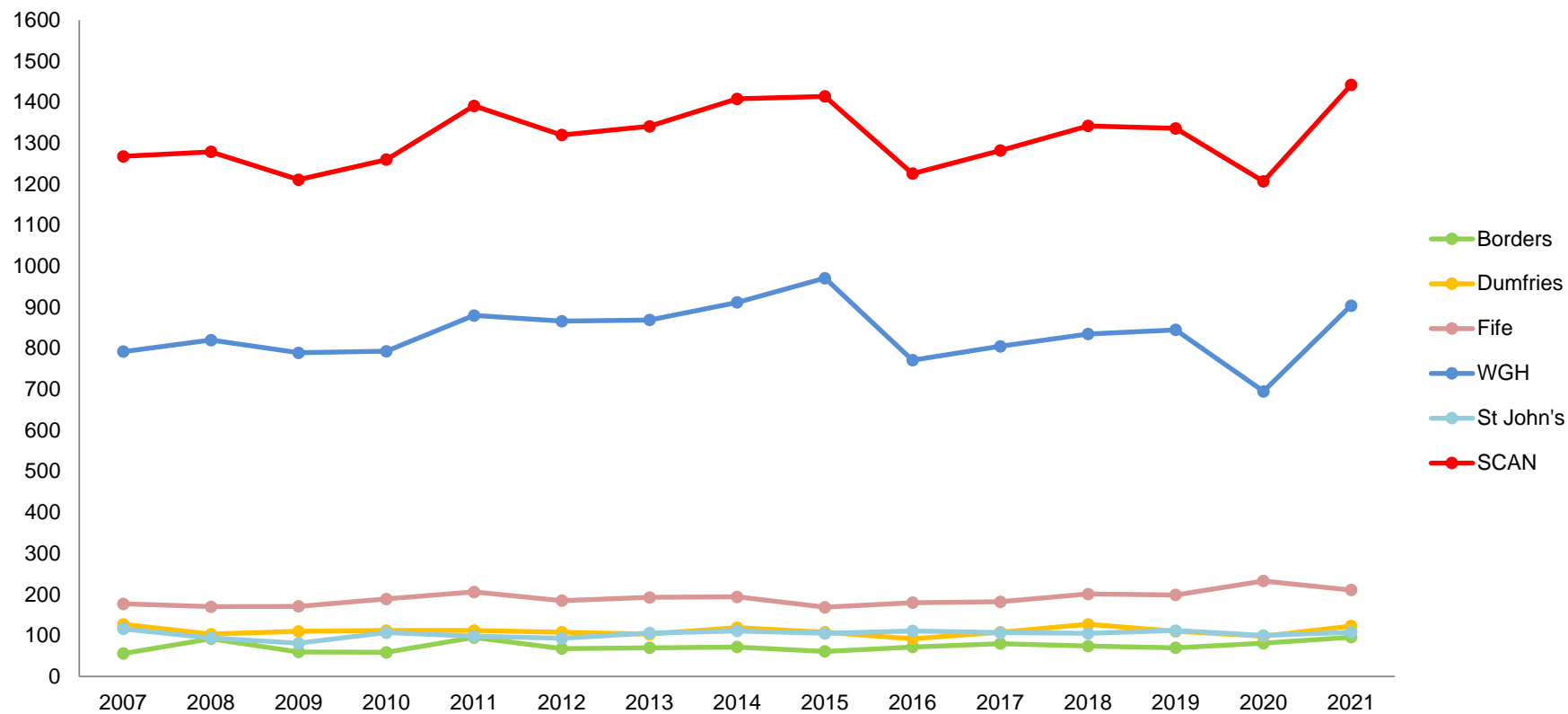
Appendix 5 – Breast Clinic Attendance by Health Board

N.B. Only the first attendance by a new patient has been counted. Appointments which patients did not attend have been excluded, as have review clinic appointments for existing patients. These tables are included to indicate the relative proportion of new patients with benign conditions.

NHS Borders
Source: TrakCare

Breast Clinic Attendance, 2021

Location	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Borders General Hospital	141	49	81	82	94	117	88	88	91	62	71	115	1079

NHS Dumfries & Galloway

Breast Clinic Attendance, 2021

Location	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Dumfries and Galloway Royal Infirmary	137	216	220	181	111	127	117	136	121	111	157	110	1744
Galloway Community Hospital	0	1	21	0	0	3	0	0	0	5	0	0	30
Total	137	217	241	181	111	130	117	136	121	116	157	110	1774

NHS Fife
Source: Marcus Vosoughi, NHS Fife, Reports: SR IR7143 and 325282, and Linzi Martin, NHS Fife, Report: RITM0232185

Breast Clinic Attendance, 2014-2021

	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**
2020	241	256	228	82	100	179	209	131	238	224	311	264	**2463**
2021	200	208	233	243	242	257	240	257	268	287	248	199	**2882**

NHS Lothian
Source: Analytical Services Department. Reference: IRS 2005

Breast Clinic Attendance and Referral Source, 2021

Western General Hospital

Referral Source	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
ASC Assessment	27	44	71	62	51	46	59	67	65	64	62	77	695
Community Health Service	0	0	0	0	0	0	0	0	0	1	0	0	1
Consultant from another Hospital outwith Health Board	0	0	0	0	0	0	0	0	0	0	1	0	1
Consultant from another Hospital within Health Board	0	0	1	2	0	0	0	0	0	0	0	0	3
Consultant within the Trust	24	22	33	25	18	40	34	28	33	22	16	19	314
GP	557	474	590	564	659	630	584	587	558	585	686	593	7067
Other (includes Armed Forces)	0	0	0	0	0	1	0	0	0	0	0	0	1
Outpatient Department	0	1	0	0	2	2	0	0	0	1	1	1	8
Prison/Penal Establishments	0	0	1	0	0	0	0	0	0	1	0	0	2
Self referral	0	0	0	0	0	0	0	0	0	1	0	0	1
(blank)	0	1	1	0	0	0	1	1	2	0	0	0	6
Total	**608**	**542**	**697**	**653**	**730**	**719**	**678**	**683**	**658**	**675**	**766**	**690**	**8099**

St John's Hospital

Referral Source	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Accident and Emergency Department	0	0	0	0	0	0	1	0	0	0	0	0	1
ASC Assessment	0	0	0	0	0	0	1	0	0	0	0	0	1
Community Health Service	0	0	0	0	0	1	0	0	0	0	0	0	1
Consultant from another Hospital within Health Board	1	0	2	0	1	2	2	0	2	1	0	1	12
Consultant within the Trust	4	5	3	3	1	4	2	3	3	6	3	2	39
GP	103	113	133	144	122	117	115	94	140	111	123	138	1453
Other Medic (Community)	0	0	0	1	0	0	0	0	0	0	0	0	1
Total	**108**	**118**	**138**	**148**	**124**	**124**	**121**	**97**	**145**	**118**	**126**	**141**	**1508**

Appendix 6 – Attainment Summary 2020

Breast Cancer QPI Attainment Summary 2020			Target %	Borders		D&G		Fife		Lothian		SCAN	
QPI 6 Immediate reconstruction	(i) Immediate reconstruction		20	N 2 / D 24	8.3%	N 4 / D 30	13.3%	N 10 / D 67	14.9%	N 31 / D 133	23.3%	N 47 / D 254	18.5%
	(ii) Immediate reconstruction within 42 days		90	N 0 / D 1	0.0%	N 1 / D 1	100%	N 8 / D 8	100%	N 19 / D 23	82.6%	N 28 / D 33	84.8%
QPI 8 Minimising Hospital Stay	(i) Day case surgery (conservation)	By HB of surgery	60	N 30 / D 42	71.4%	N 39 / D 54	72.2%	N 76 / D 83	91.6%	N 499 / D 603	82.8%	N 644 / D 782	82.4%
		By HB of residence	60	N 41 / D 47	87.2%	N 2 / D 3	66.7%	N 131 / D 156	84.0%	N 394 / D 481	81.9%	N 468 / D 568	82.4%
	(ii) Mastectomy without reconstruction	By HB of surgery	60	N 3 / D 21	14.3%	N 19 / D 28	67.9%	N 35 / D 44	79.5%	N 50 / D 135	37.0%	N 107 / D 228	46.9%
		By HB of residence	60	N 5 / D 25	20.0%	N 15 / D 24	62.5%	N 62 / D 74	83.8%	N 53 / D 131	40.5%	N 135 / D 254	53.1%
QPI 9 HER2 status for decision making			90	N 71 / D 74	95.9%	N 60 / D 90	66.7%	N 170 / D 209	81.3%	N 643 / D 695	92.5%	N 944 / D 1068	88.4%
QPI 10 Radiotherapy for conservation in older adults			<40	N 0 / D 0	N/A	N 0 / D 4	0.0%	N 5 / D 10	50.0%	N 15 / D 29	51.7%	N 20 / D 43	46.5%
QPI 11 Adjuvant chemotherapy	(i) Hormone receptor (ER plus/minus PR) positive, HER2 negative breast cancer		80	N 4 / D 8	50.0%	N 9 / D 12	75.0%	N 22 / D 25	88.0%	N 35 / D 49	71.4%	N 70 / D 94	74.5%
	(ii) Triple negative or HER2 positive breast cancer		80	N 5 / D 5	100%	N 5 / D 6	83.3%	N 12 / D 15	80.0%	N 24 / D 41	58.5%	N 46 / D 67	68.7%
QPI 13 Re-excision rates			<20	N 9 / D 45	20.0%	N 10 / D 60	16.7%	N 25 / D 106	23.6%	N 122 / D 554	22.0%	N 166 / D 765	21.7%
QPI 14 Referral for genetics testing	(i) Patients under 30		90	N 1 / D 1	100%	N 0 / D 0	N/A	N 1 / D 1	100%	N 5 / D 5	100%	N 7 / D 7	100%
	(ii) Patients under 50 (triple negative)		90	N 5 / D 5	100%	N 5 / D 5	100%	N 15 / D 16	93.8%	N 13 / D 14	92.9%	N 38 / D 40	95.0%
QPI 15 30 day mortality following chemotherapy *Data to be reported using ChemoCare*	Neoadjuvant		<1	N / D		N / D		N / D		N / D		N / D	
	Adjuvant		<1	N		N		N		N		N	

Breast Cancer QPI Attainment Summary 2020		Target %	Borders		D&G		Fife		Lothian		SCAN	
- National Standardised Reports not yet available			D		D		D		D		D	
	Palliative	<5	N		N		N		N		N	
			D		D		D		D		D	
QPI 16 Clinical trials & Research Study access – patients consented to any trial (SCRN data)		15	N	18	N	2	N	5	N	299	N	324
			D	73	D	108	D	209	D	921	D	1311
				24.7%		1.9%		2.4%		32.5%		24.7%
QPI 17 Genomic testing		60	N	1	N	3	N	9	N	15	N	28
			D	5	D	6	D	10	D	20	D	41
				20.0%		50.0%		90.0%		75.0%		68.3%
QPI 18 Neoadjuvant chemotherapy (triple negative or HER2 positive, Stage II or III ductal breast cancer)	(i) Patients receiving neoadjuvant chemo	80	N	11	N	9	N	37	N	69	N	126
			D	16	D	11	D	46	D	83	D	156
				68.8%		81.8%		80.4%		83.1%		80.8%
	(ii) Patients with pathological complete response	30	N	4	N	5	N	15	N	35	N	59
			D	12	D	9	D	37	D	71	D	129
				33.3%		55.6%		40.5%		49.3%		45.7%
QPI 19 Deep Inspiratory Hold (DIBH) Radiotherapy		80	N	8	N	16	N	40	N	101	N	165
			D	29	D	31	D	70	D	218	D	348
				27.6%		51.6%		57.1%		46.3%		47.4%

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.