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UK NHS Breast Screening Programmes & Association of Breast Surgery

An audit of screen detected breast cancers for the screening year April 2020 to March 2021

October 2022

Tables 5, 6, 7, 8, 9, 12, 14, 57, 58, 59 and 87 in Appendix 1 were amended due to a data error relating to Wales. All other data remains unchanged.

About Screening and the Screening Quality Assurance Service

Screening identifies apparently healthy people who may be at increased risk of a disease or condition, enabling earlier treatment or better informed decisions. National population screening programmes are implemented in the NHS on the advice of the UK National Screening Committee (UK NSC), which makes independent, evidence-based recommendations to ministers in the four UK countries. The Screening Quality Assurance Service (SQAS) ensures programmes are safe and effective by checking that national standards are met and promoting continuous improvement in breast screening. This is to ensure all eligible people have access to a consistent high-quality service wherever they live.

Foreword

The Association of Breast Surgery and the Screening Quality Assurance Service have presented an annual qualitative and quantitative audit report on outcomes within the programme for over a quarter of a century. Over this time the report has highlighted areas of good practice and areas where significant improvements were needed. These improvements have made real differences to women accepting the invitation to breast screening including a reduction in benign biopsy rates and improved non-operative diagnostic rates. The process of improvement and refinement is ongoing, and the typical process followed by this annual audit involves an examination of quality performance indicators as well as a global review of screening activity to look at suggest areas of development.

Readers of the report will need no reminding that this year's audit report, assessing screening performance from April 2020 to March 2021, was during the COVID-19 pandemic which has seen the biggest challenge to healthcare delivery in living memory.

Differing areas of the UK were affected in differing ways by the pandemic and associated lockdowns. Figure 1 shows a timeline of the screening related changes within 2020/2021. Screening services across the UK responded to conditions set by their respective national governments. Given the variability of these enforced changes the Screening Audit Group have made the decision to suspend assessment of quality performance indicators and the examination of outliers for this year's screening audit report. In the context of the response to a pandemic, with the effects that this had on UK screening services and their ability to function normally, no meaningful identification of outliers could reasonably be conducted. This will be a temporary suspension and it is expected that quality performance indicators will return in future audits as they have been important contributors to the improvements seen in screening performance over the years. For similar reasons, the group has decided not to present adjuvant data tables. These are also expected to return in future audits.

This year's exclusion of quality performance indicators has offered the opportunity to review some elements of the screening data in more detail and the Screening Audit Group has chosen a small number of topics that we felt would be of interest to all stakeholders. These are presented within the report and give an indicator of the rich detail contained within UK NHS BSP data. As in previous years, the full set of data tables with screening performance measures is provided in Appendix 1.

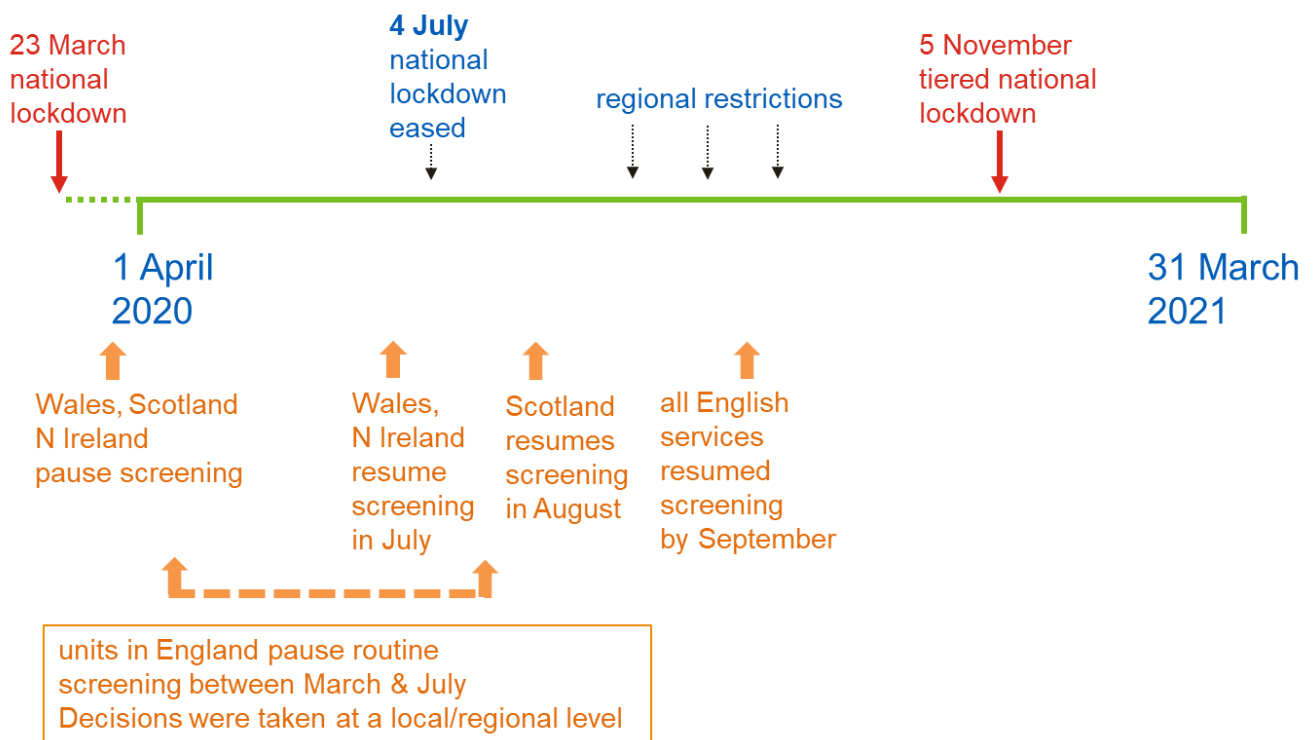
The Screening Audit Group would like to sincerely thank and congratulate colleagues in screening services across the UK for their tireless work on behalf of women participating within the breast screening programme.

Mr Ashu Gandhi

Chair, Breast Screening Audit Group

UK NHS breast screening programmes and Association of Breast Surgery

Figure 1 The Screening Audit Year 2020/21



Acknowledgements

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Clinical and administrative staff working throughout the NHS Breast Screening Programme.

Staff in Scotland, Wales & Northern Ireland (the Devolved Administrations; DA) who provide data and liaise with their cancer registries.

Screening Quality Assurance Service Professional and Clinical Advisors in England and their DA equivalents for each of the relevant disciplines.

Screening Quality Assurance Service staff working in breast screening and their equivalent colleagues in the DA.

National Cancer Registration Analysis Service staff who extracted previous cancer data from the Cancer Analysis System.

The Association of Breast Surgery office staff for providing organisational support to the audit group.

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Introduction

Purpose of the Audit

The 2020/21 UK NHS breast screening programmes and Association of Breast Surgery audit of screen-detected breast cancer was undertaken to examine UK clinical practice in the period 1 April 2020 to 31 March 2021. The audit is designed to assess clinical performance by comparison of data with as many as possible of the clinical quality assurance (QA) standards recommended by the NHS Breast Screening Programme. These include the standards set in the following publications:

- [Best Practice Guidelines for Surgeons in Breast Cancer Screening](#)
Association of Breast Surgery, 2018
- [Early & Locally Advanced Breast Cancer: Diagnosis and Management](#)
NICE Guideline 101, 2018
- [NHS Breast Screening Programme: consolidated standards](#)
Public Health England, Updated 2019
- [Breast Screening: Quality Assurance Guidelines for breast pathology services](#)
Public Health England, Updated 2020
- [NHS Breast Screening Programme: Clinical guidance for breast cancer screening assessment](#)
NHSBSP Publication No.49 4th edition, 2016

Actions following receipt of the audit

The audit data should be considered formally at meetings of the Clinical Professional Groups for Surgery, Radiology and Pathology. This will provide opportunities to recognise areas of good practice and identify areas where breast screening performance could improve. Resultant recommendations for future modification of the audit including any suggested changes to quality performance indicators should be communicated to the Audit Group by the relevant disciplinary representatives.

Your comments

The audit has developed over the years, with improvements in design and organisation resulting in improved data quality and increasingly useful results. We wish to continue this development process and your comments and suggestions are welcome.

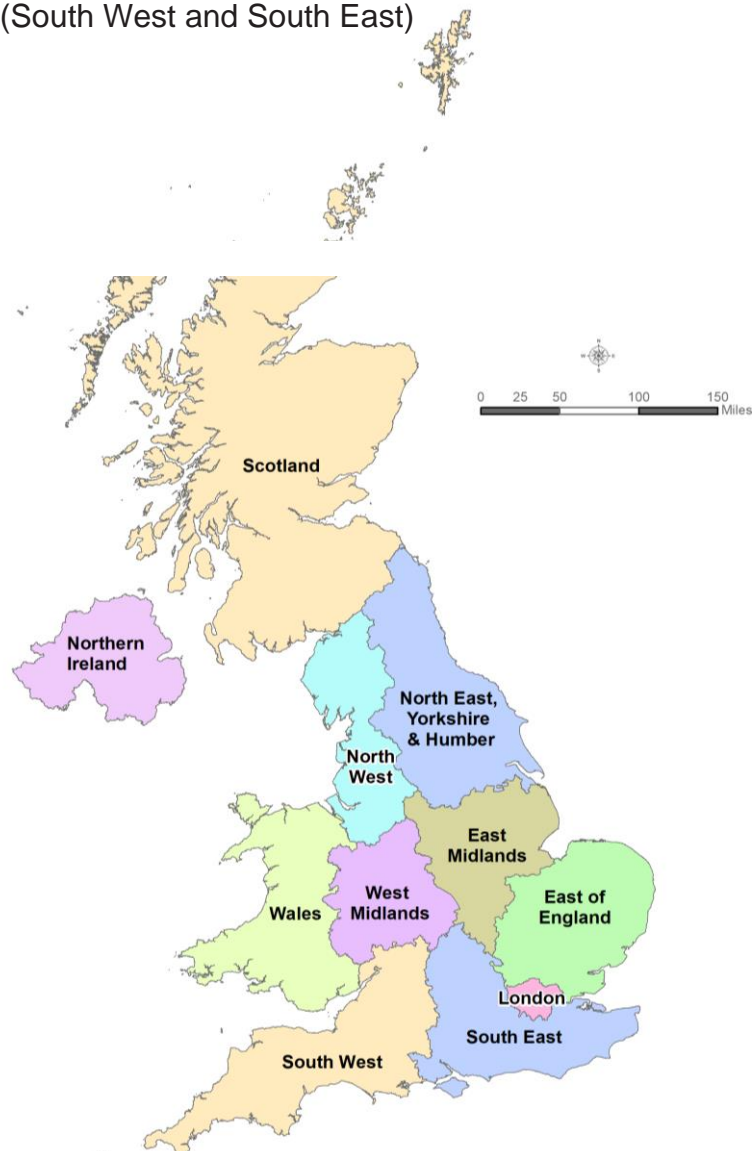
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Provision of data for the 2020/21 audit

The map below shows the areas covered by the 8 English QA sub regions and the breast screening information centres in Wales, Scotland and Northern Ireland. There are 4 Screening Quality Assurance Services (SQAS) regions in England, combining the sub regions outside of London:

- London
- Midlands and East (East Midlands, West Midlands and East of England)
- North (North West and North East Yorkshire & Humber)
- South (South West and South East)



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Executive Summary

The reduction in the number of people having breast screening during 2020/21, due to the pandemic will be no surprise and has been reported by NHS England¹, National Audit of Breast Cancer in Older Patients (NABCOP)² and in published research³. Table A below displays the screening numbers for this year's audit confirming a decline in the number of women screened due to the pandemic. Compared with data from 2018/19 (the last complete screening audit cycle with no COVID19 influence) we see a 42% drop in the number of women screened with slight variations across the UK nations (Table B). The consequences for women who did not attend screening as scheduled will require ongoing examination and audit.

This audit explored if there was an age difference in women attending for screening and those diagnosed with breast cancer during the pandemic. Given that, statistically, cancer detection rates have not changed during this audit cycle compared with previous years (Table A), it would be reasonable to assume that any change in number of cancers detected in differing age groups reflects actual numbers of women attending for screening in these groups. Table C shows a significant drop in detected cancers for women below 50 and, not surprisingly, in women over 70 who may have been more hesitant to come forward for screening during the pandemic due to the increasing risk, with age, of becoming seriously ill from COVID-19. Suspension of the AGE X trial in May 2020⁴ may also be a contributing factor for the fall in women under 50 and women over 70 attending screening.

For those women who did attend screening appointments there was no drop in the overall quality of care that they received. Non-operative diagnosis rates (Appendix 1, Tables 5-7) are similar to previous years. Assessment clinic outcomes (Tables 10-14, Appendix 1) similarly show that standards achieved in previous years continue to be upheld.

Despite staff shortages and lockdown measures screening services managed to have high levels of data completeness (Tables 21, 27, 62-64, 74). Scottish data, unfortunately missing in recent previous audits, is slowly re-integrating with the UK NHS BSP and we hope very much that this continues going forward.

Tables 22-26 show no difference in size or grade of screening cancers in 2020/21 compared with previous years and these parameters will be closely studied in future audits to see if any differences emerge. Surgical management of the vast majority of women with screen detected cancers followed standard guidelines despite the challenges of theatre access and pandemic infection control measures (Tables 35-37). Timeliness of surgery is not typically

covered in this audit as this is measured elsewhere. However, given the context, collated data were used to estimate the impact of the pandemic on this parameter and indicate that nationally there was a delay of up to 11 days during the first lockdown. However, waiting times returned to pre-pandemic levels on lifting of the lockdown.

In summary, we note a decrease in the number of women screened during this audit cycle, which encompasses the height of the COVID-19 pandemic but are reassured that those women who did attend received care in accordance with established screening standards.

This is testament to the dedication and professionalism of all staff working within the NHS Breast Screening Programme.

- 1) <https://digital.nhs.uk/data-and-information/publications/statistical/breast-screening-programme/england--2020-21>
- 2) www.nabcop.org.uk/content/uploads/2021/08/NABCOP-2021-Annual-Report-V1_high-res.pdf
- 3) Dave, R.V., Kim, B., Courtney, A. *et al.* Breast cancer management pathways during the COVID-19 pandemic: outcomes from the UK 'Alert Level 4' phase of the B-MaP-C study. *Br J Cancer* **124**, 1785–1794 (2021)
- 4) www.agex.uk

UK breast screening audit data – 2020/21

Just over 1.40 million women attended for breast screening in this audit cycle with a total of 12,784 cancers detected. The cancer detection rate was similar to that seen in previous years.

Table A Number of women screened & cancer detection rates (per 1000 women screened) in the UK NHS BSP 2020/21

	Women Screened	Total Cancers	Invasive Cancers	Non/Micro-invasive Cancers	Cancers/ 1000 screened
East Midlands	114573	1044	837	207	0.9
East of England	144764	1244	1033	211	0.9
London	127646	1119	841	277	0.9
N East, Yorks & Humber	187579	1646	1323	323	0.9
North West	138356	1292	1011	281	0.9
South East	215551	1982	1556	426	0.9
South West	148470	1471	1143	326	1.0
West Midlands	110226	1028	800	228	0.9
England	1187165	10826	8544	2279	0.9
Northern Ireland	57385	480	393	87	0.8
Scotland	115568	991	849	141	0.9
Wales	46726	487	391	95	1.0
United Kingdom	1406844	12784	10177	2602	0.9

Number of women screened during 2020/21 compared to previous years

Comparing 2020/21 data with 2018/19 (the last audit cycle completely free of any COVID-19 influence) there has been a 42% decline in number of women screened. The largest fall was noted in London and the smallest in Northern Ireland.

The closure of the Age extension trial (AgeX) in May 2020 will have impacted the number of women invited for breast screening mammography and thus contributed to a proportion of the decrease in numbers noted.

Table B UK Number of women screened during 2020/21 compared with 2018/19

	Total women screened 2020/21	Total women screened 2018/19	% decline
East Midlands	114573	221675	48
East of England	144764	280353	48
London	127646	268762	53
N East, Yorks & Humber	187579	361815	48
North West	138356	270825	49
South East	215551	354865	39
South West	148470	279917	47
West Midlands	110226	217329	49
England	1187165	2255541	47
Northern Ireland	57385	68562	16
Scotland	115568		
Wales	46726	114968	59
UK	1406844	2439071	42

*Scottish data not available for 2018/19

Did women with screen detected breast cancer experience any delays from diagnosis to date of surgery?

We examined monthly screen detected cancer diagnoses for the UK as a whole between 1 April 2020 and 31 March 2021. The first assessment date for each cancer diagnosis was used as a surrogate for the cancer diagnosis date. We then explored how many days were recorded for each patient between date of first assessment and date of first surgery. We used the 2019/20 audit cycle as a comparator.

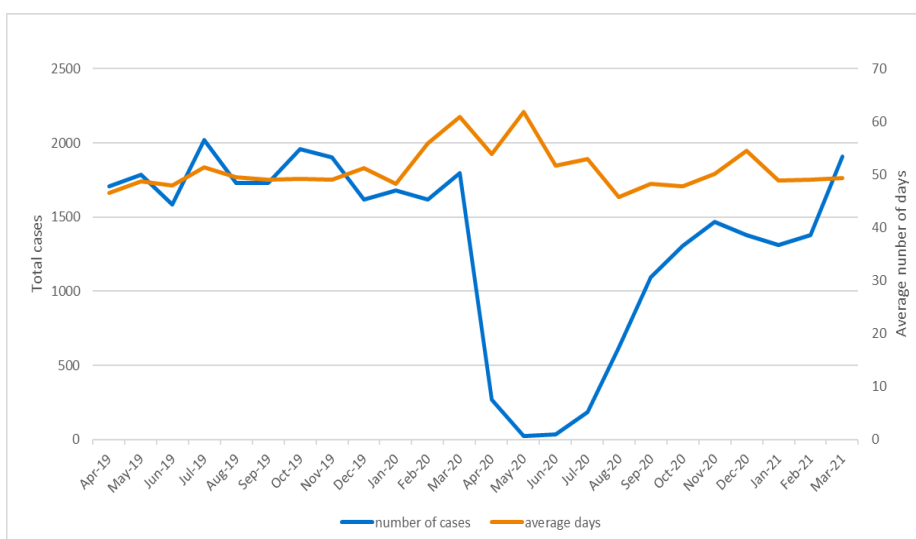
As expected there was a drop in the number of women diagnosed with screen detected breast cancer during the first UK lockdown (commencing March 23rd across the UK and ending variably late June - early July in the 4 Devolved Authorities). The drop reflects the temporary halt of breast screening in Scotland, Wales and Northern Ireland in accordance with governmental directives and decisions made at a local/regional level by many English breast screening services to similarly pause screening.

The number of days from first assessment to first surgical operation was increased from a mean of 49.6 days (April 19 - Feb 20 inclusive) to 56.4 days during the first national lockdown (March 2020 – July 2020 inclusive). This figure dropped back down to 49.1 days on lifting of the lockdown (August 2020 – March 2021 inclusive).

Table C UK numbers of screen detected breast cancers diagnosed per month during 2020/21 compared with 2019/20 and average time (days) from date of first assessment to 1st surgery during 2020/21

	No. of Cases		Average Days	
	2019 / 20	2020/21	2019 / 20	2020/21
April	1707	270	47	54
May	1786	23	49	62
June	1586	36	48	52
July	2020	182	51	53
August	1729	619	49	46
September	1728	1093	49	48
October	1960	1308	49	48
November	1903	1467	49	50
December	1619	1378	51	54
January	1677	1314	48	49
February	1619	1381	56	49
March	1795	1909	61	49

Figure 2 UK numbers of screen detected breast cancers diagnosed per month during 2020/21 compared with 2019/20 and average time (days) from date of first assessment to 1st surgery during 2020/21



Were there age-related differences in the number of women diagnosed with breast cancer during the COVID-19 pandemic?

We noted a decrease in the proportion of screen detected cancers diagnosed in women 47-50 years of age compared with the mean value for the previous 3 years. Similarly, there was a decrease in the proportion of cancers detected in women over the age of 70y. As noted earlier, closure of recruitment to the AgeX trial may have contributed to these decreases as the core programme invites women aged 50 to less than 71 years.

As the cancer detection rate during 2020/21 was similar to previous years it is reasonable to assume that the number of cancers detected reflects the age distribution of women electing to attend their screening appointment invitation. It is perhaps not surprising that the largest percentage points drop was seen in women aged over 70 who may be potentially the most hesitant to attend for screening mammography during a pandemic due to the increased risk of becoming seriously ill as a result of the COVID-19 virus.

Table D Comparison of screen detected breast cancer numbers by age: 2020/21 (%) v mean (%) of previous 3 audit cycles (2017/18, 2018/19, 2019/20)

	<50y			50-64y			65-70y			71-75y			76+y			Total
	No.	%	3y mea	No.	%	3y mea	No.	%	3y mea	No.	%	3y mea	No.	%	3y mea	
England	170	2	5	6766	62	54.7	3149	29	26.7	536	5	9.7	205	2	4	10826
Northern Ireland	5	1	1.3	306	64	63	137	29	27	17	4	6.3	15	3	2.3	480
Scotland	0	0		669	68		307	31		15	2		0	0		991
Wales	13	3	1.6	314	64	57.3	140	29	29	9	2	7.3	11	2	5	487
UK	188	1	4.3	8055	63	55	3733	29	27	577	5	9.7	231	2	4	12784

*Scottish data not available for previous 3 years

No. = total number of cancers in each age group diagnosed during 2020/21 audit cycle

% = percent of total cancers diagnosed per age group during 2020/21 audit cycle

3y mean (%) = mean percent of cancers diagnosed per age group during the previous 3 audit cycles

How did the pandemic affect numbers of women undergoing breast reconstruction following mastectomy for Ductal Carcinoma In Situ (DCIS)?

For a number of years, the number of women undergoing breast reconstruction following a diagnosis of screen detected Ductal Carcinoma In Situ has been around 31%. We hypothesised that this would drop during the pandemic due to clinical and patient anxieties about length of stay in hospital and risk of contracting COVID-19. There were also concerns about maximising throughput in operating theatres given reduced capacity and workforce. National guidance issued by the Association of Breast Surgery advised initially withholding all breast reconstruction (March 2020) and then proceeding with caution on a case by case basis (April 2020)⁵.

To look at this parameter we reviewed breast reconstruction rates by age for the 2020/21 audit cycle and compared these with the mean of the previous 3 years audit cycles (2017/18, 2018/19, 2019/20).

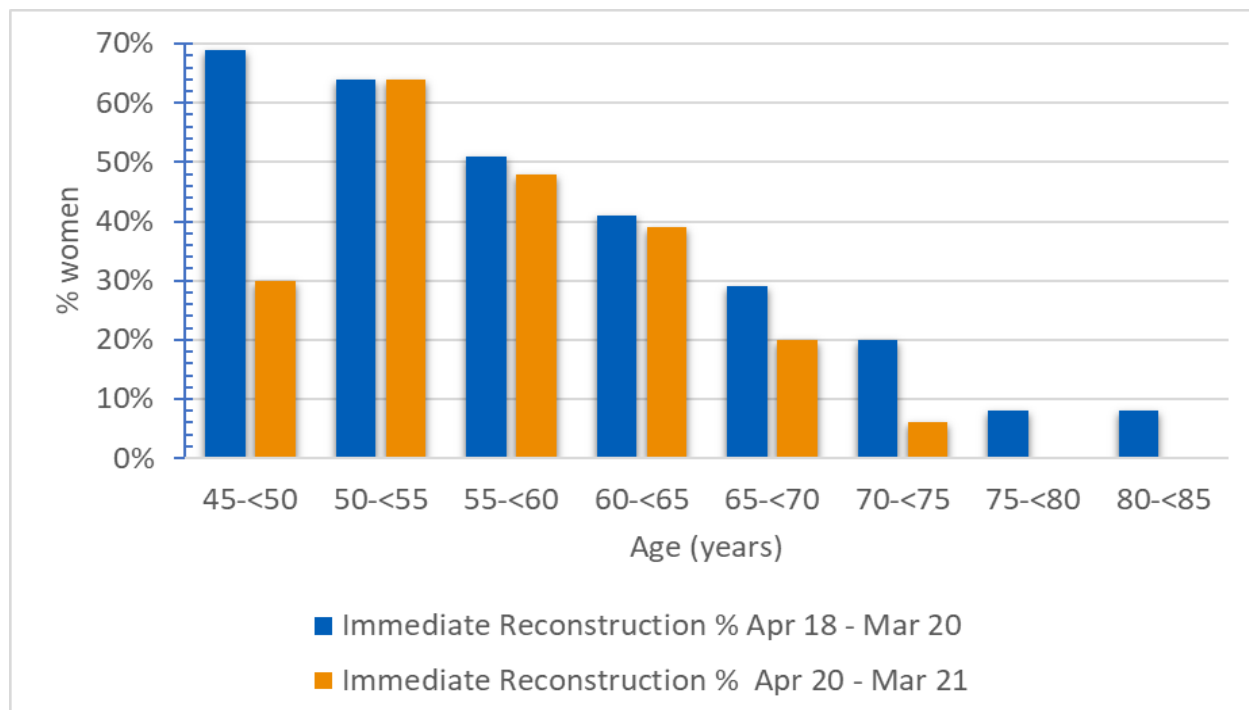
Table E (i) Immediate Reconstruction after Mastectomy for DCIS (England & Wales) 1
April 2018 – 31 March 2020

Age range y	Immediate Reconstruction n (%)	No Immediate Reconstruction n (%)	Unknown n (%)	Total women undergoing mastectomy for DCIS
45-<50	96 (69%)	43 (31%)	0	139
50-<55	341 (64%)	187 (35%)	3 (1%)	531
55-<60	177 (51%)	166 (48%)	4 (1%)	347
60-<65	126 (41%)	179 (58%)	3 (1%)	308
65-<70	94 (29%)	226 (70%)	3 (1%)	323
70-<75	36 (20%)	142 (79%)	1 (1%)	179
75-<80	5 (8%)	57 (92%)	0	62
80-<85	1 (8%)	12 (92%)	0	13
85-<90		1 (100%)	0	1
Total	876	1013	14	1903

(ii) Immediate Reconstruction after Mastectomy for DCIS (England & Wales) 1 April 2020 – 31 March 2021

Age range y	Immediate Reconstruction n (%)	No Immediate Reconstruction n (%)	Unknown n (%)	Total women undergoing mastectomy for DCIS
45-<50	3 (30%)	7 (70%)	0	10
50-<55	85 (64%)	47 (36%)	0	132
55-<60	44 (48%)	47 (51%)	1 (1%)	92
60-<65	34 (39%)	50 (58%)	3 (3%)	87
65-<70	14 (20%)	56 (79%)	1 (1%)	71
70-<75	2 (6%)	29 (91%)	1 (3%)	32
75-<80	0	4 (100%)	0	4
80-<85	0	1 (100%)	0	1
85-<90	0	0	0	0
Total	182	241	6	429

Figure 3 Immediate Reconstruction after Mastectomy for DCIS (England & Wales) comparing data 1 April 2018 – 31 March 2020 with the current audit year April 2020 – March 2021



As with all diagnoses during 2020/21 absolute numbers are lower compared to previous years. However, the data shows that, despite the challenges imposed by the coronavirus

pandemic, women undergoing mastectomy for screen detected DCIS during 2020/21 received breast reconstruction in similar proportions to those seen in pre-pandemic cohorts. This is pleasing to note. Further work is required to explore reconstruction rates in women undergoing mastectomy following a diagnosis of invasive cancer.

A drop in reconstruction rates in the below 50y and >70y cohorts is noted, but the numbers of patients are small (Table E ii) limiting interpretation.

5) <https://associationofbreastsurgery.org.uk/for-members/COVID-19-resources>

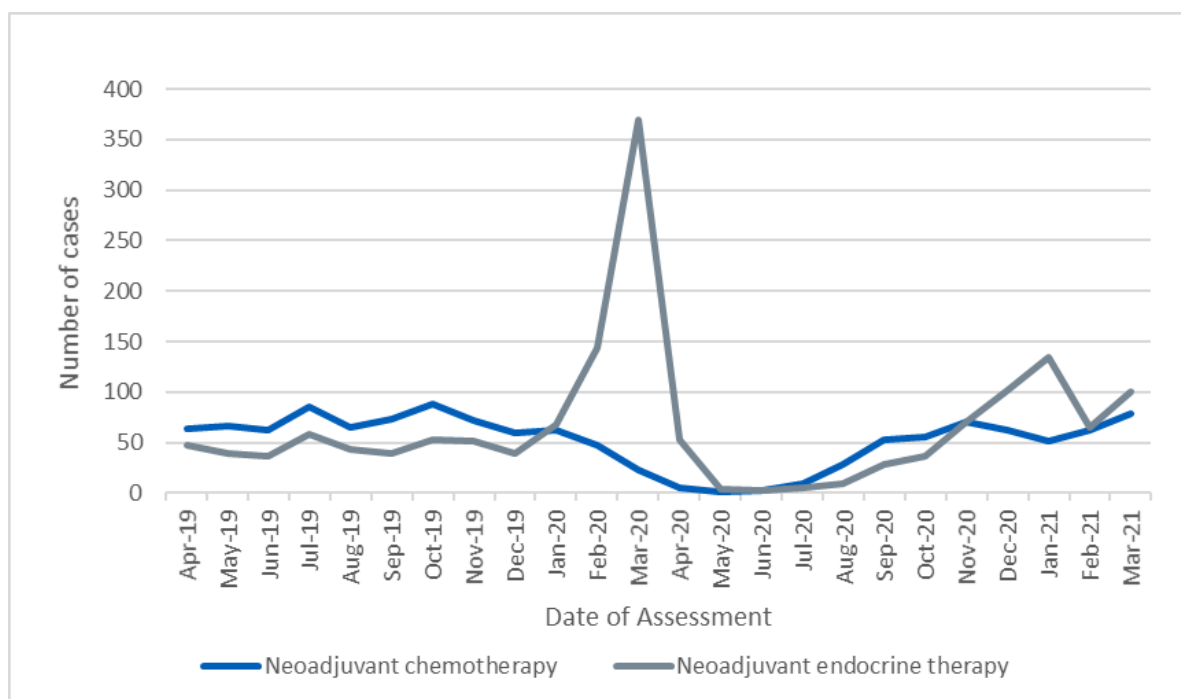
Use of Neoadjuvant Therapy during the pandemic

We examined use of systemic neoadjuvant therapy using date of 1st assessment as a surrogate for date of commencement of treatment comparing the screening audit years

2019/20 and the current audit cycle of 2020/21. Cases with a previous diagnosis of breast cancer are excluded from this analysis.

A sharp spike in absolute numbers of women receiving neoadjuvant endocrine therapy is noted commencing January 2020 and returning to normal levels by May 2020. This spike overlaps with the 1st national lockdown and may represent increased use of “bridging” hormonal therapy in lower risk cases whilst awaiting theatre access⁴.

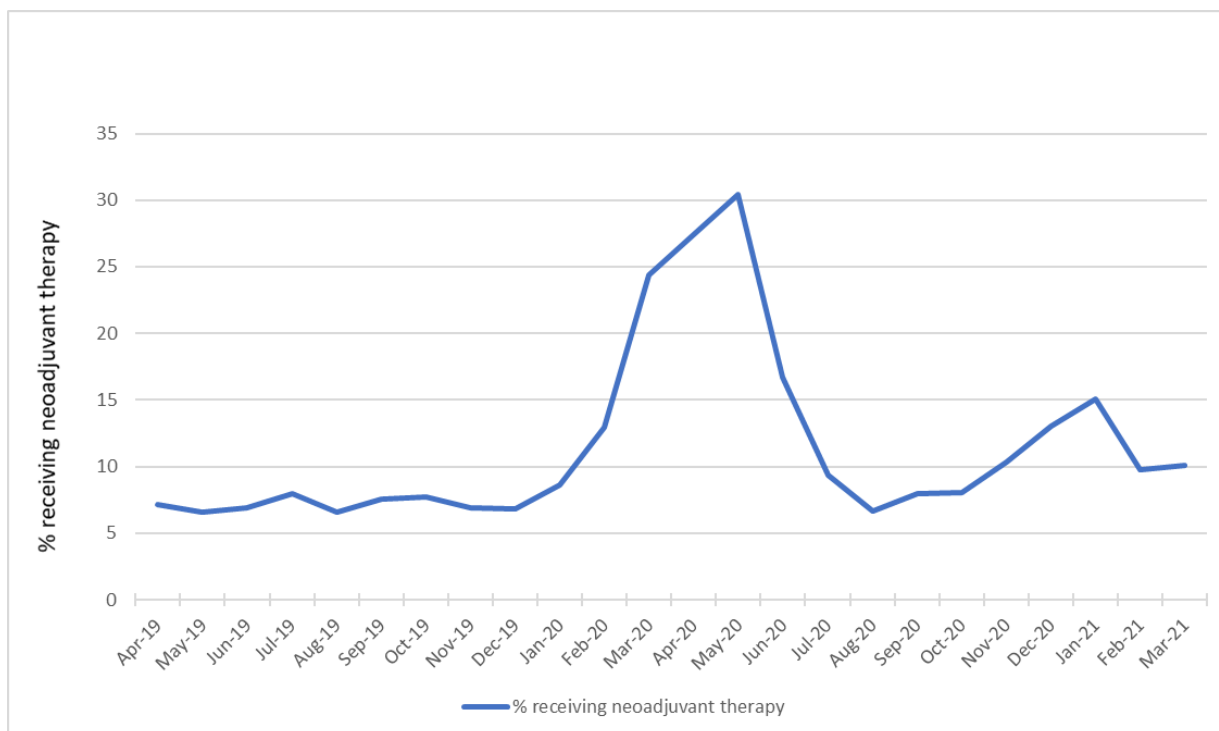
Figure 4 Use of neoadjuvant therapy in breast screening cases diagnosed during 2019/20 and 2020/21



As the absolute numbers of screen detected cancers were lower than in previous years, we examined the *percentage* of women with invasive screen detected cancers who received some form of neoadjuvant or presurgical systemic therapy.

Figure 5 Percentage of women with screen detected cancers receiving systemic neoadjuvant or bridging therapy during the screening years 2019/20 and 2020/21.

The mean value for this parameter over the 3 year period 2017/18, 2018/19, 2019/20 is 7.7%



Although there were fewer numbers of women diagnosed with screen detected breast cancers during March to June 2020, we note an increased *proportion* of these women receiving systemic neoadjuvant therapy during the first national lockdown.

This increase is noted to begin prior to the commencement of the 1st national lockdown on 23rd March 2020 possibly due to the month referring to when the woman received their diagnosis, rather than when treatment began

Sentinel Lymph Node Biopsy (SLNB) in women undergoing WLE followed by completion mastectomy for Ductal Carcinoma In Situ

Current guidelines advise that, if a completion mastectomy is required following an attempt(s) at breast conserving surgery (BCS) for DCIS, then sentinel node biopsy should be undertaken at the time of the completion mastectomy⁶. Screening data were interrogated as a hypothesis generating exercise.

We hypothesised that if the bulk of the DCIS has been excised following a BCS procedure(s) then the risk of finding a positive SLNB at completion mastectomy would be so low as to question the requirement for this axillary intervention at completion mastectomy in screen detected cases.

We looked at data of all cases of DCIS from 2011/12 to 2020/21 inclusive where a woman with screen detected DCIS had undergone ≥ 1 BCS procedure and then proceeded to a completion mastectomy with or without SLNB to identify how many women were noted with positive nodes from SLNB at completion mastectomy. Women with previous breast cancers or with LCIS alone were excluded from this cohort. Women with axillary surgery before mastectomy were excluded from Tables G and H.

Table F Sentinel node biopsy rates in women with DCIS undergoing BCS as initial procedure(s) followed by completion mastectomy and SLNB. Data for women proceeding to mastectomy as first procedure for DCIS is also provided for comparison.

DCIS treated with mastectomy, proportion with SLNB at first operation						
Year	BCS as first operation(s) then mastectomy			Mastectomy as first operation for DCIS		
	Total	SLNB with BCS		Total	SLNB with mastectomy	
		Number	%		Number	%
2011/12	212	21	10	446	341	76
2012/13	177	11	6	523	435	83
2013/14	206	15	7	521	464	89
2014/15	193	18	9	535	471	88
2015/16	154	11	7	537	476	89
2016/17	181	12	7	587	546	93
2017/18	172	15	9	573	523	91
2018/19	140	9	6	589	543	92
2019/20	110	8	7	525	485	92
2020/21	68	7	10	318	299	94
Total	1613	127	8	5154	4583	89

Over time, the numbers of women undergoing SLNB at mastectomy for DCIS has incrementally increased from 76% to 94% in keeping with national guidance. A total of 571 women (11%) did not have SLNB at completion mastectomy.

Women undergoing BCS for DCIS should not be undergoing SLNB at first procedure but there remains a cohort of women of approximately 8% where this is still occurring. This remains an area for further inspection and potential improvement.

Table G Positive sentinel node biopsy rates in women with DCIS undergoing BCS as initial procedure(s) followed by completion mastectomy and SLNB. Data for women proceeding to mastectomy as first procedure for DCIS is also provided for comparison.

DCIS treated with mastectomy and SLNB, proportion with positive nodal status						
Year	BCS as first operation(s) then mastectomy			Mastectomy as first operation		
	Positive nodal status		Total	Positive nodal status		Total
	Number	%		Number	%	
2011/12	0	0.0	95	5	1.5	341
2012/13	3	3.7	82	4	0.9	435
2013/14	0	0.0	116	3	0.6	464
2014/15	2	1.9	104	8	1.7	471
2015/16	0	0.0	91	6	1.3	476
2016/17	3	2.9	105	8	1.5	546
2017/18	2	1.8	114	9	1.7	523
2018/19	4	4.4	90	6	1.1	543
2019/20	1	1.6	64	4	0.8	485
2020/21	1	1.9	52	1	0.3	299
Total	16	1.8	913	54	1.2	4583

*women having SLNB/any axillary surgery at the time of BCS are omitted from Table G

SLNB positivity rates are low in all women undergoing surgery for DCIS as is expected. Following BCS and subsequent completion mastectomy with SLNB for DCIS sentinel node positivity is 1.8%.

We examined if there was a link to size or grade of DCIS to subsequent SLNB positivity.

Table H Size (i) and grade (ii) of DCIS in screen detected cases treated with BCS and subsequent completion mastectomy or with mastectomy as first surgery

(i) Size of DCIS with known nodal status treated with mastectomy and SLNB					(ii) Grade of DCIS with known nodal status treated with mastectomy and SLNB				
Size	BCS & SLNB with subsequent positive SLNB status at completion mastectomy	BCS & SLNB with subsequent negative SLNB status at completion mastectomy	First operation mastectomy & positive SLNB	First operation mastectomy & negative SLNB	Grade	BCS & SLNB with subsequent positive SLNB status at completion mastectomy	BCS & SLNB with subsequent negative SLNB status at completion mastectomy	First operation mastectomy & positive SLNB	First operation mastectomy & negative SLNB
<15mm	2 (13%)	64 (7%)	4 (7%)	339 (8%)	High	14 (88%)	663 (74%)	50 (93%)	3486 (77%)
15-40mm	5 (31%)	402 (45%)	15 (28%)	1716 (38%)	Intermediate	1 (6%)	189 (21%)	3 (6%)	896 (20%)
>40mm	8 (50%)	414 (46%)	35 (65%)	2419 (54%)	Low	0 (0%)	32 (4%)	1 (2%)	122 (3%)
Not assessable	1 (6%)	12 (1%)	0 (0%)	3 (0%)	Not assessable	1 (6%)	12 (1%)	0 (0%)	5 (0%)
Unknown	0 (0%)	4 (0%)	0 (0%)	34 (1%)	Unknown	0 (0%)	0 (0%)	0 (0%)	2 (0%)
Total	16 (100%)	896 (100%)	54 (100%)	4511 (100%)	Total	16 (100%)	896 (100%)	54 (100%)	4511 (100%)

*469 women did not undergo SLNB at completion mastectomy following initial BCS
571 women did not undergo SLNB at initial mastectomy

There is no obvious size cut off that allows potential identification of those women who could avoid SLNB at completion mastectomy.

There is a suggestion that those women with low or intermediate grade DCIS who undergo initial BCS and subsequent completion mastectomy are less likely to have positive SLNB and could potentially avoid this procedure.

Rates of SLNB positivity are very low following completion mastectomy for DCIS. Further work is warranted to explore whether it is safe to omit SLNB at the time of completion mastectomy for DCIS in all or a subset of women. This will need to include data on rates of invasive cancer found in completion mastectomy specimens.

At present, women should continue to be treated in accordance with current guidance. Those proceeding to completion mastectomy for DCIS should be advised to undergo SLNB at the time of their completion mastectomy.

Appendix 1: Main audit data tables (1 - 88)

DATA FROM THE 2020/21 AUDIT OF SCREEN-DETECTED BREAST CANCERS IN WOMEN ALL AGES FOR THE PERIOD 1 APRIL 2020 – 31 MARCH 2021

Data was submitted by screening services for the purposes of this audit

Table 1: Number and invasive status of screen-detected breast cancers and total women screened

Sub-region	Invasive		Invasive (<15mm)		Micro-invasive		Non-invasive		Status unknown		Total		Total women screened	Micro/Non-invasive cancer rate	Invasive cancer rate	Invasive <15mm rate
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%				
East Midlands	837	80	450	43	9	1	198	19	0	0	1044	100	114573	1.8	7.3	3.9
East of England	1033	83	526	42	11	1	200	16	0	0	1244	100	144764	1.5	7.1	3.6
London	841	75	355	32	12	1	265	24	1	0	1119	100	127646	2.2	6.6	2.8
N East, Yorks & Humber	1323	80	676	41	14	1	309	19	0	0	1646	100	187579	1.7	7.1	3.6
North West	1011	78	459	36	6	0	275	21	0	0	1292	100	138356	2.0	7.3	3.3
South East	1556	79	736	37	21	1	405	20	0	0	1982	100	215551	2.0	7.2	3.4
South West	1143	78	608	41	14	1	312	21	2	0	1471	100	148470	2.2	7.7	4.1
West Midlands	800	78	368	36	10	1	218	21	0	0	1028	100	110226	2.1	7.3	3.3
England	8544	79	4178	39	97	1	2182	20	3	0	10826	100	1187165	1.9	7.2	3.5
Northern Ireland	393	82	193	40	6	1	81	17	0	0	480	100	57385	1.5	6.8	3.4
Scotland	849	86	408	41	14	1	127	13	1	0	991	100	115568	1.2	7.3	3.5
Wales	391	80	201	41	2	0	93	19	1	0	487	100	46726	2.0	8.4	4.3
UK	10177	79.6	4980	39	119	0.9	2483	19.4	5	0	12784	100	1406844	1.8	7.2	3.5

Table 2: Breast cancer cases by age at first offered screening appointment

Sub-region	<50		50-64		65-70		71-75		76+		Total	>70	
	No.	%	No.	%	No.	%	No.	%	No.	%		No.	%
East Midlands	20	2	676	65	268	26	58	6	22	2	1044	80	8
East of England	6	0	769	62	380	31	58	5	31	2	1244	89	7
London	13	1	728	65	312	28	48	4	18	2	1119	66	6
N East, Yorks & Humber	32	2	981	60	522	32	80	5	31	2	1646	111	7
North West	20	2	797	62	380	29	83	6	12	1	1292	95	7
South East	36	2	1262	64	558	28	85	4	41	2	1982	126	6
South West	27	2	913	62	435	30	66	4	30	2	1471	96	7
West Midlands	16	2	640	62	294	29	58	6	20	2	1028	78	8
England	170	2	6766	62	3149	29	536	5	205	2	10826	741	7
Northern Ireland	5	1	306	64	137	29	17	4	15	3	480	32	7
Scotland	0	0	669	68	307	31	15	2	0	0	991	15	2
Wales	13	3	314	64	140	29	9	2	11	2	487	20	4
UK	188	1	8055	63	3733	29	577	5	231	2	12784	808	6

Sub-region	Total cases	Total pt matched	% matched	Had previous cancers			
				Had previous cancers		No previous cancers	
				No.	%	No.	%
East Midlands	1044	956	92	136	14	820	86
East of England	1244	1091	88	164	15	927	85
London	1119	977	87	125	13	852	87
NEYH	1646	1485	90	215	14	1270	86
North West	1292	1209	94	174	14	1035	86
South East	1982	1648	83	245	15	1403	85
South West	1471	1267	86	208	16	1059	84
West Midlands	1029	934	91	150	16	784	84
England	10827	9567	88	1417	15	8150	85
Northern Ireland	480	345	72	59	17	286	83
Scotland	991	896	90	135	15	761	85
UK	12298	10808	88	1611	15	9197	85

* Wales did not supply previous cancer data in 20/21. All Wales cases are included in the analysis.

Sub-region	Total matched	Total previous cancers	Invasive/micro-invasive					Non-invasive	
			Breast	Gynae-cological	Bowel	Haema-tological	Other	Breast	Other
			East Midlands	956	136	44	11	7	5
East of England	1091	164	58	8	10	9	24	17	35
London	977	125	36	12	2	3	12	17	48
NEYH	1485	215	62	24	17	10	25	16	67
North West	1209	174	56	34	7	6	24	17	36
South East	1648	245	82	21	12	8	38	30	64
South West	1267	208	69	18	12	10	20	23	57
West Midlands	934	150	50	17	4	6	17	16	49
England	9567	1417	457	145	71	57	170	147	390
Northern Ireland	345	59	21	8	4	1	7	4	15
Scotland	896	135	45	14	12	2	22	4	39
% of previous cancers		100	32	10	5	4	12	10	28
% of matched	100	15	5	2	1	1	2	1	4

* Wales did not supply previous cancer data in 19/20. All Wales cases are included in the analysis.

Sub-region	Total cancers	C5 only		C5 & B5		B5 only		E5 only		B5 & E5		Positive axillary biopsy only		Pre-operative diagnosis		No Pre-operative diagnosis	
		No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
		East Midlands	989	0	0	0	0	960	97	24	2	2	0	0	0	984	100
East of England	1171	0	0	0	0	1125	96	27	2	3	0	2	0	1155	99	14	1
London	1067	0	0	2	0	1024	96	22	2	5	0	0	0	1052	99	14	1
N East, Yorks & Humber	1568	0	0	2	0	1517	97	22	1	7	0	1	0	1547	99	19	1
North West	1220	0	0	2	0	1186	97	9	1	6	0	0	0	1201	99	17	1
South East	1871	0	0	1	0	1787	96	49	3	7	0	2	0	1841	99	25	1
South West	1380	0	0	0	0	1322	96	31	2	5	0	1	0	1352	98	21	2
West Midlands	961	0	0	1	0	931	97	20	2	2	0	0	0	953	99	7	1
England	10227	0	0	8	0	9852	96	204	2	37	0	6	0	10107	99	120	1
Northern Ireland	455	2	0	25	5	407	89	8	2	7	2	0	0	449	99	6	1
Scotland	942	0	0	1	0	922	98	0	0	0	0	0	0	923	98	19	2
Wales	487	0	0	0	0	467	96	12	2	1	0	1	0	481	99	6	1
UK	12111	2	0	34	0	11648	96	224	2	45	0	7	0	11960	99	151	1

Table 6: Pre-operative diagnosis rate (invasive cancers)

Sub-region	Total cancers	C5 only		C5 & B5		B5 only		E5 only		B5 &E5		Positive axillary biopsy only		Pre-operative diagnosis		No Pre-operative diagnosis	
		No	%	No	%	No	%	No	%	No	%	%	%	No	%	No	%
		East Midlands	791	0	0	0	0	783	99	7	1	1	0	0	0	791	100
East of England	972	0	0	0	0	959	99	8	1	2	0	2	0	971	100	1	0
London	796	0	0	1	0	787	99	3	0	5	1	0	0	796	100	0	0
N East, Yorks & Humber	1255	0	0	2	0	1238	99	3	0	6	0	1	0	1250	100	5	0
North West	960	0	0	2	0	946	99	1	0	4	0	0	0	953	99	7	1
South East	1465	0	0	0	0	1446	99	5	0	5	0	2	0	1458	100	7	0
South West	1078	0	0	0	0	1062	99	8	1	3	0	1	0	1074	100	4	0
West Midlands	748	0	0	1	0	741	99	4	1	1	0	0	0	747	100	1	0
England	8065	0	0	6	0	7962	99	39	0	27	0	6	0	8040	100	25	0
Northern Ireland	373	2	1	24	6	339	91	0	0	6	2	0	0	371	99	2	1
Scotland	807	0	0	1	0	803	100	0	0	0	0	0	0	804	100	3	0
Wales	391	0	0	0	0	381	97	6	2	0	0	1	0	388	99	3	1
UK	9636	2	0	31	0	9485	98	45	0	33	0	7	0	9603	100	33	0

Table 7: Pre-operative diagnosis rate (non-invasive cancers)

Sub-region	Total cancers	C5 only		C5 & B5		B5 only		E5 only		B5 &E5		Positive axillary biopsy only		Pre-operative diagnosis		No Pre-operative diagnosis	
		No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
		East Midlands	189	0	0	0	0	168	89	17	9	1	1	0	0	186	98
East of England	188	0	0	0	0	157	84	17	9	1	1	0	0	175	93	13	7
London	258	0	0	0	0	228	88	18	7	0	0	0	0	246	95	12	5
N East, Yorks & Humber	299	0	0	0	0	265	89	19	6	1	0	0	0	285	95	14	5
North West	255	0	0	0	0	235	92	8	3	2	1	0	0	245	96	10	4
South East	385	0	0	1	0	320	83	44	11	2	1	0	0	367	95	18	5
South West	290	0	0	0	0	249	86	22	8	2	1	0	0	273	94	17	6
West Midlands	205	0	0	0	0	183	89	15	7	1	0	0	0	199	97	6	3
England	2069	0	0	1	0	1805	87	160	8	10	0	0	0	1976	96	93	4
Northern Ireland	76	0	0	1	1	62	82	8	11	1	1	0	0	72	95	4	5
Scotland	120	0	0	0	0	105	88	0	0	0	0	0	0	105	88	15	13
Wales	93	0	0	0	0	84	90	5	5	1	1	0	0	90	97	3	3
UK	2358	0	0	2	0	2056	87	173	7	12	1	0	0	2243	95	115	5

Sub-region	Invasive		Micro-invasive		Non-invasive		Benign		Unknown		Total with surgery	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	39	18	9	4	159	75	0	0	6	3	213	100
East of England	40	20	9	5	144	72	0	0	6	3	199	100
London	33	13	9	3	196	76	0	0	21	8	259	100
N East, Yorks & Humber	59	18	14	4	245	74	0	0	13	4	331	100
North West	41	15	5	2	217	78	0	0	14	5	277	100
South East	73	18	20	5	298	73	0	0	16	4	407	100
South West	41	14	10	3	231	78	0	0	13	4	295	100
West Midlands	35	16	6	3	177	80	0	0	4	2	222	100
England	361	16	82	4	1667	76	0	0	93	4	2203	100
Northern Ireland	16	19	6	7	60	71	2	2	0	0	84	100
Scotland	37	25	14	9	96	64	1	1	3	2	151	100
Wales	28	25	2	2	76	68	5	5	0	0	111	100
UK	442	17	104	4	1899	74	8	0	96	4	2549	100

Sub-region	Invasive		Micro-invasive		Non-invasive		Benign		Unknown		Total with surgery	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	682	97	0	0	5	1	0	0	15	2	702	100
East of England	842	96	0	0	13	1	0	0	24	3	879	100
London	681	94	2	0	19	3	0	0	24	3	726	100
N East, Yorks & Humber	1116	98	0	0	11	1	0	0	12	1	1139	100
North West	833	96	0	0	8	1	0	0	26	3	867	100
South East	1270	96	3	0	25	2	0	0	21	2	1319	100
South West	949	95	0	0	16	2	0	0	31	3	996	100
West Midlands	641	95	2	0	15	2	0	0	16	2	674	100
England	7014	96	7	0	112	2	0	0	169	2	7302	100
Northern Ireland	338	98	0	0	3	1	3	1	0	0	344	100
Scotland	650	94	0	0	4	1	1	0	35	5	690	100
Wales	326	96	0	0	6	2	7	2	1	0	340	100
UK	8328	96	7	0	125	1	11	0	205	2	8676	100

Sub-region	1		2		3+		Total		Repeat (2+) visit	
	No	%	No	%	No	%	No	%	No	%
East Midlands	798	81	157	16	34	3	989	100	191	19
East of England	1057	90	104	9	10	1	1171	100	114	10
London	901	84	143	13	23	2	1067	100	166	16
N East, Yorks & Humber	1371	87	174	11	23	1	1568	100	197	13
North West	1004	82	186	15	30	2	1220	100	216	18
South East	1579	84	250	13	42	2	1871	100	292	16
South West	1114	81	225	16	41	3	1380	100	266	19
West Midlands	761	79	177	18	23	2	961	100	200	21
England	8585	84	1416	14	226	2	10227	100	1642	16
Northern Ireland	419	92	35	8	1	0	455	100	36	8
Scotland	807	86	88	9	47	5	942	100	135	14
Wales	431	89	51	10	5	1	487	100	56	11
UK	10242	85	1590	13	279	2	12111	100	1869	15

Sub-region	1		2		3+		Total		First core/cyt/VAE at 2+ visit	
	No	%	No	%	No	%	No	%	No	%
East Midlands	950	96	39	4	0	0	989	100	39	4
East of England	1149	98	19	2	1	0	1169	100	20	2
London	1019	96	46	4	2	0	1067	100	48	4
N East, Yorks & Humber	1529	98	36	2	2	0	1567	100	38	2
North West	1154	95	66	5	0	0	1220	100	66	5
South East	1801	96	66	4	2	0	1869	100	68	4
South West	1306	95	72	5	1	0	1379	100	73	5
West Midlands	941	98	19	2	1	0	961	100	20	2
England	9849	96	363	4	9	0	10221	100	372	4
Northern Ireland	449	99	3	1	0	0	452	100	3	1
Wales	481	99	5	1	0	0	486	100	5	1
UK excl Scotland	10779	97	371	3	9	0	11159	100	380	3

No data provided for Scotland

Sub-region	Invasive					Non-invasive					Overall				
	1		2+		Total	1		2+		Total	1		2+		Total
	No	%	No	%		No	%	No	%		No	%	No	%	
East Midlands	708	90	83	10	791	144	77	42	23	186	861	87	125	13	986
East of England	932	96	37	4	969	144	82	31	18	175	1087	94	68	6	1155
London	755	95	41	5	796	196	80	50	20	246	959	91	94	9	1053
N East, Yorks & Humber	1189	95	60	5	1249	247	87	38	13	285	1447	93	101	7	1548
North West	882	93	71	7	953	207	84	38	16	245	1094	91	109	9	1203
South East	1366	94	90	6	1456	282	77	85	23	367	1666	90	178	10	1844
South West	991	92	82	8	1073	212	78	61	22	273	1212	89	146	11	1358
West Midlands	688	92	59	8	747	151	76	48	24	199	845	89	109	11	954
England	7511	93	523	7	8034	1583	80	393	20	1976	9171	91	930	9	10101
Northern Ireland	351	95	20	5	371	62	86	10	14	72	418	93	31	7	449
Wales	366	95	21	5	387	74	82	16	18	90	442	92	38	8	480
UK excl. Scotland	8228	94	564	6	8792	1719	80	419	20	2137	10031	91	999	9	11030

No data provided for Scotland

Sub-region	C5, B5, E5 or a combination thereof		C4, B4, E4 or a combination thereof		C3, B3, E3 or a combination thereof		C2, B2, E2 or a combination thereof		C1, B1, E1 or a combination thereof		Total
	No	%	No	%	No	%	No	%	No	%	
East Midlands	158	85	3	2	17	9	5	3	3	2	186
East of England	153	87	4	2	15	9	2	1	1	1	175
London	217	88	2	1	19	8	4	2	4	2	246
N East, Yorks & Humber	262	92	2	1	16	6	4	1	1	0	285
North West	221	90	8	3	9	4	5	2	2	1	245
South East	305	83	6	2	43	12	1	0	12	3	367
South West	231	85	6	2	25	9	5	2	6	2	273
West Midlands	170	85	8	4	15	8	5	3	1	1	199
England	1717	87	39	2	159	8	31	2	30	2	1976
Northern Ireland	65	90	0	0	6	8	0	0	1	1	72
Wales	76	84	2	2	8	9	0	0	4	4	90
UK	1858	87	41	2	173	8	31	1	35	2	2138

No data for Scotland

Table 14: Any further visits after core/cytology/vacuum biopsy result

Sub-region	Invasive					Non-Invasive					Overall				
	Further visit		No further visit		Total	Further visit		No further visit		Total	Further visit		No further visit		Total
	No	%	No	%		No	%	No	%		No	%	No	%	
East Midlands	24	3	767	97	791	12	6	177	94	189	36	4	953	96	989
East of England	21	2	949	98	970	4	2	184	98	188	25	2	1144	98	1169
London	22	3	774	97	796	14	5	244	95	258	37	3	1030	97	1067
N East, Yorks & Humber	51	4	1203	96	1254	7	2	292	98	299	58	4	1509	96	1567
North West	41	4	919	96	960	9	4	246	96	255	50	4	1170	96	1220
South East	50	3	1413	97	1463	12	3	373	97	385	64	3	1805	97	1869
South West	45	4	1032	96	1077	15	5	275	95	290	60	4	1319	96	1379
West Midlands	59	8	689	92	748	18	9	187	91	205	77	8	884	92	961
England	313	4	7746	96	8059	91	4	1978	96	2069	407	4	9814	96	10221
Northern Ireland	1	0	370	100	371	0	0	75	100	75	1	0	451	100	452
Wales	11	3	379	97	390	2	2	91	98	93	13	3	473	97	486
UK excl. Scotland	325	4	8495	96	8820	93	4	2144	96	2237	421	4	10738	96	11159

No data for Scotland

Table 15: Status of diagnostic open biopsies

Sub-region	Benign biopsy rate		Malignant biopsy rate
	Prevalent	Incident	
East Midlands	0.93	0.20	0.03
East of England	0.74	0.17	0.10
London	0.53	0.21	0.11
N East, Yorks & Humber	0.42	0.15	0.10
North West	0.65	0.21	0.12
South East	0.39	0.29	0.12
South West	0.81	0.23	0.14
West Midlands	0.65	0.21	0.06
England	0.63	0.22	0.10
Northern Ireland	0.34	0.25	0.10
Scotland	0.87	0.58	0.16
Wales	0.79	0.28	0.13
UK	0.66	0.25	0.11

Numerator – number of benign open biopsy at prevalent or incident screen (all ages)

Denominator – Number of women screened at prevalent or incident screen (all ages)

Table 16: Invasive status of malignant diagnostic open biopsies

Sub-region	Total malignant open biopsies	Invasive		Micro-invasive		Non-invasive		Status unknown	
		No.	%	No.	%	No.	%	No.	%
East Midlands	3	0	0	0	0	3	100	0	0
East of England	14	1	7	0	0	13	93	0	0
London	14	0	0	1	7	12	86	1	7
N East, Yorks & Humber	19	5	26	0	0	14	74	0	0
North West	17	7	41	0	0	10	59	0	0
South East	25	7	28	0	0	18	72	0	0
South West	21	4	19	0	0	17	81	0	0
West Midlands	7	1	14	0	0	6	86	0	0
England	120	25	21	1	1	93	78	1	1
Northern Ireland	6	2	33	0	0	4	67	0	0
Scotland	19	3	16	0	0	15	79	1	5
Wales	6	3	50	0	0	3	50	0	0
UK	151	33	22	1	1	115	76	2	1

Table 17: Non-operative history for invasive cancers with malignant open biopsy

Sub-region	Total malignant open biopsies	No non-operative procedures		Cytology only		Core biopsy/VAB only		Both cytology and core biopsy/VAB		VAE and other non-op biopsy	
		No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	0	0	-	0	-	0	-	0	-	0	-
East of England	1	0	0	0	0	1	100	0	0	0	0
London	0	0	-	0	-	0	-	0	-	0	-
N East, Yorks & Humber	5	0	0	0	0	5	100	0	0	0	0
North West	7	0	0	0	0	7	100	0	0	0	0
South East	7	0	0	0	0	6	86	0	0	1	14
South West	4	0	0	0	0	3	75	0	0	1	25
West Midlands	1	0	0	0	0	1	100	0	0	0	0
England	25	0	0	0	0	23	92	0	0	2	8
Northern Ireland	2	2	100	0	0	0	0	0	0	0	0
Scotland	3	1	33	0	0	2	67	0	0	0	0
Wales	3	0	0	0	0	3	100	0	0	0	0
UK	33	3	9	0	0	28	85	0	0	2	6

Table 18: Non-operative history of the breast for micro/non-invasive cancers with malignant open biopsy

Sub-region	Total malignant open biopsies	No non-operative procedures		Cytology only		Core biopsy/VAB only		Both cytology and core biopsy/VAB		VAE and other non-op biopsy	
		No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	3	0	0	0	0	2	67	0	0	1	33
East of England	13	0	0	0	0	13	100	0	0	0	0
London	13	0	0	0	0	12	92	0	0	1	8
N East, Yorks & Humber	14	0	0	0	0	12	86	0	0	2	14
North West	10	0	0	0	0	9	90	1	10	0	0
South East	18	0	0	1	6	16	89	0	0	1	6
South West	17	0	0	0	0	16	94	1	6	0	0
West Midlands	6	0	0	0	0	6	100	0	0	0	0
England	94	0	0	1	1	86	91	2	2	5	5
Northern Ireland	4	1	25	0	0	3	75	0	0	0	0
Scotland	15	0	0	0	0	14	93	1	7	0	0
Wales	3	0	0	0	0	3	100	0	0	0	0
UK	116	1	1	1	1	106	91	3	3	5	4

Table 19: Highest cytology and core biopsy/VAE result prior to malignant diagnostic open biopsies (invasive cancers)

Sub-region	Total	No Non-operative diagnosis		C4, B4, E4 or a combination thereof		C3, B3, E3 or a combination thereof		C2, B2, E2 or a combination thereof		C1, B1, E1 or a combination thereof	
		No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	0	0	-	0	-	0	-	0	-	0	-
East of England	1	0	0	0	0	1	100	0	0	0	0
London	0	0	-	0	-	0	-	0	-	0	-
N East, Yorks & Humber	5	0	0	3	60	2	40	0	0	0	0
North West	7	0	0	3	43	4	57	0	0	0	0
South East	7	0	0	1	14	5	71	0	0	1	14
South West	4	0	0	1	25	3	75	0	0	0	0
West Midlands	1	0	0	0	0	1	100	0	0	0	0
England	25	0	0	8	32	16	64	0	0	1	4
Northern Ireland	2	2	100	0	0	0	0	0	0	0	0
Scotland	3	1	33	0	0	1	33	0	0	1	33
Wales	3	0	0	1	33	1	33	0	0	1	33
UK	33	3	9	9	27	18	55	0	0	3	9

Sub-region	Total malignant open biopsies	No non-operative procedures		C4, B4 or both		C3, B3 or both		C2, B2 or both		C1, B1 or both	
		No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	3	0	0	1	33	2	67	0	0	0	0
East of England	13	0	0	4	31	9	69	0	0	0	0
London	13	0	0	1	8	12	92	0	0	0	0
N East, Yorks & Humber	14	0	0	4	29	9	64	1	7	0	0
North West	10	0	0	2	20	8	80	0	0	0	0
South East	18	0	0	4	22	14	78	0	0	0	0
South West	17	0	0	10	59	6	35	0	0	1	6
West Midlands	6	0	0	3	50	3	50	0	0	0	0
England	94	0	0	29	31	63	67	1	1	1	1
Northern Ireland	4	1	25	2	50	1	25	0	0	0	0
Scotland	15	0	0	5	33	10	67	0	0	0	0
Wales	3	0	0	1	33	2	67	0	0	0	0
UK	116	1	1	37	32	76	66	1	1	1	1

Sub-region	Unknown cytonuclear grade		Unknown size		Unknown cytonuclear grade and/or size		Total with surgery
	No.	%	No.	%	No.	%	No.
East Midlands	1	1	8	4	8	4	179
East of England	1	1	6	3	7	4	175
London	1	0	23	9	23	9	243
N East, Yorks & Humber	2	1	16	6	16	6	284
North West	0	0	16	6	16	6	248
South East	1	0	19	5	19	5	352
South West	2	1	16	6	17	6	274
West Midlands	0	0	4	2	4	2	195
England	8	0	108	6	110	6	1950
Northern Ireland	0	0	3	4	3	4	76
Scotland	9	8	14	12	15	13	117
Wales	0	0	9	10	9	10	92
UK	17	1	134	6	137	6	2235

Sub-region	<15mm		15-≤40mm		>40 mm		Size not assessable		Size unknown		Total non-invasive with surgery	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	63	35	75	42	32	18	1	1	8	4	179	100
East of England	67	38	67	38	29	17	6	3	6	3	175	100
London	66	27	94	39	53	22	7	3	23	9	243	100
N East, Yorks & Humber	91	32	117	41	54	19	6	2	16	6	284	100
North West	80	32	105	42	42	17	5	2	16	6	248	100
South East	119	34	152	43	51	14	11	3	19	5	352	100
South West	103	38	107	39	41	15	7	3	16	6	274	100
West Midlands	59	30	79	41	50	26	3	2	4	2	195	100
England	648	33	796	41	352	18	46	2	108	6	1950	100
Northern Ireland	26	34	34	45	12	16	1	1	3	4	76	100
Scotland	36	31	51	44	16	14	0	0	14	12	117	100
Wales	22	24	39	42	21	23	1	1	9	10	92	100
UK	732	33	920	41	401	18	48	2	134	6	2235	100

Sub-region	High		Intermediate		Low		Not assessable		Unknown		Total non-invasive with surgery	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	100	56	65	36	11	6	2	1	1	1	179	100
East of England	106	61	52	30	9	5	7	4	1	1	175	100
London	132	54	74	30	28	12	8	3	1	0	243	100
N East, Yorks & Humber	185	65	71	25	20	7	6	2	2	1	284	100
North West	154	62	67	27	22	9	5	2	0	0	248	100
South East	204	58	101	29	35	10	11	3	1	0	352	100
South West	167	61	76	28	21	8	8	3	2	1	274	100
West Midlands	138	71	34	17	20	10	3	2	0	0	195	100
England	1186	61	540	28	166	9	50	3	8	0	1950	100
Northern Ireland	46	61	23	30	6	8	1	1	0	0	76	100
Scotland	73	62	30	26	5	4	0	0	9	8	117	100
Wales	57	62	28	30	6	7	1	1	0	0	92	100
UK	1362	61	621	28	183	8	52	2	17	1	2235	100

Sub-region	<10mm		10- <15mm		15- ≤20mm		>20- ≤35mm		>35- ≤50mm		>50mm		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	205	27	219	29	159	21	121	16	22	3	17	2	7	1	750	100
East of England	224	24	271	29	189	20	192	21	19	2	20	2	13	1	928	100
London	167	22	171	22	179	23	150	20	41	5	35	5	19	2	762	100
N East, Yorks & Humber	347	29	290	24	250	21	239	20	38	3	30	2	11	1	1205	100
North West	211	23	228	25	218	24	176	19	48	5	27	3	8	1	916	100
South East	348	25	346	25	321	23	284	20	52	4	33	2	23	2	1407	100
South West	275	26	294	28	222	21	181	17	35	3	27	3	17	2	1051	100
West Midlands	165	23	179	25	166	23	133	19	42	6	19	3	10	1	714	100
England	1942	25	1998	26	1704	22	1476	19	297	4	208	3	108	1	7733	100
Northern Ireland	80	22	108	30	63	17	72	20	22	6	13	4	6	2	364	100
Scotland	208	28	178	24	148	20	138	18	26	3	13	2	36	5	747	100
Wales	100	26	101	27	74	20	63	17	13	3	11	3	16	4	378	100
UK	2330	25	2385	26	1989	22	1749	19	358	4	245	3	166	2	9222	100

Sub-region	<10mm		10- <15mm		15- ≤20mm		>20- ≤35mm		>35- ≤50mm		>50mm		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	124	17	180	24	157	21	151	20	49	7	47	6	42	6	750	100
East of England	134	14	239	26	181	20	219	24	43	5	49	5	63	7	928	100
London	86	11	124	16	166	22	172	23	77	10	72	9	65	9	762	100
N East, Yorks & Humber	197	16	241	20	245	20	321	27	90	7	76	6	35	3	1205	100
North West	120	13	192	21	227	25	216	24	61	7	53	6	47	5	916	100
South East	200	14	267	19	339	24	336	24	113	8	86	6	66	5	1407	100
South West	150	14	236	22	224	21	242	23	73	7	62	6	64	6	1051	100
West Midlands	89	12	138	19	164	23	163	23	61	9	44	6	55	8	714	100
England	1100	14	1617	21	1703	22	1820	24	567	7	489	6	437	6	7733	100
Northern Ireland	45	12	98	27	79	22	85	23	33	9	21	6	3	1	364	100
Scotland	124	17	154	21	172	23	161	22	59	8	33	4	44	6	747	100
Wales	58	15	62	16	77	20	88	23	31	8	25	7	37	10	378	100
UK	1327	14	1931	21	2031	22	2154	23	690	7	568	6	521	6	9222	100

Sub-region	Grade 1		Grade 2		Grade 3		Not assessable		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	190	25	423	56	136	18	0	0	1	0	750	100
East of England	213	23	525	57	187	20	3	0	0	0	928	100
London	191	25	447	59	123	16	0	0	1	0	762	100
N East, Yorks & Humber	266	22	696	58	240	20	2	0	1	0	1205	100
North West	246	27	506	55	160	17	3	0	1	0	916	100
South East	348	25	788	56	260	18	9	1	2	0	1407	100
South West	272	26	585	56	184	18	9	1	1	0	1051	100
West Midlands	167	23	424	59	119	17	1	0	3	0	714	100
England	1893	24	4394	57	1409	18	27	0	10	0	7733	100
Northern Ireland	86	24	199	55	78	21	1	0	0	0	364	100
Scotland	174	23	384	51	132	18	0	0	57	8	747	100
Wales	96	25	187	49	95	25	0	0	0	0	378	100
UK	2249	24	5164	56	1714	19	28	0	67	1	9222	100

Sub-region	Unknown invasive size		Unknown nodal status		Unknown grade		Unknown NPI*		Total invasive
	No.	%	No.	%	No.	%	No.	%	
East Midlands	5	0.7	5	0.7	1	0.1	10	1.5	668
East of England	12	1.5	8	1.0	0	0.0	21	2.5	824
London	16	2.4	3	0.4	1	0.1	19	2.8	668
N East, Yorks & Humber	9	0.8	12	1.1	1	0.1	23	2.0	1140
North West	6	0.7	8	1.0	1	0.1	15	1.8	812
South East	18	1.4	17	1.3	2	0.2	37	2.9	1280
South West	11	1.2	14	1.5	0	0.0	29	3.0	956
West Midlands	9	1.5	2	0.3	1	0.2	12	2.0	614
England	86	1.2	69	1.0	7	0.1	166	2.4	6962
Northern Ireland	2	0.7	2	0.7	0	0.0	5	1.7	288
Scotland	35	4.9	63	8.8	51	7.1	77	10.8	715
Wales	5	1.6	8	2.5	0	0.0	12	3.8	319
UK	128	1.5	142	1.7	58	0.7	260	3.1	8284

* NPI is unknown if size, grade or nodal status are unknown or grade if not assessable

Sub-region	EPG		GPG		MPG1		MPG2		PPG		Total with known NPI	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	156	24	267	41	158	24	53	8	24	4	658	100
East of England	159	20	327	41	183	23	95	12	39	5	803	100
London	139	21	252	39	158	24	67	10	33	5	649	100
N East, Yorks & Humber	200	18	451	40	300	27	120	11	46	4	1117	100
North West	190	24	304	38	189	24	87	11	27	3	797	100
South East	249	20	488	39	322	26	121	10	63	5	1243	100
South West	212	23	371	40	217	23	83	9	44	5	927	100
West Midlands	122	20	249	41	146	24	65	11	20	3	602	100
England	1427	21	2709	40	1673	25	691	10	296	4	6796	100
Northern Ireland	48	17	102	36	73	26	35	12	25	9	283	100
Scotland	141	22	233	37	155	24	80	13	29	5	638	100
Wales	68	22	101	33	84	27	34	11	20	7	307	100
UK	1684	21	3145	39	1985	25	840	10	370	5	8024	100

Sub-region	Positive		Negative		Not done or Unknown		Total
	No.	%	No.	%	No.	%	
East Midlands	715	90	73	9	3	0	791
East of England	892	92	79	8	1	0	972
London	744	93	50	6	2	0	796
N East, Yorks & Humber	1147	91	105	8	3	0	1255
North West	883	92	75	8	2	0	960
South East	1337	91	128	9	0	0	1465
South West	986	91	90	8	2	0	1078
West Midlands	686	92	56	7	6	1	748
England	7390	92	656	8	19	0	8065
Northern Ireland	336	90	37	10	0	0	373
Scotland	722	89	69	9	16	2	807
Wales	347	89	43	11	1	0	391
UK	8795	91	805	8	36	0.4	9636

Sub-region	Positive		Negative		Not done or Unknown		Total
	No.	%	No.	%	No.	%	
East Midlands	399	50	119	15	273	35	791
East of England	629	65	126	13	217	22	972
London	599	75	113	14	84	11	796
N East, Yorks & Humber	554	44	183	15	518	41	1255
North West	744	78	193	20	23	2	960
South East	1208	82	250	17	7	0	1465
South West	406	38	114	11	558	52	1078
West Midlands	577	77	136	18	35	5	748
England	5116	63	1234	15	1715	21	8065
Northern Ireland	309	83	63	17	1	0	373
Scotland	647	80	142	18	18	2	807
Wales	192	49	88	23	111	28	391
UK	6264	65	1527	16	1845	19	9636

Sub-region	Positive		Negative		Not done or Unknown		Total
	No.	%	No.	%	No.	%	
East Midlands	4	5	53	73	16	22	73
East of England	3	4	67	85	9	11	79
London	4	8	45	90	1	2	50
N East, Yorks & Humber	4	4	83	79	18	17	105
North West	4	5	71	95	0	0	75
South East	10	8	118	92	0	0	128
South West	3	3	70	78	17	19	90
West Midlands	4	7	51	91	1	2	56
England	36	5	558	85	62	9	656
Northern Ireland	4	11	33	89	0	0	37
Scotland	3	4	66	96	0	0	69
Wales	0	0	41	95	2	5	43
UK	43	5	698	87	64	8	805

Sub-region	Positive		Negative		Borderline		Not done or Unknown		Total
	No.	%	No.	%	No.	%	No.	%	
East Midlands	86	11	696	88	1	0	8	1	791
East of England	97	10	855	88	2	0	18	2	972
London	88	11	704	88	0	0	4	1	796
N East, Yorks & Humber	143	11	1099	88	4	0	9	1	1255
North West	109	11	841	88	2	0	8	1	960
South East	148	10	1303	89	0	0	14	1	1465
South West	94	9	974	90	0	0	10	1	1078
West Midlands	76	10	656	88	3	0	13	2	748
England	841	10	7128	88	12	0	84	1	8065
Northern Ireland	41	11	322	86	10	3	0	0	373
Scotland	79	10	697	86	5	1	26	3	807
Wales	52	13	333	85	4	1	2	1	391
UK	1013	11	8480	88	31	0	112	1	9636

Sub-region	Total HER2 unknown/not done	<10mm invasive size		Grade 1		Negative nodal status	
		No	%	No	%	No	%
East Midlands	8	1	13	2	25	4	50
East of England	18	5	28	6	33	12	67
London	4	1	25	1	25	3	75
N East, Yorks & Humber	9	6	67	0	0	5	56
North West	8	5	63	2	25	5	63
South East	14	8	57	3	21	12	86
South West	10	6	60	4	40	7	70
West Midlands	13	6	46	5	38	8	62
England	84	38	45	23	27	56	67
Northern Ireland	0	0	-	0	-	0	-
Scotland	26	11	42	6	23	17	65
Wales	2	1	50	0	0	1	50
UK	112	50	45	29	26	74	66

Sub-region	Positive		Negative		Not done or Unknown		Total
	No.	%	No.	%	No.	%	
East Midlands	65	33	17	9	116	59	198
East of England	32	16	12	6	155	78	199
London	103	38	17	6	150	56	270
N East, Yorks & Humber	113	36	21	7	179	57	313
North West	129	50	26	10	105	40	260
South East	212	52	31	8	163	40	406
South West	160	53	45	15	96	32	301
West Midlands	57	27	20	9	136	64	213
England	871	40	189	9	1100	51	2160
Northern Ireland	25	30	9	11	48	59	82
Scotland	3	2	2	1	129	96	134
Wales	7	7	2	2	86	91	95
UK	906	37	202	8	1363	55	2471

Sub-region	Conservation surgery		Mastectomy		No surgery		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	144	76	35	19	10	5	0	0	189	100
East of England	137	73	38	20	13	7	0	0	188	100
London	185	72	58	22	15	6	0	0	258	100
N East, Yorks & Humber	235	79	49	16	15	5	0	0	299	100
North West	213	84	35	14	7	3	0	0	255	100
South East	288	75	64	17	33	9	0	0	385	100
South West	227	78	47	16	16	6	0	0	290	100
West Midlands	152	74	43	21	10	5	0	0	205	100
England	1581	76	369	18	119	6	0	0	2069	100
Northern Ireland	67	88	9	12	0	0	0	0	76	100
Scotland	100	83	14	12	3	3	3	3	120	100
Wales	59	63	32	34	1	1	1	1	93	100
UK	1807	77	424	18	123	5	4	0	2358	100

Sub-region	Conservation surgery		Mastectomy		No surgery		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	5	56	4	44	0	0	0	0	9	100
East of England	8	73	3	27	0	0	0	0	11	100
London	9	75	3	25	0	0	0	0	12	100
N East, Yorks & Humber	10	71	4	29	0	0	0	0	14	100
North West	5	100	0	0	0	0	0	0	5	100
South East	12	57	9	43	0	0	0	0	21	100
South West	8	73	3	27	0	0	0	0	11	100
West Midlands	6	75	2	25	0	0	0	0	8	100
England	63	69	28	31	0	0	0	0	91	100
Northern Ireland	4	67	2	33	0	0	0	0	6	100
Scotland	12	86	2	14	0	0	0	0	14	100
Wales	2	100	0	0	0	0	0	0	2	100
UK	81	72	32	28	0	0	0	0	113	100

Sub-region	Conservation surgery		Mastectomy		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%
East Midlands	13	41	19	59	0	0	32	100
East of England	11	38	18	62	0	0	29	100
London	19	36	34	64	0	0	53	100
N East, Yorks & Humber	20	37	34	63	0	0	54	100
North West	17	40	25	60	0	0	42	100
South East	19	37	32	63	0	0	51	100
South West	14	34	27	66	0	0	41	100
West Midlands	22	44	28	56	0	0	50	100
England	135	38	217	62	0	0	352	100
Northern Ireland	7	58	5	42	0	0	12	100
Scotland	8	50	8	50	0	0	16	100
Wales	2	10	19	90	0	0	21	100
UK	152	38	249	62	0	0	401	100

Sub-region	Conservation surgery		Mastectomy		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%
East Midlands	11	46	13	54	0	0	24	100
East of England	9	41	13	59	0	0	22	100
London	12	32	26	68	0	0	38	100
N East, Yorks & Humber	16	35	30	65	0	0	46	100
North West	11	34	21	66	0	0	32	100
South East	14	42	19	58	0	0	33	100
South West	12	40	18	60	0	0	30	100
West Midlands	18	43	24	57	0	0	42	100
England	103	39	164	61	0	0	267	100
Northern Ireland	7	58	5	42	0	0	12	100
Scotland	7	44	7	44	2	13	16	88
Wales	0	0	15	100	0	0	15	100
UK	117	38	191	62	2	1	310	100

Sub-region	Conservation surgery		Mastectomy		No Surgery		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	623	79	127	16	41	5	0	0	791	100
East of England	803	83	125	13	44	5	0	0	972	100
London	609	77	153	19	34	4	0	0	796	100
N East, Yorks & Humber	1036	83	169	13	50	4	0	0	1255	100
North West	769	80	147	15	44	5	0	0	960	100
South East	1202	82	205	14	58	4	0	0	1465	100
South West	898	83	153	14	27	3	0	0	1078	100
West Midlands	581	78	133	18	34	5	0	0	748	100
England	6521	81	1212	15	332	4	0	0	8065	100
Northern Ireland	301	81	63	17	9	2	0	0	373	100
Scotland	655	81	78	10	60	7	14	2	807	100
Wales	300	77	77	20	13	3	1	0	391	100
UK	7777	81	1430	15	414	4	15	0	9636	100

Sub-region	<15mm		15-≤20mm		>20-≤35mm		>35-≤50mm		>50mm	
	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	47	11	14	9	34	28	15	68	15	88
East of England	41	8	19	10	32	17	13	68	18	90
London	51	15	19	11	37	25	13	32	29	83
N East, Yorks & Humber	56	9	19	8	46	19	22	58	23	77
North West	45	10	24	11	27	15	25	52	24	89
South East	65	9	38	12	52	18	23	44	25	76
South West	48	8	30	14	31	17	20	57	21	78
West Midlands	40	12	25	15	30	23	17	40	17	89
England	393	10	188	11	289	20	148	50	172	83
Northern Ireland	13	7	3	5	18	25	16	73	10	77
Scotland	15	4	10	7	21	15	13	50	12	92
Wales	24	12	15	20	20	32	6	46	10	91
UK	445	9	216	11	348	20	183	51	204	83

Numerator – number of invasive tumours treated by mastectomy by invasive size

Denominator – number of surgically treated invasive breast cancers by invasive size (see Table 24)

Sub-region	<15mm		15-≤20mm		>20-≤35mm		>35-≤50mm		>50mm	
	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	15	5	6	4	31	21	26	53	36	77
East of England	13	3	11	6	23	11	20	47	40	82
London	13	6	13	8	28	16	23	30	56	78
N East, Yorks & Humber	19	4	15	6	42	13	36	40	50	66
North West	14	4	14	6	28	13	29	48	46	87
South East	24	5	22	6	44	13	48	42	58	67
South West	13	3	22	10	32	13	25	34	45	73
West Midlands	19	8	16	10	21	13	15	25	38	86
England	130	5	119	7	249	14	222	39	369	75
Northern Ireland	7	5	4	5	16	19	19	58	16	76
Scotland	7	3	5	3	13	8	23	39	21	64
Wales	7	6	9	12	21	24	10	32	20	80
UK	151	5	137	7	299	14	274	40	426	75

Numerator – number of tumours treated by mastectomy by whole size

Denominator – number of surgically treated invasive breast cancers by whole size (see Table 25)

Sub-region	Whole Size <15mm		Whole size 15-≤20mm		Whole size >20-≤35mm		Whole size >35-≤50mm		Whole size >50mm	
	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	15	5	1	1	7	5	6	12	15	32
East of England	13	3	4	2	3	1	2	5	14	29
London	13	6	6	4	4	2	10	13	15	21
N East, Yorks & Humber	19	4	5	2	6	2	11	12	13	17
North West	14	4	2	1	6	3	8	13	10	19
South East	24	5	5	1	7	2	11	10	17	20
South West	13	3	5	2	6	2	10	14	12	19
West Midlands	19	8	4	2	1	1	6	10	8	18
England	130	5	32	2	40	2	64	11	104	21
Northern Ireland	5	3	1	1	0	0	3	9	4	19
Scotland	7	3	0	0	0	0	5	8	3	9
Wales	7	6	4	5	5	6	2	6	2	8
UK	149	5	37	2	45	2	74	11	113	20

Numerator – number of tumours treated by mastectomy where invasive size is less than 15mm, by whole size

Denominator – number of surgically treated invasive breast cancers by whole size (see Table 25)

Sub-region	Immediate reconstruction		No immediate reconstruction		Unknown		Total mastectomies	
	No.	%	No.	%	No.	%	No.	%
East Midlands	31	19	135	81	0	0	166	100
East of England	67	40	99	60	0	0	166	100
London	93	43	121	57	0	0	214	100
N East, Yorks & Humber	69	31	153	69	0	0	222	100
North West	48	26	134	74	0	0	182	100
South East	80	29	198	71	0	0	278	100
South West	70	34	133	66	0	0	203	100
West Midlands	45	25	133	75	0	0	178	100
England	503	31	1106	69	0	0	1609	100
Northern Ireland	9	12	65	88	0	0	74	100
Scotland	17	18	63	67	14	15	94	100
Wales	17	16	92	84	0	0	109	100
UK	546	29	1326	70	14	1	1886	100

Table 44: Any neo-adjuvant therapy							
Sub-region	Had treatment		Did not have treatment		Unknown		Total
	No.	%	No.	%	No.	%	
East Midlands	115	12	874	88	0	0	989
East of England	131	11	1040	89	0	0	1171
London	108	10	959	90	0	0	1067
N East, Yorks & Humber	92	6	1476	94	0	0	1568
North West	134	11	1086	89	0	0	1220
South East	160	9	1711	91	0	0	1871
South West	120	9	1260	91	0	0	1380
West Midlands	134	14	827	86	0	0	961
England	994	10	9233	90	0	0	10227
Northern Ireland	82	18	373	82	0	0	455
Scotland	63	7	162	17	717	76	942
Wales	72	15	415	85	0	0	487
UK	1211	10	10183	84	717	6	12111

Table 45: Neo-adjuvant endocrine therapy							
Sub-region	Had treatment		Did not have treatment		Unknown		Total
	No.	%	No.	%	No.	%	
East Midlands	63	6	926	94	0	0	989
East of England	72	6	1099	94	0	0	1171
London	55	5	1012	95	0	0	1067
N East, Yorks & Humber	54	3	1514	97	0	0	1568
North West	73	6	1147	94	0	0	1220
South East	71	4	1800	96	0	0	1871
South West	57	4	1323	96	0	0	1380
West Midlands	86	9	875	91	0	0	961
England	531	5	9696	95	0	0	10227
Northern Ireland	75	16	380	84	0	0	455
Scotland	8	1	217	23	717	76	942
Wales	49	10	438	90	0	0	487
UK	663	5	10731	89	717	6	12111

Table 46: Neo-adjuvant chemotherapy for invasive cancers							
Sub-region	Had treatment		Did not have treatment		Unknown		Total
	No.	%	No.	%	No.	%	
East Midlands	58	7	733	93	0	0	791
East of England	64	7	908	93	0	0	972
London	52	7	744	93	0	0	796
N East, Yorks & Humber	40	3	1215	97	0	0	1255
North West	70	7	890	93	0	0	960
South East	89	6	1376	94	0	0	1465
South West	66	6	1012	94	0	0	1078
West Midlands	49	7	699	93	0	0	748
England	488	6	7577	94	0	0	8065
Northern Ireland	10	3	363	97	0	0	373
Scotland	30	4	714	88	63	8	807
Wales	24	6	367	94	0	0	391
UK	552	6	9021	94	63	1	9636

Sub-region	Had treatment		Did not have treatment		Unknown		Total
	No.	%	No.	%	No.	%	
East Midlands	2	0	987	100	0	0	989
East of England	7	1	1164	99	0	0	1171
London	9	1	1058	99	0	0	1067
N East, Yorks & Humber	1	0	1567	100	0	0	1568
North West	11	1	1209	99	0	0	1220
South East	9	0	1862	100	0	0	1871
South West	6	0	1374	100	0	0	1380
West Midlands	12	1	949	99	0	0	961
England	57	1	10170	99	0	0	10227
Northern Ireland	2	0	453	100	0	0	455
Scotland	25	3	830	88	87	9	942
Wales	6	1	481	99	0	0	487
UK	90	1	11934	99	87	1	12111

Sub-region	Total surgeons	<10 cases		10-29 cases		30-49 cases		50-79 cases		80-99 cases		100+ cases		Median
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
East Midlands	54	12	22	33	61	9	17	0	0	0	0	0	0	18
East of England	61	19	31	32	52	7	11	3	5	0	0	0	0	20
London	95	51	54	38	40	6	6	0	0	0	0	0	0	9
N East, Yorks & Humber	78	18	23	44	56	14	18	2	3	0	0	0	0	20
North West	80	30	38	43	54	7	9	0	0	0	0	0	0	14
South East	78	12	15	42	54	18	23	6	8	0	0	0	0	20
South West	77	23	30	35	45	18	23	1	1	0	0	0	0	17
West Midlands	58	15	26	37	64	5	9	1	2	0	0	0	0	15
England	581	180	31	304	52	84	14	13	2	0	0	0	0	16
Northern Ireland	22	4	18	14	64	3	14	1	5	0	0	0	0	23
Scotland	55	12	22	39	71	3	5	1	2	0	0	0	0	16
Wales	18	3	17	8	44	5	28	2	11	0	0	0	0	28
UK	676	199	29	365	54	95	14	17	3	0	0	0	0	15

The surgeons in each sub-region are credited with their total UK screening caseload.

Sub-region	Total (referred)	<10 cases		10-29 cases		30-49 cases		50-79 cases		80-99 cases		100+ cases	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	996	50	5	633	64	313	31	0	0	0	0	0	0
East of England	1191	78	7	664	56	266	22	183	15	0	0	0	0
London	1086	179	16	690	64	217	20	0	0	0	0	0	0
N East, Yorks & Humber	1581	91	6	885	56	495	31	110	7	0	0	0	0
North West	1240	150	12	836	67	254	20	0	0	0	0	0	0
South East	1872	39	2	791	42	688	37	354	19	0	0	0	0
South West	1435	56	4	660	46	660	46	59	4	0	0	0	0
West Midlands	972	60	6	683	70	178	18	51	5	0	0	0	0
England	10373	703	7	5842	56	3071	30	757	7	0	0	0	0
Northern Ireland	480	11	2	303	63	115	24	51	11	0	0	0	0
Scotland	948	46	5	716	76	119	13	67	7	0	0	0	0
Wales	487	11	2	177	36	180	37	119	24	0	0	0	0
UK	12288	771	6	7038	57	3485	28	994	8	0	0	0	0

Table 50: Explanations for surgeons with screening caseload less than 10 cases (2020/21)

Sub-region	All surgeons screening caseload <10	Surgeon from another region		Symptomatic caseload >30 pa*		Joined/Left		Plastic surgeon		Private practice		No information/data errors		Other (including impact of COVID-19)	
		No	%	No	%	No	%	No	%	No	%	No	%	No	%
East Midlands	12	2	17	2	17	3	25	1	8	0	0	0	0	4	33
East of England	19	0	0	3	16	0	0	4	21	3	16	2	11	7	37
London	51	14	27	5	10	2	4	19	37	4	8	4	8	3	6
N East, Yorks & Humber	18	6	33	5	28	2	11	1	6	0	0	2	11	2	11
North West	30	14	47	2	7	4	13	1	3	3	10	2	7	4	13
South East	12	3	25	2	17	2	17	0	0	2	17	0	0	3	25
South West	23	3	13	0	0	6	26	2	9	2	9	2	9	8	35
West Midlands	15	2	13	1	7	5	33	1	7	0	0	1	7	5	33
England	180	44	24	20	11	24	13	29	16	14	8	13	7	36	20
Northern Ireland	4	0	0	0	0	0	0	1	25	0	0	1	25	2	50
Scotland	12	3	25	0	0	0	0	0	0	0	0	9	75	0	0
Wales	3	0	0	3	100	0	0	0	0	0	0	0	0	0	0
UK	199	47	24	23	12	0	0	30	15	14	7	23	12	38	19

*pa= per annual

Table 51: Annual screening surgical caseload per surgeon (2018/19-2020/21)

Sub-region	Total surgeons	<30 cases		30-89 cases		90-149 cases		150-239 cases		240-299 cases		300+ cases		3 years median
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
East Midlands	91	45	49	26	29	15	16	5	5	0	0	0	0	21
East of England	111	59	53	28	25	17	15	6	5	1	1	0	0	20
London	167	108	65	38	23	18	11	3	2	0	0	0	0	9
N East, Yorks & Humber	119	47	39	36	30	28	24	7	6	1	1	0	0	24
North West	115	47	41	49	43	15	13	4	3	0	0	0	0	21
South East	151	81	54	33	22	24	16	11	7	0	0	2	1	18
South West	117	52	44	35	30	25	21	5	4	0	0	0	0	23
West Midlands	91	38	42	37	41	12	13	4	4	0	0	0	0	20
England	962	477	50	282	29	154	16	45	5	2	0	2	0	19
Northern Ireland	23	4	17	14	61	3	13	2	9	0	0	0	0	24
Wales	30	12	40	3	10	6	20	8	27	0	0	1	3	37
UK	1015	493	49	299	29	163	16	55	5	2	0	3	0	19

*No data were submitted from Scotland for 18/19 audit

Table 52: Proportion of women referred to consultant surgeons according to annual caseload of surgeon (2018/19-2020/21)

Sub-region	Total (referred)	<10 cases		10-29 cases		30-49 cases		50-79 cases		80-99 cases		100+ cases	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	4554	133	2.9	1803	40	1779	39	839	18	0	0	0	0
East of England	5152	182	3.5	1622	31	1905	37	1191	23	252	5	0	0
London	5047	452	9.0	1905	38	2156	43	534	11	0	0	0	0
N East, Yorks & Humber	7081	219	3.1	1914	27	3392	48	1304	18	252	4	0	0
North West	5923	298	5.0	3112	53	1785	30	728	12	0	0	0	0
South East	7869	257	3.3	1953	25	2786	35	2241	28	0	0	632	8
South West	6268	270	4.3	1825	29	3267	52	906	14	0	0	0	0
West Midlands	4397	171	3.9	2149	49	1384	31	693	16	0	0	0	0
England	46291	1982	4.3	16283	35	18454	40	8436	18	504	1	632	1
Northern Ireland	1528	38	2.5	848	55	325	21	317	21	0	0	0	0
Wales	2644	43	1.6	165	6	709	27	1424	54	0	0	303	11
UK	50438	2038	4.0	17296	34	19488	39	10177	20	504	1	935	2

*No data were submitted from Scotland for 18/19 audit

Sub-region	Invasive			Non/micro-invasive		
	Total	No	%	Total	No	%
East Midlands	750	116	15	188	38	20
East of England	928	134	14	186	32	17
London	762	126	17	255	56	22
N East, Yorks & Humber	1205	177	15	298	55	18
North West	916	137	15	253	54	21
South East	1407	265	19	373	68	18
South West	1051	172	16	285	65	23
West Midlands	714	118	17	203	35	17
England	7733	1245	16	2041	403	20
Northern Ireland	364	82	23	82	15	18
Wales	378	72	19	94	19	20
UK (excl Scotland)	8475	1399	17	2217	437	20

Insufficient data for Scotland

Sub-region	Invasive			Non/micro-invasive		
	Total	No	%	Total	No	%
East Midlands	0	0	-	3	2	67
East of England	1	1	100	12	7	58
London	0	0	-	13	7	54
N East, Yorks & Humber	3	3	100	13	4	31
North West	7	5	71	10	1	10
South East	7	5	71	17	7	41
South West	4	3	75	17	3	18
West Midlands	1	1	100	6	3	50
England	23	18	78	91	34	37
Northern Ireland	2	2	100	4	0	0
Wales	3	3	100	3	0	0
UK excl Scotland	28	23	82	98	34	35

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Sub-region	1		2		3		4+		Unknown		Total cancers		Repeat 2+ ops	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%
East Midlands	527	83	98	16	7	1	0	0	0	0	632	100	105	17
East of England	699	86	105	13	6	1	0	0	0	0	810	100	111	14
London	520	83	100	16	5	1	1	0	0	0	626	100	106	17
N East, Yorks & Humber	908	85	141	13	13	1	0	0	0	0	1062	100	154	15
North West	664	85	110	14	7	1	1	0	0	0	782	100	118	15
South East	985	80	224	18	14	1	2	0	0	0	1225	100	240	20
South West	766	83	132	14	19	2	4	0	0	0	921	100	155	17
West Midlands	485	82	97	16	11	2	0	0	0	0	593	100	108	18
England	5554	84	1007	15	82	1	8	0	0	0	6651	100	1097	16
Northern Ireland	239	77	65	21	5	2	0	0	0	0	309	100	70	23
Wales	239	78	60	20	6	2	0	0	0	0	305	100	66	22
UK	6032	83	1132	16	93	1	8	0	0	0	7265	100	1233	17

Insufficient data for Scotland

Table 56: Number of therapeutic operations (non/micro-invasive cancers) with initial BCS and a non-operative diagnosis

Sub-region	1		2		3		4+		Unknown		Total cancers		Repeat 2+ ops	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%
East Midlands	112	76	31	21	5	3	0	0	0	0	148	100	36	24
East of England	114	83	20	14	3	2	1	1	0	0	138	100	24	17
London	143	75	43	23	4	2	1	1	0	0	191	100	48	25
N East, Yorks & Humber	198	81	32	13	13	5	1	0	0	0	244	100	46	19
North West	164	76	40	18	12	6	1	0	0	0	217	100	53	24
South East	239	81	43	15	12	4	2	1	0	0	296	100	57	19
South West	169	74	51	22	5	2	2	1	0	0	227	100	58	26
West Midlands	129	81	26	16	4	3	1	1	0	0	160	100	31	19
England	1268	78	286	18	58	4	9	1	0	0	1621	100	353	22
Northern Ireland	54	78	14	20	1	1	0	0	0	0	69	100	15	22
Wales	43	69	16	26	3	5	0	0	0	0	62	100	19	31
UK	1365	78	316	18	62	4	9	1	0	0	1752	100	387	22

Insufficient data for Scotland

Table 57: Number of therapeutic operations for invasive cancers with B5b (invasive) core biopsy result

Sub-region	1		2		3+		Unknown		Total		Repeat (2+) rate	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	609	87	87	12	6	1	0	0	702	100	93	13
East of England	773	88	102	12	4	0	0	0	879	100	106	12
London	619	85	101	14	6	1	0	0	726	100	107	15
N East, Yorks & Humber	1000	88	128	11	11	1	0	0	1139	100	139	12
North West	757	87	103	12	7	1	0	0	867	100	110	13
South East	1108	84	197	15	14	1	0	0	1319	100	211	16
South West	862	87	114	11	20	2	0	0	996	100	134	13
West Midlands	575	85	88	13	11	2	0	0	674	100	99	15
England	6303	86	920	13	79	1	0	0	7302	100	999	14
Northern Ireland	275	80	66	19	3	1	0	0	344	100	69	20
Wales	285	84	50	15	5	1	1	0	341	100	55	16
UK	6863	86	1036	13	87	1	1	0	7987	100	1123	14

Insufficient data for Scotland

Table 58: Number of therapeutic operations for invasive cancers with B5a (non-invasive) core biopsy result

Sub-region	1		2		3+		Unknown		Total		Repeat (2+) rate	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	17	44	21	54	1	3	0	0	39	100	22	56
East of England	16	40	22	55	2	5	0	0	40	100	24	60
London	14	42	19	58	0	0	0	0	33	100	19	58
N East, Yorks & Humber	24	41	32	54	3	5	0	0	59	100	35	59
North West	19	46	21	51	1	2	0	0	41	100	22	54
South East	28	38	43	59	2	3	0	0	73	100	45	62
South West	11	27	27	66	3	7	0	0	41	100	30	73
West Midlands	17	49	18	51	0	0	0	0	35	100	18	51
England	146	40	203	56	12	3	0	0	361	100	215	60
Northern Ireland	5	31	9	56	2	13	0	0	16	100	11	69
Scotland	12	31	16	41	11	28	0	0	39	100	27	69
Wales	14	50	13	46	1	4	0	0	28	100	14	50
UK	165	41	225	56	15	4	0	0	405	100	240	59

Insufficient data for Scotland

Table 59: Number of therapeutic operations for non-invasive or micro-invasive cancers with B5a (non-invasive) core biopsy result

Sub-region	1		2		3+		Unknown		Total		Repeat (2+) rate	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	140	80	29	17	5	3	0	0	174	100	34	20
East of England	136	86	19	12	4	3	0	0	159	100	23	14
London	179	79	42	19	5	2	0	0	226	100	47	21
N East, Yorks & Humber	225	83	33	12	14	5	0	0	272	100	47	17
North West	185	78	38	16	13	6	0	0	236	100	51	22
South East	276	83	46	14	12	4	0	0	334	100	58	17
South West	195	77	52	20	7	3	0	0	254	100	59	23
West Midlands	157	84	25	13	5	3	0	0	187	100	30	16
England	1493	81	284	15	65	4	0	0	1842	100	349	19
Northern Ireland	57	84	11	16	0	0	0	0	68	100	11	16
Wales	66	80	14	17	3	4	0	0	83	100	17	20
UK	1616	81	309	16	68	3	0	0	1993	100	377	19

Insufficient data for Scotland

Table 60: Repeat BCS (all cancers) with initial BCS and a non-operative diagnosis

Sub-region	All cancers with initial BCS (with non-op diagnosis)	Repeat BCS	
		No	%
East Midlands	780	104	13
East of England	948	84	9
London	817	99	12
N East, Yorks & Humber	1306	123	9
North West	999	112	11
South East	1521	203	13
South West	1148	148	13
West Midlands	753	93	12
England	8272	966	12
Northern Ireland	378	51	13
Wales	367	58	16
UK	9017	1075	12

Insufficient data for Scotland

Table 61: Converted to mastectomy (all cancers) with initial BCS and a non-operative diagnosis

Sub-region	All cancers with initial BCS (with non-op diagnosis)	Converted to Mx	
		No	%
East Midlands	780	12	2
East of England	948	14	1
London	817	27	3
N East, Yorks & Humber	1306	41	3
North West	999	28	3
South East	1521	44	3
South West	1148	39	3
West Midlands	753	20	3
England	8272	225	3
Northern Ireland	378	12	3
Scotland	718	2	0
Wales	367	12	3
UK	9735	251	3

Sub-region	Total cases with surgery to the breast	Complete margin data	% complete margin data	Not complete margin data
East Midlands	915	826	90	89
East of England	1083	1024	95	59
London	970	884	91	86
N East, Yorks & Humber	1476	1445	98	31
North West	1128	1068	95	60
South East	1738	1627	94	111
South West	1288	1234	96	54
West Midlands	894	871	97	23
England	9492	8979	95	513
Northern Ireland	440	432	98	8
Wales	454	401	88	53
UK excl. Scotland	10386	9812	94	574

No data provided for Scotland

Sub-region	Total cases with surgery	Margin clear		Margin not clear		Margin unknown	
		No.	%	No.	%	No.	%
East Midlands	752	747	99	2	0	3	0
East of England	923	911	99	12	1	0	0
London	762	754	99	8	1	0	0
N East, Yorks & Humber	1256	1231	98	22	2	3	0
North West	952	923	97	27	3	2	0
South East	1463	1442	99	19	1	2	0
South West	1093	1065	97	26	2	2	0
West Midlands	723	711	98	12	2	0	0
England	7924	7784	98	128	2	12	0
Northern Ireland	367	360	98	6	2	1	0
Wales	348	336	97	12	3	0	0
UK excl. Scotland	8639	8480	98	146	2	13	0

No data provided for Scotland

Sub-region	Total cases with surgery	Margin clear		Margin not clear		Margin unknown	
		No.	%	No.	%	No.	%
East Midlands	163	160	98	3	2	0	0
East of England	160	152	95	3	2	5	3
London	208	203	98	5	2	0	0
N East, Yorks & Humber	220	200	91	17	8	3	1
North West	176	164	93	11	6	1	1
South East	275	261	95	13	5	1	0
South West	195	187	96	7	4	1	1
West Midlands	171	163	95	8	5	0	0
England	1568	1490	95	67	4	11	1
Northern Ireland	73	73	100	0	0	0	0
Wales	106	104	98	2	2	0	0
UK excl. Scotland	1747	1667	95	69	4	11	1

No data provided for Scotland

Sub-region	Had axillary ultrasound		Did not have axillary ultrasound		Unknown		Total
	No.	%	No.	%	No.	%	
East Midlands	780	99	11	1	0	0	791
East of England	960	99	12	1	0	0	972
London	796	100	0	0	0	0	796
N East, Yorks & Humber	1227	98	28	2	0	0	1255
North West	956	100	4	0	0	0	960
South East	1461	100	4	0	0	0	1465
South West	1063	99	15	1	0	0	1078
West Midlands	745	100	3	0	0	0	748
England	7988	99	77	1	0	0	8065
Northern Ireland	362	97	11	3	0	0	373
Wales	363	93	24	6	4	1	391
UK excl. Scotland	8713	99	112	1	4	0	8829

No data provided for Scotland

Sub-region	Normal		Abnormal		Total
	No.	%	No.	%	
East Midlands	672	86	108	14	780
East of England	830	86	130	14	960
London	692	87	104	13	796
N East, Yorks & Humber	1039	85	188	15	1227
North West	788	82	168	18	956
South East	1258	86	203	14	1461
South West	922	87	141	13	1063
West Midlands	605	81	140	19	745
England	6806	85	1182	15	7988
Northern Ireland	270	75	92	25	362
Wales	285	79	78	21	363
UK excl. Scotland	7361	84	1352	16	8713

No data provided for Scotland

Sub-region	Had axillary biopsy		Did not have axillary biopsy		Unknown		Total
	No.	%	No.	%	No.	%	
East Midlands	103	95	5	5	0	0	108
East of England	120	92	10	8	0	0	130
London	101	97	3	3	0	0	104
N East, Yorks & Humber	175	93	13	7	0	0	188
North West	125	74	42	25	1	1	168
South East	173	85	30	15	0	0	203
South West	115	82	26	18	0	0	141
West Midlands	134	96	6	4	0	0	140
England	1046	88	135	11	1	0	1182
Northern Ireland	66	72	26	28	0	0	92
Wales	78	100	0	0	0	0	78
UK excl. Scotland	1190	88	161	12	1	0	1352

No data provided for Scotland

Sub-region	C1/B1		C2/B2		C3/B3		C4/B4		C5/B5		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	
East Midlands	6	6	48	47	0	0	0	0	49	48	103
East of England	9	8	43	36	4	3	2	2	62	52	120
London	2	2	32	32	2	2	0	0	65	64	101
N East, Yorks & Humber	13	7	99	57	0	0	5	3	58	33	175
North West	2	2	70	56	1	1	2	2	50	40	125
South East	8	5	81	47	0	0	1	1	83	48	173
South West	17	15	43	37	1	1	3	3	51	44	115
West Midlands	5	4	72	54	1	1	0	0	56	42	134
England	62	6	488	47	9	1	13	1	474	45	1046
Northern Ireland	4	6	34	52	2	3	0	0	26	39	66
Wales	2	3	42	54	0	0	0	0	34	44	78
UK excl. Scotland	68	6	564	47	11	1	13	1	534	45	1190

No data provided for Scotland

Sub-region	C1/B1		C2/B2		C3/B3		C4/B4		C5/B5		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	
East Midlands	0	-	0	-	0	-	0	-	0	-	0
East of England	1	50	0	0	1	50	0	0	0	0	2
London	0	0	1	100	0	0	0	0	0	0	1
N East, Yorks & Humber	1	50	0	0	0	0	0	0	1	50	2
North West	0	0	3	100	0	0	0	0	0	0	3
South East	0	0	7	58	0	0	0	0	5	42	12
South West	1	33	1	33	0	0	0	0	1	33	3
West Midlands	0	0	1	100	0	0	0	0	0	0	1
England	3	13	13	54	1	4	0	0	7	29	24
Northern Ireland	1	100	0	0	0	0	0	0	0	0	1
Wales	0	0	0	0	0	0	0	0	1	100	1
UK excl. Scotland	4	15	13	50	1	4	0	0	8	31	26

No data provided for Scotland

Sub-region	C1/B1		C2/B2		C3/B3		C4/B4		C5/B5	
	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	1	20	11	29	0	-	0	-	21	95
East of England	1	11	8	23	2	67	2	100	29	91
London	0	0	6	21	0	0	0	-	36	92
N East, Yorks & Humber	2	20	14	16	0	-	3	75	43	96
North West	0	0	8	13	1	100	1	100	25	100
South East	1	17	13	18	0	-	1	100	48	91
South West	3	18	5	14	1	100	1	100	22	76
West Midlands	1	33	12	19	0	0	0	-	27	93
England	9	17	77	18	4	57	8	57	251	93
Northern Ireland	2	50	5	18	0	0	0	-	16	89
Wales	0	0	6	20	0	-	0	-	17	85
UK excl. Scotland	11	19	88	18	4	44	8	89	284	91

Denominator is all invasive cancers with an abnormal axillary biopsy result and at least one surgery to the axilla.

*Excluded cases with neo-adjuvant therapy. No data for Scotland

Table 71: Positive predictivity of all/any pre-op assessments for invasive cancers with positive nodal status at surgery *

Sub-region	Total with positive nodal status	Had positive pre-op ax assessment	
		No	%
East Midlands	94	21	22
East of England	142	29	20
London	120	36	30
N East, Yorks & Humber	192	43	22
North West	130	25	19
South East	235	48	20
South West	165	22	13
West Midlands	93	27	29
England	1171	251	21
Northern Ireland	68	16	24
Wales	60	17	28
UK excl Scotland	1299	284	21

*Excluded cases with neo-adjuvant therapy. No data provided for Scotland

Table 72: Nodal positivity for invasive cancers without neo-adjuvant therapy and without or unknown pre-op axillary assessment

Sub-region	Total without/unknown pre-op ax	Positive nodal status	
		No	%
East Midlands	599	61	10
East of England	736	100	14
London	595	78	13
N East, Yorks & Humber	980	130	13
North West	714	95	13
South East	1133	172	15
South West	860	133	15
West Midlands	517	53	10
England	6134	822	13
Northern Ireland	234	45	19
Wales	261	37	14
UK excl. Scotland	6629	904	14

*Excluded cases with neo-adjuvant therapy. No data provided for Scotland

Table 73: Pre-op axillary biopsy results for invasive cancers with positive nodal status

Sub-region	C1/B1		C2/B2		C3/B3		C4/B4		C5/B5		Invasive cases with positive nodal status
	No.	%	No.	%	No.	%	No.	%	No.	%	
East Midlands	1	1	11	12	0	0	0	0	21	22	94
East of England	1	1	8	6	2	1	2	1	29	20	142
London	0	0	6	5	0	0	0	0	36	30	120
N East, Yorks & Humber	2	1	14	7	0	0	3	2	43	22	192
North West	0	0	8	6	1	1	1	1	25	19	130
South East	1	0	13	6	0	0	1	0	48	20	235
South West	3	2	5	3	1	1	1	1	22	13	165
West Midlands	1	1	12	13	0	0	0	0	27	29	93
England	9	1	77	7	4	0	8	1	251	21	1171
Northern Ireland	2	3	5	7	0	0	0	0	16	24	68
Wales	0	0	6	10	0	0	0	0	17	28	60
UK excl. Scotland	11	1	88	7	4	0	8	1	284	20	1299

The denominator is all invasive cancers with axillary ultrasound and positive nodes at surgery. Excluded cases with neo-adjuvant therapy. No data for Scotland.

Table 74: Data completion of lymph node status for surgically treated invasive cancers

Sub-region	Total invasive cancers with surgery	Nodal status known		Nodes obtained but status unknown		No nodes obtained		Unknown if nodes obtained	
		No.	%	No.	%	No.	%	No.	%
East Midlands	750	745	99	0	0	5	1	0	0
East of England	928	918	99	0	0	10	1	0	0
London	762	757	99	0	0	5	1	0	0
N East, Yorks & Humber	1205	1191	99	0	0	14	1	0	0
North West	916	906	99	0	0	10	1	0	0
South East	1407	1388	99	0	0	19	1	0	0
South West	1051	1037	99	0	0	14	1	0	0
West Midlands	714	712	100	0	0	2	0	0	0
England	7733	7654	99	0	0	79	1	0	0
Northern Ireland	364	361	99	0	0	3	1	0	0
Wales	378	368	97	0	0	9	2	1	0
UK excl. Scotland	8475	8383	99	0	0	91	1	1	0

No data provided for Scotland

Table 75: Sentinel lymph node primary axillary procedure undertaken for invasive cancers with axillary surgery

Sub-region	With SLNB		Other Axillary procedure		Total	
	No.	%	No.	%	No.	%
East Midlands	693	93	53	7	746	100
East of England	852	93	68	7	920	100
London	690	91	67	9	757	100
N East, Yorks & Humber	1131	95	62	5	1193	100
North West	833	92	71	8	904	100
South East	1286	93	104	7	1390	100
South West	972	94	66	6	1038	100
West Midlands	655	92	57	8	712	100
England	7112	93	548	7	7660	100
Northern Ireland	310	86	51	14	361	100
Wales	336	91	34	9	370	100
UK excl. Scotland	7758	92	633	8	8391	100

No data provided for Scotland

Table 76: Nodal status of invasive cancers

Sub-region	Total known with known nodal status	Positive		Negative	
		No.	%	No.	%
East Midlands	745	117	16	628	84
East of England	918	163	18	755	82
London	757	147	19	610	81
N East, Yorks & Humber	1191	203	17	988	83
North West	906	152	17	754	83
South East	1388	269	19	1119	81
South West	1037	187	18	850	82
West Midlands	712	111	16	601	84
England	7654	1349	18	6305	82
Northern Ireland	361	88	24	273	76
Wales	368	71	19	297	81
UK excl. Scotland	8383	1508	18	6875	82

No data provided for Scotland

Sub-region	Total with axillary surgery	0 node obtained		1,2,3 nodes obtained		≥4nodes obtained		Unknown	
		No.	%	No.	%	No.	%	No.	%
		East Midlands	53	0	0	1	2	52	98
East of England	68	1	1	4	6	63	93	0	0
London	67	0	0	0	0	67	100	0	0
N East, Yorks & Humber	62	0	0	5	8	57	92	0	0
North West	71	0	0	9	13	62	87	0	0
South East	104	0	0	5	5	99	95	0	0
South West	66	1	2	5	8	60	91	0	0
West Midlands	57	0	0	6	11	51	89	0	0
England	548	2	0	35	6	511	93	0	0
Northern Ireland	51	0	0	6	12	45	88	0	0
Wales	34	0	0	1	3	33	97	0	0
UK excl. Scotland	633	2	0	42	7	589	93	0	0

No data provided for Scotland

Sub-region	With SLNB				Without SLNB			
	Positive		Negative		Positive		Negative	
	No.	%	No.	%	No.	%	No.	%
East Midlands	83	12	609	88	34	64	19	36
East of England	114	13	737	87	49	72	18	26
London	91	13	599	87	56	84	11	16
N East, Yorks & Humber	160	14	969	86	43	69	19	31
North West	108	13	725	87	44	62	29	41
South East	186	14	1097	85	83	80	22	21
South West	142	15	830	85	45	68	20	30
West Midlands	73	11	582	89	38	67	19	33
England	957	13	6148	86	392	72	157	29
Northern Ireland	50	16	260	84	38	75	13	25
Wales	44	13	290	86	27	79	7	21
UK excl. Scotland	1051	14	6698	86	457	72	177	28

No data provided for Scotland

Sub-region	1-<4 nodes obtained					4+ nodes obtained				
	1 Ax op		2+ Ax ops		Total	1 Ax op		2+ Ax ops		Total
	No.	%	No.	%		No.	%	No.	%	
East Midlands	47	100	0	0	47	10	28	26	72	36
East of England	53	100	0	0	53	20	33	41	67	61
London	38	100	0	0	38	12	23	41	77	53
N East, Yorks & Humber	86	100	0	0	86	25	34	49	66	74
North West	44	98	1	2	45	18	29	45	71	63
South East	87	99	1	1	88	34	35	64	65	98
South West	88	100	0	0	88	26	48	28	52	54
West Midlands	40	98	1	2	41	5	16	27	84	32
England	483	99	3	1	486	150	32	321	68	471
Northern Ireland	11	100	0	0	11	6	15	33	85	39
Wales	23	100	0	0	23	6	29	15	71	21
UK excl. Scotland	517	99	3	1	520	162	31	369	69	531

No data provided for Scotland

Table 80: Status of invasive cases with <4 nodes obtained

Sub-region	Total with nodes obtained	Nodal status determined on basis of <4 nodes		Positive sentinel procedure(s)		Positive (Other)		Negative sentinel procedure(s)		Negative (Other)		Unknown status	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	745	560	75.2	47	6.3	0	0.0	512	69	1	0.1	0	0
East of England	918	695	75.7	53	5.8	2	0.2	638	69	2	0.2	0	0
London	757	544	71.9	38	5.0	0	0.0	506	67	0	0.0	0	0
N East, Yorks & Humber	1191	929	78.0	86	7.2	1	0.1	838	70	4	0.3	0	0
North West	906	653	72.1	45	5.0	1	0.1	597	66	10	1.1	0	0
South East	1388	1021	73.6	88	6.3	0	0.0	928	67	5	0.4	0	0
South West	1037	829	79.9	88	8.5	1	0.1	736	71	4	0.4	0	0
West Midlands	712	558	78.4	41	5.8	0	0.0	511	72	6	0.8	0	0
England	7654	5789	75.6	486	6.3	5	0.1	5266	69	32	0.4	0	0
Northern Ireland	361	232	64.3	11	3.0	0	0.0	215	60	6	1.7	0	0
Wales	368	288	78.3	23	6.3	1	0.3	264	72	0	0.0	0	0
UK excl. Scotland	8383	6309	75	520	6.2	6	0.1	5745	69	38	0.5	0	0

No data provided for Scotland

Table 81: Availability of lymph node status for surgically treated non-invasive cancers

Sub-region	Total non-invasive cancers	Nodal status known		Nodes obtained but status unknown		No nodes obtained		Unknown if nodes obtained	
		No.	%	No.	%	No.	%	No.	%
East Midlands	179	38	21	0	0	141	79	0	0
East of England	175	46	26	0	0	129	74	0	0
London	243	70	29	0	0	173	71	0	0
N East, Yorks & Humber	284	57	20	0	0	227	80	0	0
North West	248	41	17	0	0	207	83	0	0
South East	352	77	22	0	0	275	78	0	0
South West	274	52	19	0	0	222	81	0	0
West Midlands	195	49	25	0	0	146	75	0	0
England	1950	430	22	0	0	1520	78	0	0
Northern Ireland	76	14	18	0	0	62	82	0	0
Wales	92	33	36	0	0	58	63	1	1
UK excl. Scotland	2118	477	23	0	0	1640	77	1	0

No data provided for Scotland

Table 82: Treatment for non-invasive cancers with known nodal status

Sub-region	Conservation with known nodal status		Total Conservation	Mastectomy with known nodal status		Total mastectomy
	No.	%		No.	%	
East Midlands	9	6	144	29	83	35
East of England	10	7	137	36	95	38
London	15	8	185	55	95	58
N East, Yorks & Humber	10	4	235	47	96	49
North West	8	4	213	33	94	35
South East	16	6	288	61	95	64
South West	7	3	227	45	96	47
West Midlands	9	6	152	40	93	43
England	84	5	1581	346	94	369
Northern Ireland	5	7	67	9	100	9
Wales	6	10	59	27	84	32
UK excl. Scotland	95	6	1707	382	93	410

No data provided for Scotland

Sub-region	Total known nodal status	Positive		Negative	
		No.	%	No.	%
East Midlands	38	1	3	37	97
East of England	46	0	0	46	100
London	70	1	1	69	99
N East, Yorks & Humber	57	0	0	57	100
North West	41	0	0	41	100
South East	77	0	0	77	100
South West	52	0	0	52	100
West Midlands	49	0	0	49	100
England	430	2	0	428	100
Northern Ireland	14	0	0	14	100
Wales	33	0	0	33	100
UK excl. Scotland	477	2	0	475	100

No data provided for Scotland

Sub-region	With SLNB		Without SLNB								Total with mastectomy	Total known nodal status	% determined on basis of SLNB
			Ax sampling		Ax clearance		Unknown procedure		No intended Ax procedure				
	No.	%	No.	%	No.	%	No.	%	No.	%			
East Midlands	28	80	1	3	0	0.0	0	0.0	0	0.0	35	29	97
East of England	36	95	0	0	0	0.0	0	0.0	0	0.0	38	36	100
London	54	93	0	0	1	1.7	0	0.0	0	0.0	58	55	98
N East, Yorks & Humber	47	96	0	0	0	0.0	0	0.0	0	0.0	49	47	100
North West	32	91	1	3	0	0.0	0	0.0	0	0.0	35	33	97
South East	61	95	0	0	0	0.0	0	0.0	0	0.0	64	61	100
South West	45	96	0	0	0	0.0	0	0.0	0	0.0	47	45	100
West Midlands	40	93	0	0	0	0.0	0	0.0	0	0.0	43	40	100
England	343	93	2	1	1	0.3	0	0.0	0	0.0	369	346	99
Northern Ireland	9	100	0	0	0	0.0	0	0.0	0	0.0	9	9	100
Wales	25	78	2	6	0	0.0	0	0.0	0	0.0	32	27	93
UK excl. Scotland	377	92	4	1	1	0.2	0	0.0	0	0.0	410	382	99

No data provided for Scotland

Sub-region	With SLNB		Without SLNB								Total with BCS	Total known nodal status	% determined on basis of SLNB
			Ax sampling		Ax clearance		Unknown procedure		No intended Ax procedure				
	No.	%	No.	%	No.	%	No.	%	No.	%			
East Midlands	9	6	0	0	0	0.0	0	0.0	0	0.0	144	9	100
East of England	10	7	0	0	0	0.0	0	0.0	0	0.0	137	10	100
London	15	8	0	0	0	0.0	0	0.0	0	0.0	185	15	100
N East, Yorks & Humber	10	4	0	0	0	0.0	0	0.0	0	0.0	235	10	100
North West	7	3	1	0	0	0.0	0	0.0	0	0.0	213	8	88
South East	16	6	0	0	0	0.0	0	0.0	0	0.0	288	16	100
South West	7	3	0	0	0	0.0	0	0.0	0	0.0	227	7	100
West Midlands	8	5	1	1	0	0.0	0	0.0	0	0.0	152	9	89
England	82	5	2	0	0	0.0	0	0.0	0	0.0	1581	84	98
Northern Ireland	5	7	0	0	0	0.0	0	0.0	0	0.0	67	5	100
Wales	6	10	0	0	0	0.0	0	0.0	0	0.0	59	6	100
UK excl. Scotland	93	5	2	0	0	0.0	0	0.0	0	0.0	1707	95	98

No data provided for Scotland

Sub-region	Total known nodal status	Conservation			Mastectomy		
		Mean	Median	Maximum	Mean	Median	Maximum
East Midlands	38	2	1	4	3	2	7
East of England	46	2	2	4	2	2	5
London	70	2	2	5	3	2	9
N East, Yorks & Humber	57	2	1	4	2	2	7
North West	41	2	2	6	3	2	7
South East	77	2	2	8	2	2	9
South West	52	2	1	4	2	2	5
West Midlands	49	2	2	5	2	2	8
England	430	2	2	8	2	2	9
Northern Ireland	14	3	3	5	3	2	5
Wales	33	1	1	2	2	2	5
UK excl. Scotland	477	2	2	8	2	2	9

No data provided for Scotland

Sub-region	B5b						B5a					
	Total B5b	% had Ax	Ax in 1st op		Ax in later op		Total B5a	% had Ax	Ax in 1st op		Ax in later op	
			No.	%	No.	%			No.	%	No.	%
East Midlands	702	100	700	100	0	0	39	95	16	41	21	54
East of England	879	100	876	100	0	0	40	93	16	40	21	53
London	726	99	721	99	0	0	33	100	16	48	17	52
N East, Yorks & Humber	1139	100	1135	100	0	0	59	88	22	37	30	51
North West	867	100	863	100	0	0	41	83	16	39	18	44
South East	1319	100	1313	100	1	0	73	88	26	36	38	52
South West	996	99	988	99	0	0	41	90	12	29	25	61
West Midlands	674	100	673	100	1	0	35	97	18	51	16	46
England	7302	100	7269	100	2	0	361	91	142	39	186	52
Northern Ireland	344	100	343	100	0	0	16	88	3	19	11	69
Wales	340	99	337	99	0	0	28	86	10	36	14	50
UK excl. Scotland	7986	100	7949	100	2	0	405	90	155	38	211	52

No data provided for Scotland

Sub-region	Total node positive invasive	SLNB at 1st Ax op		No SLNB at 1st Ax op		Total with repeat Ax op	% repeat Ax op after SLNB
		No	%	No	%		
East Midlands	117	26	22	0	0	26	100
East of England	163	41	25	0	0	41	100
London	147	41	28	2	1	43	95
N East, Yorks & Humber	203	49	24	1	0	50	98
North West	152	45	30	1	1	46	98
South East	269	64	24	2	1	66	97
South West	187	28	15	1	1	29	97
West Midlands	111	28	25	0	0	28	100
England	1349	322	24	7	1	329	98
Northern Ireland	88	33	38	3	3	36	92
Wales	71	15	21	0	0	15	100
UK excl. Scotland	1508	370	25	10	1	380	97

No data provided for Scotland