

Screen Detected Breast Cancers – Data Tables 2022-2023

Data source

Data for the women diagnosed with screen-detected breast cancer in England with a date of first offered screening appointment between 1st April 2022 to 31st March 2023 was uploaded by individual screening services via the Breast Screening Information System (BSIS). The source of these data was the National Breast Screening System (NBSS). A series of data validation checks were automatically applied, and individual explanations were required before data could be successfully uploaded. On receipt of the national data a comparison with the data held by the English cancer registry was undertaken to identify cases with a previous diagnosis of breast cancer. These cases were excluded for specified analyses from tables 4-83.

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SCREEN DETECTED BREAST CANCERS IN WOMEN ALL AGES FOR THE PERIOD 1 APRIL 2022 – 31 MARCH 2023

Data collated and prepared by NHS England

The 2021/22 totals have been provided for comparison purposes.

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

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	1326	82	667	41	14	1	271	17	0	0	1611	100	192093	1.5	6.9	3.5
East of England	1579	81	764	39	18	1	349	18	0	0	1946	100	235278	1.6	6.7	3.2
London	1723	76	696	31	22	1	508	23	0	0	2253	100	274305	1.9	6.3	2.5
N East, Yorks & Humber	2289	81	1183	42	30	1	512	18	2	0	2833	100	339144	1.6	6.7	3.5
North West	1963	79	931	38	18	1	499	20	1	0	2481	100	284865	1.8	6.9	3.3
South East	2471	78	1151	36	28	1	670	21	2	0	3171	100	337259	2.1	7.3	3.4
South West	2065	80	1041	40	28	1	493	19	1	0	2587	100	276467	1.9	7.5	3.8
West Midlands	1667	80	795	38	14	1	406	19	0	0	2087	100	237450	1.8	7.0	3.3
England	15083	80	7228	38	172	1	3708	20	6	0	18969	100	2176861	1.8	6.9	3.3
England 2021/22	15964	79	7658	38	213	1	4012	20	6	0	20195	100	2202251	1.9	7.2	3.5

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

Region	<50		50-64		65-70		71-75		76+		Total	>70	
	No.	%	No.	%	No.	%	No.	%	No.	%		No.	%
East Midlands	10	1	932	58	474	29	105	7	90	6	1611	195	12
East of England	15	1	1060	54	553	28	170	9	148	8	1946	318	16
London	16	1	1496	66	522	23	126	6	93	4	2253	219	10
N East, Yorks & Humber	13	0	1708	60	812	29	163	6	137	5	2833	300	11
North West	33	1	1538	62	716	29	118	5	76	3	2481	194	8
South East	23	1	1911	60	845	27	211	7	181	6	3171	392	12
South West	14	1	1513	58	762	29	159	6	139	5	2587	298	12
West Midlands	39	2	1259	60	587	28	109	5	93	4	2087	202	10
England	163	1	11417	60	5271	28	1161	6	957	5	18969	2118	11
England 2021/22	89	0	12225	61	5766	29	1283	6	832	4	20195	2115	10

Region	Total cases	Total pt matched	% matched	Had previous cancers		No previous cancers	
				No.	%	No.	%
				East Midlands	1611	1451	90
East of England	1946	1723	89	128	7	1595	93
London	2253	2059	91	137	7	1922	93
NEYH	2833	2588	91	184	7	2404	93
North West	2481	2130	86	169	8	1961	92
South East	3171	2830	89	215	8	2615	92
South West	2587	2142	83	197	9	1945	91
West Midlands	2087	1914	92	148	8	1766	92
England	18969	16837	89	1282	8	15555	92
England 2021/22	20203	19620	97	2941	15	16679	85

Cases with previous breast cancers are excluded from Tables 4 to 83.

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	1508	0	0	2	0	1446	96	33	2	12	1	3	0	1496	99
East of England	1817	0	0	3	0	1721	95	42	2	17	1	0	0	1783	98	34	2
London	2116	1	0	1	0	2030	96	51	2	8	0	2	0	2093	99	23	1
N East, Yorks & Humber	2647	0	0	6	0	2542	96	44	2	27	1	3	0	2622	99	25	1
North West	2311	0	0	3	0	2212	96	43	2	26	1	2	0	2286	99	25	1
South East	2954	0	0	2	0	2819	95	71	2	14	0	2	0	2908	98	46	2
South West	2389	0	0	1	0	2285	96	45	2	25	1	1	0	2357	99	32	1
West Midlands	1938	0	0	0	0	1891	98	22	1	3	0	1	0	1917	99	21	1
England	17680	1	0	18	0	16946	96	351	2	132	1	14	0	17462	99	218	1
England 2021/22	18873	2	0	12	0	18154	96	348	2	93	0	3	0	18612	99	261	1

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	1236	0	0	2	0	1214	98	9	1	7	1	3	0	1235	100
East of England	1477	0	0	2	0	1438	97	13	1	15	1	0	0	1468	99	9	1
London	1624	1	0	1	0	1601	99	10	1	5	0	2	0	1620	100	4	0
N East, Yorks & Humber	2142	0	0	6	0	2096	98	9	0	23	1	2	0	2136	100	6	0
North West	1831	0	0	3	0	1786	98	9	0	23	1	2	0	1823	100	8	0
South East	2297	0	0	2	0	2261	98	13	1	12	1	2	0	2290	100	7	0
South West	1900	0	0	0	0	1858	98	12	1	22	1	1	0	1893	100	7	0
West Midlands	1545	0	0	0	0	1533	99	4	0	3	0	1	0	1541	100	4	0
England	14052	1	0	16	0	13787	98	79	1	110	1	13	0	14006	100	46	0
England 2021/22	14935	1	0	11	0	14742	99	62	0	73	0	3	0	14892	100	43	0

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

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	258	0	0	0	0	218	84	24	9	5	2	0	0	247	96	11	4
East of England	325	0	0	1	0	268	82	29	9	2	1	0	0	300	92	25	8
London	472	0	0	0	0	412	87	38	8	3	1	0	0	453	96	19	4
N East, Yorks & Humber	473	0	0	0	0	418	88	32	7	4	1	0	0	454	96	19	4
North West	462	0	0	0	0	409	89	33	7	3	1	0	0	445	96	17	4
South East	630	0	0	0	0	532	84	58	9	2	0	0	0	592	94	38	6
South West	462	0	0	1	0	401	87	33	7	3	1	0	0	438	95	24	5
West Midlands	379	0	0	0	0	344	91	18	5	0	0	0	0	362	96	17	4
England	3461	0	0	2	0	3002	87	265	8	22	1	0	0	3291	95	170	5
England 2021/22	3735	0	0	1	0	3223	86	280	7	17	0	0	0	3521	94	214	6

Table 7: B5a (Non-invasive) core biopsy: histological status of surgical specimen

Region	Invasive		Micro-invasive		Non-invasive		Benign		Unknown		Total with surgery	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	62	21	13	4	208	71	9	3	0	0	292	100
East of England	75	21	15	4	257	73	6	2	0	0	353	100
London	104	20	17	3	357	70	31	6	0	0	509	100
N East, Yorks & Humber	101	19	28	5	396	73	15	3	0	0	540	100
North West	90	18	17	3	383	76	16	3	0	0	506	100
South East	97	15	25	4	505	78	20	3	0	0	647	100
South West	80	16	25	5	375	76	15	3	0	0	495	100
West Midlands	66	16	14	3	332	79	9	2	0	0	421	100
England	675	18	154	4	2813	75	121	3	0	0	3763	100
England 2021/22	778	19	185	5	2987	73	120	3	1	0	4071	100

Table 8: B5b (Invasive) core biopsy: histological status of surgical specimen

Region	Invasive		Micro-invasive		Non-invasive		Benign		Unknown		Total with surgery	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	1074	97	1	0	10	1	22	2	2	0	1109	100
East of England	1262	96	1	0	16	1	36	3	3	0	1318	100
London	1325	94	0	0	34	2	52	4	2	0	1413	100
N East, Yorks & Humber	1884	97	0	0	23	1	38	2	1	0	1946	100
North West	1578	96	2	0	17	1	51	3	0	0	1648	100
South East	2001	95	2	0	31	1	60	3	2	0	2096	100
South West	1669	96	3	0	22	1	47	3	2	0	1743	100
West Midlands	1349	95	2	0	23	2	47	3	2	0	1423	100
England	12142	96	11	0	176	1	353	3	14	0	12696	100
England 2021/22	12943	96	11	0	196	1	275	2	34	0	13459	100

Region	1		2		3+		Total		Repeat (2+) visit	
	No	%	No	%	No	%	No	%	No	%
East Midlands	1176	78	265	18	67	4	1508	100	332	22
East of England	1603	88	196	11	18	1	1817	100	214	12
London	1828	86	257	12	31	1	2116	100	288	14
N East, Yorks & Humber	2306	87	315	12	26	1	2647	100	341	13
North West	1916	83	335	14	60	3	2311	100	395	17
South East	2513	85	395	13	46	2	2954	100	441	15
South West	1944	81	380	16	65	3	2389	100	445	19
West Midlands	1628	84	277	14	33	2	1938	100	310	16
England	14914	84	2420	14	346	2	17680	100	2766	16
England 2021/22	15889	84	2581	14	403	2	18873	100	2984	16

Region	1		2		3+		Total		First core/cyt/VAE at 2+ visit	
	No	%	No	%	No	%	No	%	No	%
East Midlands	1405	93	99	7	1	0	1505	100	100	7
East of England	1786	98	29	2	0	0	1815	100	29	2
London	2022	96	90	4	2	0	2114	100	92	4
N East, Yorks & Humber	2572	97	69	3	0	0	2641	100	69	3
North West	2208	96	98	4	1	0	2307	100	99	4
South East	2813	95	138	5	0	0	2951	100	138	5
South West	2256	95	131	5	0	0	2387	100	131	5
West Midlands	1903	98	33	2	1	0	1937	100	34	2
England	16965	96	687	4	5	0	17657	100	692	4
England 2021/22	18084	96	774	4	11	0	18869	100	785	4

Region	Invasive					Non-Invasive					Overall				
	1		2+		Total	1		2+		Total	1		2+		Total
	No	%	No	%		No	%	No	%		No	%	No	%	
East Midlands	1098	89	134	11	1232	183	74	64	26	247	1292	87	201	13	1493
East of England	1373	94	95	6	1468	253	84	47	16	300	1640	92	143	8	1783
London	1559	96	59	4	1618	378	83	75	17	453	1951	93	140	7	2091
N East, Yorks & Humber	2025	95	109	5	2134	386	85	68	15	454	2435	93	184	7	2619
North West	1681	92	140	8	1821	368	83	77	17	445	2063	90	221	10	2284
South East	2157	94	131	6	2288	488	82	104	18	592	2667	92	239	8	2906
South West	1742	92	150	8	1892	345	79	93	21	438	2108	89	248	11	2356
West Midlands	1438	93	102	7	1540	295	81	67	19	362	1746	91	170	9	1916
England	13073	93	920	7	13993	2696	82	595	18	3291	15902	91	1546	9	17448
England 2021/22	13934	94	955	6	14889	2835	81	686	19	3521	16937	91	1672	9	18609

Table 12: Worst core/cytology biopsy results of the first non-operative needle biopsy visit for non-invasive cancers with a non-operative diagnosis

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	213	86	7	3	20	8	6	2	1	0	247
East of England	263	88	6	2	25	8	3	1	3	1	300
London	404	89	1	0	40	9	5	1	3	1	453
N East, Yorks & Humber	408	90	7	2	30	7	3	1	6	1	454
North West	399	90	8	2	30	7	3	1	5	1	445
South East	520	88	6	1	55	9	4	1	7	1	592
South West	382	87	5	1	38	9	8	2	5	1	438
West Midlands	323	89	3	1	31	9	3	1	2	1	362
England	2912	88	43	1	269	8	35	1	32	1	3291
England 2122	3084	88	69	2	286	8	33	1	49	1	3521

Table 13: Any further visits after core/cytology/vacuum biopsy result

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	52	4	1181	96	1233	12	5	246	95	258	64	4	1441	96	1505
East of England	37	3	1438	97	1475	6	2	319	98	325	43	2	1772	98	1815
London	47	3	1575	97	1622	21	4	451	96	472	69	3	2045	97	2114
N East, Yorks & Humber	75	4	2064	96	2139	15	3	456	97	471	90	3	2551	97	2641
North West	72	4	1756	96	1828	18	4	443	96	461	90	4	2217	96	2307
South East	60	3	2234	97	2294	23	4	607	96	630	83	3	2868	97	2951
South West	73	4	1825	96	1898	13	3	449	97	462	87	4	2300	96	2387
West Midlands	86	6	1458	94	1544	23	6	356	94	379	109	6	1828	94	1937
England	502	4	13531	96	14033	131	4	3327	96	3458	635	4	17022	96	17657
England 2021/22	539	4	14393	96	14932	141	4	3593	96	3734	681	4	18188	96	18869

Table 14: Status of diagnostic open biopsies

Region	Benign biopsy rate		Malignant biopsy rate
	Prevalent	Incident	
East Midlands	0.68	0.18	0.06
East of England	0.70	0.15	0.14
London	0.40	0.18	0.08
N East, Yorks & Humber	0.52	0.16	0.07
North West	0.56	0.23	0.09
South East	0.63	0.23	0.14
South West	0.67	0.28	0.12
West Midlands	0.56	0.23	0.09
England	0.57	0.20	0.10
England 2021/22	0.66	0.24	0.12

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)

Region	Total malignant open biopsies	Invasive		Micro-invasive		Non-invasive		Status unknown	
		No.	%	No.	%	No.	%	No.	%
East Midlands	12	1	8	0	0	11	92	0	0
East of England	34	9	26	0	0	25	74	0	0
London	23	4	17	0	0	19	83	0	0
N East, Yorks & Humber	25	6	24	0	0	19	76	0	0
North West	25	8	32	0	0	17	68	0	0
South East	46	7	15	0	0	38	83	1	2
South West	32	7	22	1	3	24	75	0	0
West Midlands	21	4	19	0	0	17	81	0	0
England	218	46	21	1	0	170	78	1	0
England 2021/22	261	43	16	3	1	214	82	1	0

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	1	0	0	0	0	1	100	0	0	0	0
East of England	9	2	22	0	0	7	78	0	0	0	0
London	4	0	0	0	0	4	100	0	0	0	0
N East, Yorks & Humber	6	1	17	0	0	5	83	0	0	0	0
North West	8	1	13	0	0	6	75	0	0	1	13
South East	7	1	14	0	0	5	71	0	0	1	14
South West	7	1	14	0	0	6	86	0	0	0	0
West Midlands	4	0	0	0	0	4	100	0	0	0	0
England	46	6	13	0	0	38	83	0	0	2	4
England 2021/22	43	0	0	2	5	36	84	0	0	5	12

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.	%
East Midlands	11	0	0	0	0	11	100	0	0	0	0
East of England	25	0	0	0	0	21	84	0	0	4	16
London	19	0	0	0	0	19	100	0	0	0	0
N East, Yorks & Humber	19	2	11	1	5	13	68	0	0	3	16
North West	17	1	6	0	0	15	88	0	0	1	6
South East	38	0	0	0	0	34	89	0	0	4	11
South West	25	0	0	0	0	22	88	1	4	2	8
West Midlands	17	0	0	0	0	16	94	1	6	0	0
England	171	3	2	1	1	151	88	2	1	14	8
England 2021/22	217	1	0	1	0	199	92	3	1	12	6

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	1	0	0	0	0	1	100	0	0	0	0
East of England	9	2	22	4	44	3	33	0	0	0	0
London	4	0	0	3	75	1	25	0	0	0	0
N East, Yorks & Humber	6	1	17	3	50	2	33	0	0	0	0
North West	8	1	13	2	25	4	50	0	0	1	13
South East	7	1	14	1	14	4	57	0	0	1	14
South West	7	1	14	2	29	4	57	0	0	0	0
West Midlands	4	0	0	2	50	2	50	0	0	0	0
England	46	6	13	17	37	21	46	0	0	2	4
England 2021/22	43	0	0	17	40	24	56	2	5	0	0

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	11	0	0	2	18	8	73	0	0	1	9
East of England	25	0	0	6	24	19	76	0	0	0	0
London	19	0	0	3	16	16	84	0	0	0	0
N East, Yorks & Humber	19	2	11	6	32	9	47	2	11	0	0
North West	17	1	6	7	41	8	47	1	6	0	0
South East	38	0	0	12	32	25	66	1	3	0	0
South West	25	0	0	5	20	20	80	0	0	0	0
West Midlands	17	0	0	2	12	15	88	0	0	0	0
England	171	3	2	43	25	120	70	4	2	1	1
England 2021/22	217	1	0	71	33	140	65	4	2	1	0

Region	Unknown cytonuclear grade		Unknown size		Unknown cytonuclear grade and/or size		Total with surgery
	No.	%	No.	%	No.	%	No.
East Midlands	3	1	11	4	12	5	250
East of England	1	0	11	4	12	4	305
London	2	0	36	8	37	9	432
N East, Yorks & Humber	7	2	20	4	24	5	452
North West	1	0	19	4	19	4	439
South East	7	1	30	5	30	5	605
South West	2	0	23	5	23	5	440
West Midlands	1	0	14	4	15	4	371
England	24	1	164	5	172	5	3294
England 2021/22	19	1	170	5	173	5	3553

Table 21: Size of surgically treated non-invasive cancers

Region	<15mm		15-≤40mm		>40 mm		Size not assessable		Size unknown		Total non-invasive with surgery	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	69	28	106	42	58	23	6	2	11	4	250	100
East of England	107	35	130	43	50	16	7	2	11	4	305	100
London	120	28	184	43	76	18	16	4	36	8	432	100
N East, Yorks & Humber	147	33	188	42	86	19	11	2	20	4	452	100
North West	157	36	166	38	86	20	11	3	19	4	439	100
South East	188	31	264	44	96	16	27	4	30	5	605	100
South West	158	36	173	39	67	15	19	4	23	5	440	100
West Midlands	121	33	156	42	75	20	5	1	14	4	371	100
England	1067	32	1367	41	594	18	102	3	164	5	3294	100
England 2021/22	1193	34	1450	41	651	18	89	3	170	5	3553	100

Table 22: Cytonuclear grade of surgically treated non-invasive cancers

Region	High		Intermediate		Low		Not assessable		Unknown		Total non-invasive with surgery	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	127	51	90	36	24	10	6	2	3	1	250	100
East of England	181	59	97	32	19	6	7	2	1	0	305	100
London	232	54	130	30	52	12	16	4	2	0	432	100
N East, Yorks & Humber	284	63	126	28	24	5	11	2	7	2	452	100
North West	257	59	133	30	36	8	12	3	1	0	439	100
South East	336	56	176	29	59	10	27	4	7	1	605	100
South West	265	60	134	30	20	5	19	4	2	0	440	100
West Midlands	225	61	110	30	29	8	6	2	1	0	371	100
England	1907	58	996	30	263	8	104	3	24	1	3294	100
England 2021/22	2085	59	1038	29	321	9	90	3	19	1	3553	100

Table 23: Invasive size of surgically treated invasive breast cancers

Region	<10mm		10- <15mm		15- ≤20mm		>20- ≤35mm		>35- ≤50mm		>50mm		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	299	25	324	27	269	23	210	18	44	4	25	2	14	1	1185	100
East of England	360	25	355	25	338	24	255	18	55	4	38	3	15	1	1416	100
London	337	22	324	21	359	23	362	24	78	5	54	4	20	1	1534	100
N East, Yorks & Humber	549	27	563	27	456	22	349	17	83	4	43	2	22	1	2065	100
North West	423	24	454	26	415	24	325	18	77	4	49	3	15	1	1758	100
South East	511	23	554	25	494	22	468	21	90	4	81	4	22	1	2220	100
South West	501	27	459	25	430	23	325	18	68	4	39	2	24	1	1846	100
West Midlands	373	25	363	24	333	22	302	20	68	5	40	3	18	1	1497	100
England	3353	25	3396	25	3094	23	2596	19	563	4	369	3	150	1	13521	100
England 2021/22	3525	25	3634	25	3420	24	2639	18	586	4	361	3	202	1	14367	100

Table 24: Whole size of surgically treated invasive breast cancers

Region	<10mm		10- <15mm		15- ≤20mm		>20- ≤35mm		>35- ≤50mm		>50mm		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	177	15	284	24	272	23	251	21	82	7	66	6	53	4	1185	100
East of England	206	15	287	20	339	24	288	20	110	8	66	5	120	8	1416	100
London	156	10	247	16	325	21	397	26	141	9	132	9	136	9	1534	100
N East, Yorks & Humber	318	15	457	22	478	23	468	23	136	7	132	6	76	4	2065	100
North West	261	15	361	21	408	23	379	22	137	8	106	6	106	6	1758	100
South East	273	12	450	20	493	22	556	25	164	7	151	7	133	6	2220	100
South West	305	17	381	21	414	22	407	22	123	7	85	5	131	7	1846	100
West Midlands	210	14	289	19	349	23	326	22	103	7	96	6	124	8	1497	100
England	1906	14	2756	20	3078	23	3072	23	996	7	834	6	879	7	13521	100
England 2021/22	1928	13	2967	21	3314	23	3373	23	1084	8	894	6	807	6	14367	100

Table 25: Grade of surgically treated invasive cancers

Region	Grade 1		Grade 2		Grade 3		Not assessable		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	315	27	659	56	208	18	2	0	1	0	1185	100
East of England	339	24	821	58	244	17	7	0	5	0	1416	100
London	322	21	931	61	271	18	3	0	7	0	1534	100
N East, Yorks & Humber	491	24	1192	58	375	18	1	0	6	0	2065	100
North West	401	23	1043	59	306	17	3	0	5	0	1758	100
South East	532	24	1314	59	361	16	5	0	8	0	2220	100
South West	462	25	1042	56	334	18	6	0	2	0	1846	100
West Midlands	323	22	946	63	223	15	3	0	2	0	1497	100
England	3185	24	7948	59	2322	17	30	0	36	0	13521	100
England 2021/22	3468	24	8409	59	2420	17	38	0	32	0	14367	100

Table 26: Data completeness for surgically treated invasive cancers (excl. cases with neo-adjuvant therapy)

Region	Unknown invasive size		Unknown nodal status		Unknown grade		Unknown NPI*		Total invasive
	No.	%	No.	%	No.	%	No.	%	
East Midlands	9	0.8	7	0.6	0	0.0	16	1.4	1105
East of England	11	0.9	26	2.1	5	0.4	40	3.2	1260
London	15	1.1	19	1.4	4	0.3	36	2.7	1324
N East, Yorks & Humber	18	1.0	30	1.6	2	0.1	48	2.5	1891
North West	10	0.6	8	0.5	2	0.1	20	1.3	1585
South East	13	0.6	20	1.0	2	0.1	35	1.7	2040
South West	20	1.2	35	2.1	1	0.1	57	3.4	1699
West Midlands	12	1.0	7	0.6	0	0.0	20	1.6	1219
England	108	0.9	152	1.3	16	0.1	272	2.2	12123
England 2021/22	164	1.2	149	1.1	27	0.2	336	2.5	13226

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

Table 27: NPI Group of surgically treated invasive cancers (with known NPI excl. cases with neo-adjuvant therapy)

Region	EPG		GPG		MPG1		MPG2		PPG		Total with known NPI	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	259	24	426	39	268	25	98	9	38	3	1089	100
East of England	258	21	516	42	270	22	140	11	36	3	1220	100
London	230	18	522	41	313	24	157	12	66	5	1288	100
N East, Yorks & Humber	373	20	756	41	466	25	176	10	72	4	1843	100
North West	313	20	662	42	378	24	142	9	70	4	1565	100
South East	407	20	797	40	497	25	227	11	77	4	2005	100
South West	360	22	657	40	424	26	151	9	50	3	1642	100
West Midlands	217	18	537	45	290	24	118	10	37	3	1199	100
England	2417	20	4873	41	2906	25	1209	10	446	4	11851	100
England 2021/22	2698	21	5322	41	3129	24	1222	9	519	4	12890	100

Table 28: ER status (invasive cancers)

Region	Positive		Negative		Not done or Unknown		Total
	No.	%	No.	%	No.	%	
East Midlands	1110	90	124	10	2	0	1236
East of England	1350	91	122	8	5	0	1477
London	1488	92	134	8	2	0	1624
N East, Yorks & Humber	1955	91	182	8	5	0	2142
North West	1662	91	169	9	0	0	1831
South East	2129	93	168	7	0	0	2297
South West	1723	91	172	9	5	0	1900
West Midlands	1391	90	145	9	9	1	1545
England	12808	91	1216	9	28	0	14052
England 2021/22	13696	92	1213	8	26	0	14935

Table 29: PgR status (invasive)

Region	Positive		Negative		Not done or Unknown		Total
	No.	%	No.	%	No.	%	
East Midlands	589	48	193	16	454	37	1236
East of England	1026	69	203	14	248	17	1477
London	1238	76	271	17	115	7	1624
N East, Yorks & Humber	1116	52	324	15	702	33	2142
North West	1489	81	338	18	4	0	1831
South East	1904	83	390	17	3	0	2297
South West	842	44	257	14	801	42	1900
West Midlands	1240	80	291	19	14	1	1545
England	9444	67	2267	16	2341	17	14052
England 2021/22	9883	66	2274	15	2778	19	14935

Region	Positive		Negative		Not done or Unknown		Total
	No.	%	No.	%	No.	%	
East Midlands	0	0	86	69	38	31	124
East of England	4	3	100	82	18	15	122
London	7	5	125	93	2	1	134
N East, Yorks & Humber	10	5	154	85	18	10	182
North West	4	2	165	98	0	0	169
South East	10	6	158	94	0	0	168
South West	9	5	130	76	33	19	172
West Midlands	2	1	142	98	1	1	145
England	46	4	1060	87	110	9	1216
England 2021/22	52	4	1023	84	138	11	1213

Region	Positive		Negative		Borderline		Not done or Unknown		Total
	No.	%	No.	%	No.	%	No.	%	
East Midlands	116	9	1112	90	2	0	6	0	1236
East of England	145	10	1278	87	6	0	48	3	1477
London	193	12	1410	87	15	1	6	0	1624
N East, Yorks & Humber	234	11	1881	88	8	0	19	1	2142
North West	167	9	1660	91	2	0	2	0	1831
South East	244	11	2039	89	4	0	10	0	2297
South West	156	8	1720	91	4	0	20	1	1900
West Midlands	186	12	1322	86	10	1	27	2	1545
England	1441	10	12422	88	51	0	138	1	14052
England 2021/22	1454	10	13286	89	39	0	156	1	14935

Region	Total HER2 unknown/not done	<10mm invasive size		Grade 1		Negative nodal status	
		No	%	No	%	No	%
East Midlands	6	3	50	2	33	4	67
East of England	48	14	29	12	25	29	60
London	6	2	33	1	17	2	33
N East, Yorks & Humber	19	7	37	3	16	7	37
North West	2	2	100	1	50	1	50
South East	10	8	80	1	10	9	90
South West	20	13	65	6	30	16	80
West Midlands	27	15	56	4	15	20	74
England	138	64	46	30	22	88	64
England 2021/22	156	76	49	39	25	103	66

Region	Positive		Negative		Not done or Unknown		Total
	No.	%	No.	%	No.	%	
East Midlands	47	17	14	5	211	78	272
East of England	77	23	16	5	247	73	340
London	199	40	40	8	253	51	492
N East, Yorks & Humber	150	30	35	7	318	63	503
North West	253	53	37	8	189	39	479
South East	357	54	70	11	229	35	656
South West	288	59	52	11	148	30	488
West Midlands	87	22	19	5	287	73	393
England	1458	40	283	8	1882	52	3623
England 2021/22	1526	39	318	8	2089	53	3933

Region	Conservation surgery		Mastectomy		No surgery		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	194	75	54	21	8	3	2	1	258	100
East of England	243	75	57	18	20	6	5	2	325	100
London	338	72	94	20	40	8	0	0	472	100
N East, Yorks & Humber	373	79	75	16	21	4	4	1	473	100
North West	357	77	81	18	23	5	1	0	462	100
South East	514	82	88	14	25	4	3	0	630	100
South West	364	79	73	16	22	5	3	1	462	100
West Midlands	289	76	79	21	8	2	3	1	379	100
England	2672	77	601	17	167	5	21	1	3461	100
England 2021/22	2886	77	660	18	182	5	7	0	3735	100

Region	Conservation surgery		Mastectomy		No surgery		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	7	50	7	50	0	0	0	0	14	100
East of England	7	47	8	53	0	0	0	0	15	100
London	13	65	7	35	0	0	0	0	20	100
N East, Yorks & Humber	29	97	1	3	0	0	0	0	30	100
North West	15	88	2	12	0	0	0	0	17	100
South East	18	69	8	31	0	0	0	0	26	100
South West	15	58	10	38	0	0	1	4	26	100
West Midlands	11	79	3	21	0	0	0	0	14	100
England	115	71	46	28	0	0	1	1	162	100
England 2021/22	144	73	54	27	0	0	0	0	198	100

Region	Conservation surgery		Mastectomy		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%
East Midlands	25	43	33	57	0	0	58	100
East of England	21	42	29	58	0	0	50	100
London	25	33	51	67	0	0	76	100
N East, Yorks & Humber	34	40	52	60	0	0	86	100
North West	37	43	49	57	0	0	86	100
South East	40	42	56	58	0	0	96	100
South West	22	33	45	67	0	0	67	100
West Midlands	28	37	47	63	0	0	75	100
England	232	39	362	61	0	0	594	100
England 2021/22	253	39	398	61	0	0	651	100

Region	Conservation surgery		Mastectomy		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%
East Midlands	12	41	17	59	0	0	29	100
East of England	18	41	26	59	0	0	44	100
London	18	32	39	68	0	0	57	100
N East, Yorks & Humber	25	34	48	66	0	0	73	100
North West	29	41	41	59	0	0	70	100
South East	34	47	39	53	0	0	73	100
South West	17	33	35	67	0	0	52	100
West Midlands	22	40	33	60	0	0	55	100
England	175	39	278	61	0	0	453	100
England 2021/22	190	38	313	62	0	0	503	100

Region	Conservation surgery		Mastectomy		No Surgery		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	984	80	200	16	51	4	1	0	1236	100
East of England	1191	81	222	15	61	4	3	0	1477	100
London	1246	77	288	18	90	6	0	0	1624	100
N East, Yorks & Humber	1792	84	273	13	77	4	0	0	2142	100
North West	1516	83	239	13	73	4	3	0	1831	100
South East	1844	80	376	16	77	3	0	0	2297	100
South West	1600	84	243	13	54	3	3	0	1900	100
West Midlands	1259	81	238	15	48	3	0	0	1545	100
England	11432	81	2079	15	531	4	10	0	14052	100
England 2021/22	12089	81	2273	15	568	4	5	0	14935	100

Table 39: Mastectomy rate with invasive tumour size

Region	<15mm		15-≤20mm		>20-≤35mm		>35-≤50mm		>50mm	
	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	63	10	37	14	52	25	23	52	20	80
East of England	66	9	31	9	63	25	27	49	32	84
London	75	11	41	11	90	25	32	41	43	80
N East, Yorks & Humber	89	8	46	10	76	22	26	31	32	74
North West	70	8	41	10	58	18	31	40	37	76
South East	98	9	52	11	116	25	42	47	63	78
South West	78	8	41	10	56	17	33	49	30	77
West Midlands	64	9	44	13	64	21	36	53	25	63
England	603	9	333	11	575	22	250	44	282	76
England 2021/22	718	10	383	11	565	21	288	49	276	76

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)

Table 40: Mastectomy rate with whole tumour size

Region	<15mm		15-≤20mm		>20-≤35mm		>35-≤50mm		>50mm	
	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	26	6	29	11	51	20	28	34	52	79
East of England	21	4	20	6	52	18	40	36	47	71
London	14	3	24	7	65	16	49	35	95	72
N East, Yorks & Humber	29	4	31	6	70	15	39	29	85	64
North West	20	3	28	7	40	11	45	33	84	79
South East	23	3	29	6	100	18	70	43	111	74
South West	27	4	27	7	54	13	46	37	60	71
West Midlands	24	5	33	9	44	13	39	38	61	64
England	184	4	221	7	476	15	356	36	595	71
England 2021/22	209	4	251	8	526	16	432	40	637	71

Numerator – number of tumours treated by mastectomy by whole size

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

Table 41: Mastectomy rate for <15mm invasive cancers by whole tumour size

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	26	6	6	2	7	3	7	9	15	23
East of England	21	4	5	1	15	5	10	9	9	14
London	14	3	9	3	12	3	15	11	18	14
N East, Yorks & Humber	29	4	7	1	9	2	14	10	27	20
North West	20	3	6	1	6	2	11	8	21	20
South East	23	3	7	1	17	3	13	8	29	19
South West	27	4	10	2	11	3	12	10	16	19
West Midlands	24	5	9	3	6	2	5	5	15	16
England	184	4	59	2	83	3	87	9	150	18
England 2021/22	209	4	68	2	108	3	108	10	196	22

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)

Region	Immediate reconstruction		No immediate reconstruction		Unknown		Total mastectomies	
	No.	%	No.	%	No.	%	No.	%
East Midlands	63	24	198	76	0	0	261	100
East of England	86	30	200	70	1	0	287	100
London	184	47	198	51	7	2	389	100
N East, Yorks & Humber	112	32	229	66	8	2	349	100
North West	134	42	188	58	0	0	322	100
South East	125	26	347	73	1	0	473	100
South West	106	33	219	67	1	0	326	100
West Midlands	94	29	226	71	0	0	320	100
England	904	33	1805	66	18	1	2727	100
England 2021/22	1039	35	1942	65	7	0	2988	100

Region	Had treatment		Did not have treatment		Unknown		Total
	No.	%	No.	%	No.	%	
East Midlands	104	7	1404	93	0	0	1508
East of England	193	11	1624	89	0	0	1817
London	246	12	1870	88	0	0	2116
N East, Yorks & Humber	211	8	2436	92	0	0	2647
North West	220	10	2091	90	0	0	2311
South East	220	7	2734	93	0	0	2954
South West	182	8	2207	92	0	0	2389
West Midlands	316	16	1622	84	0	0	1938
England	1692	10	15988	90	0	0	17680
England 2021/22	1450	8	17423	92	0	0	18873

Region	Had treatment		Did not have treatment		Unknown		Total
	No.	%	No.	%	No.	%	
East Midlands	33	2	1475	98	0	0	1508
East of England	86	5	1731	95	0	0	1817
London	99	5	2017	95	0	0	2116
N East, Yorks & Humber	111	4	2536	96	0	0	2647
North West	87	4	2224	96	0	0	2311
South East	76	3	2878	97	0	0	2954
South West	65	3	2324	97	0	0	2389
West Midlands	185	10	1753	90	0	0	1938
England	742	4	16938	96	0	0	17680
England 2021/22	633	3	18240	97	0	0	18873

Region	Had treatment		Did not have treatment		Unknown		Total
	No.	%	No.	%	No.	%	
East Midlands	73	6	1163	94	0	0	1236
East of England	114	8	1363	92	0	0	1477
London	150	9	1474	91	0	0	1624
N East, Yorks & Humber	103	5	2039	95	0	0	2142
North West	134	7	1697	93	0	0	1831
South East	145	6	2152	94	0	0	2297
South West	121	6	1779	94	0	0	1900
West Midlands	145	9	1400	91	0	0	1545
England	985	7	13067	93	0	0	14052
England 2021/22	858	6	14077	94	0	0	14935

Region	Had treatment		Did not have treatment		Unknown		Total
	No.	%	No.	%	No.	%	
East Midlands	0	0	1508	100	0	0	1508
East of England	3	0	1814	100	0	0	1817
London	7	0	2109	100	0	0	2116
N East, Yorks & Humber	9	0	2638	100	0	0	2647
North West	16	1	2295	99	0	0	2311
South East	17	1	2937	99	0	0	2954
South West	5	0	2384	100	0	0	2389
West Midlands	20	1	1918	99	0	0	1938
England	77	0	17603	100	0	0	17680
England 2021/22	73	0	18800	100	0	0	18873

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	63	15	24	27	43	17	27	3	5	1	2	0	0	23
East of England	69	17	25	24	35	21	30	6	9	1	1	0	0	26
London	114	49	43	38	33	16	14	10	9	1	1	0	0	13
N East, Yorks & Humber	89	19	21	27	30	24	27	18	20	0	0	1	1	30
North West	97	24	25	38	39	26	27	7	7	2	2	0	0	23
South East	107	27	25	33	31	29	27	16	15	1	1	1	1	27
South West	89	23	26	24	27	26	29	16	18	0	0	0	0	29
West Midlands	63	8	13	19	30	24	38	12	19	0	0	0	0	33
England	691	182	26	230	33	183	26	88	13	6	1	2	0	25
England 2021/22	664	158	24	197	30	193	29	98	15	14	2	4	1	27

The surgeons in each Region are credited with their total UK screening caseload.

Table 48: Proportion of women referred to consultant surgeons according to annual caseload of surgeon

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	1548	51	3	554	36	690	45	169	11	84	5	0	0
East of England	1835	47	3	514	28	814	44	368	20	92	5	0	0
London	2130	113	5	734	34	610	29	590	28	83	4	0	0
N East, Yorks & Humber	2722	50	2	520	19	961	35	1061	39	0	0	130	5
North West	2388	70	3	746	31	963	40	424	18	185	8	0	0
South East	3066	57	2	732	24	1139	37	936	31	89	3	113	4
South West	2491	47	2	512	21	1016	41	916	37	0	0	0	0
West Midlands	2006	14	1	397	20	901	45	694	35	0	0	0	0
England	18186	449	2	4709	26	7094	39	5158	28	533	3	243	1
England 2021/22	19432	448	2	3927	20	7435	38	5903	30	1232	6	487	3

Table 49: Repeat operations (>1 op) of surgically treated invasive and non/micro-invasive cancers without a non-op diagnosis

Region	Invasive			Non/micro-invasive		
	Total	No	%	Total	No	%
East Midlands	1	1	100	11	5	45
East of England	9	3	33	25	9	36
London	4	1	25	19	2	11
N East, Yorks & Humber	6	3	50	19	9	47
North West	8	5	63	15	4	27
South East	7	4	57	38	9	24
South West	7	6	86	24	7	29
West Midlands	4	2	50	17	8	47
England	46	25	54	168	53	32
England 2021/22	43	30	70	211	68	32

Table 50: Number of therapeutic operations (invasive cancers) with initial BCS and a non-operative diagnosis

Region	1		2		3		4+		Unknown		Total cancers		Repeat 2+ ops	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%
East Midlands	820	82	167	17	14	1	4	0	0	0	1005	100	185	18
East of England	1015	84	175	14	18	1	2	0	0	0	1210	100	195	16
London	1053	83	199	16	13	1	2	0	0	0	1267	100	214	17
N East, Yorks & Humber	1582	87	216	12	24	1	2	0	0	0	1824	100	242	13
North West	1279	84	238	16	14	1	0	0	0	0	1531	100	252	16
South East	1518	80	327	17	32	2	12	1	0	0	1889	100	371	20
South West	1361	83	240	15	26	2	3	0	0	0	1630	100	269	17
West Midlands	1062	83	195	15	17	1	2	0	0	0	1276	100	214	17
England	9690	83	1757	15	158	1	27	0	0	0	11632	100	1942	17
England 2021/22	10251	83	1818	15	206	2	23	0	0	0	12298	100	2047	17

Table 51: Number of therapeutic operations (non/micro-invasive cancers) with initial BCS and a non-operative diagnosis

Region	1		2		3		4+		Unknown		Total cancers		Repeat 2+ ops	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%
East Midlands	156	76	44	22	4	2	0	0	0	0	204	100	48	24
East of England	186	79	46	20	2	1	1	0	0	0	235	100	49	21
London	281	82	55	16	5	1	1	0	0	0	342	100	61	18
N East, Yorks & Humber	316	79	71	18	10	3	3	1	0	0	400	100	84	21
North West	309	84	52	14	8	2	1	0	0	0	370	100	61	16
South East	374	72	111	21	30	6	2	0	0	0	517	100	143	28
South West	280	74	81	22	13	3	2	1	0	0	376	100	96	26
West Midlands	242	80	48	16	10	3	1	0	0	0	301	100	59	20
England	2144	78	508	19	82	3	11	0	0	0	2745	100	601	22
England 2021/22	2307	78	554	19	78	3	8	0	0	0	2947	100	640	22

Table 52: Number of therapeutic operations for invasive cancers with B5b (invasive) core biopsy result

Region	1		2		3+		Unknown		Total		Repeat (2+) rate	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	959	86	135	12	15	1	0	0	1109	100	150	14
East of England	1137	86	165	13	16	1	0	0	1318	100	181	14
London	1235	87	170	12	8	1	0	0	1413	100	178	13
N East, Yorks & Humber	1738	89	184	9	24	1	0	0	1946	100	208	11
North West	1427	87	207	13	14	1	0	0	1648	100	221	13
South East	1770	84	289	14	37	2	0	0	2096	100	326	16
South West	1506	86	214	12	24	1	0	0	1744	100	238	14
West Midlands	1242	87	165	12	16	1	0	0	1423	100	181	13
England	11014	87	1529	12	154	1	0	0	12697	100	1683	13
England 2021/22	11638	86	1629	12	192	1	0	0	13459	100	1821	14

Table 53: Number of therapeutic operations for invasive cancers with B5a (non-invasive) core biopsy result

Region	1		2		3+		Unknown		Total		Repeat (2+) rate	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	23	37	37	60	2	3	0	0	62	100	39	63
East of England	34	45	37	49	4	5	0	0	75	100	41	55
London	36	35	61	59	7	7	0	0	104	100	68	65
N East, Yorks & Humber	50	50	48	48	3	3	0	0	101	100	51	50
North West	37	41	53	59	0	0	0	0	90	100	53	59
South East	45	46	47	48	5	5	0	0	97	100	52	54
South West	33	41	42	53	5	6	0	0	80	100	47	59
West Midlands	18	27	46	70	2	3	0	0	66	100	48	73
England	276	41	371	55	28	4	0	0	675	100	399	59
England 2021/22	343	44	398	51	39	5	0	0	780	100	437	56

Table 54: Number of therapeutic operations for non-invasive or micro-invasive cancers with B5a (non-invasive) core biopsy result

Region	1		2		3+		Unknown		Total		Repeat (2+) rate	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	184	80	42	18	4	2	0	0	230	100	46	20
East of England	221	79	54	19	3	1	0	0	278	100	57	21
London	344	85	55	14	6	1	0	0	405	100	61	15
N East, Yorks & Humber	353	80	73	17	13	3	0	0	439	100	86	20
North West	354	85	54	13	8	2	0	0	416	100	62	15
South East	408	74	114	21	28	5	0	0	550	100	142	26
South West	315	76	85	20	15	4	0	0	415	100	100	24
West Midlands	291	82	53	15	11	3	0	0	355	100	64	18
England	2470	80	530	17	88	3	0	0	3088	100	618	20
England 2021/22	2656	81	555	17	80	2	0	0	3291	100	635	19

Table 55: Repeat BCS (all cancers) with initial BCS and a non-operative diagnosis

Region	All cancers with initial BCS (with non-op diagnosis)	Repeat BCS	
		No	%
East Midlands	1209	152	13
East of England	1445	151	10
London	1609	161	10
N East, Yorks & Humber	2224	225	10
North West	1902	214	11
South East	2406	361	15
South West	2006	260	13
West Midlands	1577	191	12
England	14378	1715	12
England 2021/22	15245	1864	12

Table 56: Converted to mastectomy (all cancers) with initial BCS and a non-operative diagnosis

Region	All cancers with initial BCS (with non-op diagnosis)	Converted to Mx	
		No	%
East Midlands	1209	36	3
East of England	1445	31	2
London	1609	36	2
N East, Yorks & Humber	2224	50	2
North West	1902	31	2
South East	2406	70	3
South West	2006	51	3
West Midlands	1577	35	2
England	14378	340	2
England 2021/22	15245	370	2

Region	Total cases with surgery to the breast	Complete margin data	% complete margin data	Not complete margin data
East Midlands	1410	1265	90	145
East of England	1690	1577	93	113
London	1891	1769	94	122
N East, Yorks & Humber	2486	2449	99	37
North West	2141	2032	95	109
South East	2759	2591	94	168
South West	2235	2148	96	87
West Midlands	1821	1761	97	60
England	16433	15592	95	841
England 2021/22	17642	16644	94	998

Region	Total cases with surgery	Margin clear		Margin not clear		Margin unknown	
		No.	%	No.	%	No.	%
East Midlands	1152	1144	99	7	1	1	0
East of England	1412	1376	97	32	2	4	0
London	1514	1496	99	18	1	0	0
N East, Yorks & Humber	2141	2123	99	15	1	3	0
North West	1825	1780	98	39	2	6	0
South East	2302	2258	98	37	2	7	0
South West	1916	1893	99	19	1	4	0
West Midlands	1511	1485	98	25	2	1	0
England	13773	13555	98	192	1	26	0
England 2021/22	14731	14399	98	300	2	32	0

Region	Total cases with surgery	Margin clear		Margin not clear		Margin unknown	
		No.	%	No.	%	No.	%
East Midlands	256	254	99	2	1	0	0
East of England	270	237	88	2	1	31	11
London	377	365	97	12	3	0	0
N East, Yorks & Humber	341	325	95	15	4	1	0
North West	312	301	96	11	4	0	0
South East	454	426	94	27	6	1	0
South West	313	301	96	11	4	1	0
West Midlands	307	293	95	14	5	0	0
England	2630	2502	95	94	4	34	1
England 2021/22	2899	2682	93	160	6	57	2

Region	Had axillary ultrasound		Did not have axillary ultrasound		Unknown		Total
	No.	%	No.	%	No.	%	
East Midlands	1224	99	12	1	0	0	1236
East of England	1453	98	24	2	0	0	1477
London	1621	100	3	0	0	0	1624
N East, Yorks & Humber	2092	98	50	2	0	0	2142
North West	1828	100	3	0	0	0	1831
South East	2294	100	2	0	1	0	2297
South West	1883	99	16	1	1	0	1900
West Midlands	1537	99	8	1	0	0	1545
England	13932	99	118	1	2	0	14052
England 2021/22	14815	99	119	1	1	0	14935

Region	Normal		Abnormal		Total
	No.	%	No.	%	
East Midlands	1031	84	193	16	1224
East of England	1257	87	196	13	1453
London	1363	84	258	16	1621
N East, Yorks & Humber	1798	86	294	14	2092
North West	1541	84	287	16	1828
South East	1973	86	321	14	2294
South West	1660	88	223	12	1883
West Midlands	1279	83	258	17	1537
England	11902	85	2030	15	13932
England 2021/22	12801	86	2014	14	14815

Region	Had axillary biopsy		Did not have axillary biopsy		Unknown		Total
	No.	%	No.	%	No.	%	
East Midlands	183	95	10	5	0	0	193
East of England	190	97	6	3	0	0	196
London	249	97	6	2	3	1	258
N East, Yorks & Humber	276	94	18	6	0	0	294
North West	237	83	50	17	0	0	287
South East	303	94	17	5	1	0	321
South West	196	88	27	12	0	0	223
West Midlands	250	97	7	3	1	0	258
England	1884	93	141	7	5	0	2030
England 2021/22	1864	93	140	7	10	0	2014

Table 63: Worst axillary biopsy result for invasive cancer cases with an abnormal axillary ultrasound scan

Region	C1/B1		C2/B2		C3/B3		C4/B4		C5/B5		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	
East Midlands	6	3	76	42	3	2	2	1	96	52	183
East of England	4	2	70	37	2	1	2	1	112	59	190
London	9	4	86	35	1	0	2	1	151	61	249
N East, Yorks & Humber	7	3	139	50	1	0	2	1	127	46	276
North West	8	3	105	44	4	2	2	1	118	50	237
South East	9	3	121	40	0	0	2	1	171	56	303
South West	14	7	70	36	2	1	2	1	108	55	196
West Midlands	3	1	119	48	0	0	2	1	126	50	250
England	60	3	786	42	13	1	16	1	1009	54	1884
England 2021/22	92	5	768	41	6	0	12	1	986	53	1864

Table 64: Worst axillary biopsy result for invasive cancer cases with a normal axillary ultrasound scan

Region	C1/B1		C2/B2		C3/B3		C4/B4		C5/B5		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	
East Midlands	0	0	1	100	0	0	0	0	0	0	1
East of England	0	0	5	71	0	0	0	0	2	29	7
London	0	0	0	0	0	0	0	0	1	100	1
N East, Yorks & Humber	0	0	4	57	0	0	1	14	2	29	7
North West	1	13	4	50	0	0	0	0	3	38	8
South East	0	0	3	50	1	17	0	0	2	33	6
South West	0	0	2	40	1	20	0	0	2	40	5
West Midlands	0	0	2	50	1	25	0	0	1	25	4
England	1	3	21	54	3	8	1	3	13	33	39
England 2021/22	4	9	20	44	3	7	1	2	17	38	45

Table 65: PPV of axillary biopsy results for invasive cancers (with any axillary ultrasound scan result) found to have positive nodes at surgery*

Region	C1/B1		C2/B2		C3/B3		C4/B4		C5/B5	
	No.	%	No.	%	No.	%	No.	%	No.	%
East Midlands	0	0	9	14	2	67	1	50	45	92
East of England	0	0	15	23	1	50	1	100	57	93
London	2	40	12	19	0	0	1	50	64	98
N East, Yorks & Humber	1	20	19	15	0	0	1	33	78	96
North West	1	13	11	13	1	50	1	100	56	92
South East	1	13	24	23	0	0	0	-	105	95
South West	4	33	12	19	1	33	0	-	57	97
West Midlands	0	0	18	19	0	0	0	0	49	100
England	9	19	120	18	5	36	5	50	511	96
England 2021/22	20	27	124	18	5	71	7	58	513	92

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.

Table 66: Positive predictivity of all/any pre-op assessments for invasive cancers with positive nodal status at surgery *			
Region	Total with positive nodal status	Had positive pre-op ax assessment	
		No	%
East Midlands	174	45	26
East of England	221	58	26
London	230	64	28
N East, Yorks & Humber	337	78	23
North West	254	56	22
South East	375	105	28
South West	279	57	20
West Midlands	174	49	28
England	2044	512	25
England 2021/22	2256	513	23

*Excluded cases with neo-adjuvant therapy.

Table 67: Nodal positivity for invasive cancers without neo-adjuvant therapy and without or unknown pre-op axillary assessment			
Region	Total without/unknown pre-op ax	Positive nodal status	
		No	%
East Midlands	978	117	12
East of England	1103	146	13
London	1172	151	13
N East, Yorks & Humber	1649	238	14
North West	1416	184	13
South East	1797	245	14
South West	1531	205	13
West Midlands	1063	107	10
England	10709	1393	13
England 2021/22	11757	1587	13

*Excluded cases with neo-adjuvant therapy.

Table 68: Pre-op axillary biopsy results for invasive cancers with positive nodal status												
Region	C1/B1		C2/B2		C3/B3		C4/B4		C5/B5		Invasive cases with positive nodal status	
	No.	%	No.	%	No.	%	No.	%	No.	%		
East Midlands	0	0	9	5	2	1	1	1	45	26	174	
East of England	0	0	15	7	1	0	1	0	58	26	221	
London	2	1	12	5	0	0	1	0	64	28	230	
N East, Yorks & Humber	1	0	19	6	0	0	1	0	78	23	337	
North West	1	0	11	4	1	0	1	0	56	22	254	
South East	1	0	24	6	0	0	0	0	105	28	375	
South West	4	1	12	4	1	0	0	0	57	20	279	
West Midlands	0	0	18	10	0	0	0	0	49	28	174	
England	9	0	120	6	5	0	5	0	512	25	2044	
England 21/22	20	1	124	5	5	0	7	0	513	23	2256	

The denominator is all invasive cancers with axillary ultrasound and positive nodes at surgery. Excluded cases with neo-adjuvant therapy.

Table 69: Data completion of lymph node status for surgically treated invasive cancers

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	1185	1177	99	0	0	8	1	0	0
East of England	1416	1390	98	0	0	26	2	0	0
London	1534	1513	99	0	0	21	1	0	0
N East, Yorks & Humber	2065	2035	99	0	0	30	1	0	0
North West	1758	1749	99	0	0	9	1	0	0
South East	2220	2198	99	0	0	22	1	0	0
South West	1846	1810	98	0	0	36	2	0	0
West Midlands	1497	1490	100	0	0	7	0	0	0
England	13521	13362	99	0	0	159	1	0	0
England 2021/22	14367	14210	99	0	0	157	1	0	0

Table 70: Sentinel lymph node primary axillary procedure undertaken for invasive cancers with axillary surgery

Region	With SLNB		Other Axillary procedure		Total	
	No.	%	No.	%	No.	%
East Midlands	1065	90	113	10	1178	100
East of England	1285	92	107	8	1392	100
London	1386	91	129	9	1515	100
N East, Yorks & Humber	1909	94	128	6	2037	100
North West	1596	91	152	9	1748	100
South East	2010	91	187	9	2197	100
South West	1706	94	108	6	1814	100
West Midlands	1366	92	125	8	1491	100
England	12323	92	1049	8	13372	100
England 2021/22	13196	93	1032	7	14228	100

Table 71: Nodal status of invasive cancers

Region	Total known with known nodal status	Positive		Negative	
		No.	%	No.	%
East Midlands	1177	196	17	981	83
East of England	1390	256	18	1134	82
London	1513	284	19	1229	81
N East, Yorks & Humber	2035	369	18	1666	82
North West	1749	301	17	1448	83
South East	2198	412	19	1786	81
South West	1810	312	17	1498	83
West Midlands	1490	230	15	1260	85
England	13362	2360	18	11002	82
England 2021/22	14210	2552	18	11658	82

Table 72: Number of nodes taken for invasive cases without SLNB or with unknown axillary procedure

Region	Total with axillary surgery	0 node obtained		1,2,3 nodes obtained		≥4nodes obtained		Unknown	
		No.	%	No.	%	No.	%	No.	%
		East Midlands	113	1	1	6	5	106	94
East of England	107	0	0	1	1	106	99	0	0
London	129	1	1	2	2	126	98	0	0
N East, Yorks & Humber	128	1	1	13	10	114	89	0	0
North West	152	0	0	12	8	140	92	0	0
South East	187	0	0	9	5	178	95	0	0
South West	108	0	0	2	2	106	98	0	0
West Midlands	125	0	0	10	8	115	92	0	0
England	1049	3	0	55	5	991	94	0	0
England 2021/22	1032	3	0	58	6	971	94	0	0

Table 73: Nodal status of invasive cancers with SLNB or unknown axillary procedure

Region	With SLNB				Without SLNB			
	Positive		Negative		Positive		Negative	
	No.	%	No.	%	No.	%	No.	%
East Midlands	132	12	933	88	64	57	48	42
East of England	174	14	1109	86	82	77	25	23
London	176	13	1209	87	108	84	20	16
N East, Yorks & Humber	276	14	1632	85	93	73	34	27
North West	206	13	1390	87	95	63	58	38
South East	269	13	1739	87	143	76	47	25
South West	228	13	1474	86	84	78	24	22
West Midlands	150	11	1215	89	80	64	45	36
England	1611	13	10701	87	749	71	301	29
England 2021/22	1785	14	11394	86	767	74	264	26

Table 74: Number of nodes obtained for invasive cancers with positive nodal status determined from SLNB

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	60	100	0	0	60	30	42	42	58	72
East of England	83	100	0	0	83	27	30	64	70	91
London	84	99	1	1	85	26	29	65	71	91
N East, Yorks & Humber	152	100	0	0	152	63	51	61	49	124
North West	104	100	0	0	104	35	34	67	66	102
South East	135	100	0	0	135	48	36	86	64	134
South West	141	100	0	0	141	31	36	56	64	87
West Midlands	75	100	0	0	75	32	43	43	57	75
England	834	100	1	0	835	292	38	484	62	776
England 2021/22	897	99	6	1	903	344	39	538	61	882

Table 75: Status of invasive cases with <4 nodes obtained

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	1177	856	72.7	60	5.1	0	0.0	790	67	6	0.5	0	0
East of England	1390	1020	73.4	83	6.0	0	0.0	936	67	1	0.1	0	0
London	1513	1132	74.8	85	5.6	1	0.1	1045	69	1	0.1	0	0
N East, Yorks & Humber	2035	1567	77.0	152	7.5	6	0.3	1402	69	7	0.3	0	0
North West	1749	1268	72.5	104	5.9	1	0.1	1151	66	12	0.7	0	0
South East	2198	1667	75.8	135	6.1	0	0.0	1522	69	10	0.5	0	0
South West	1810	1429	79.0	141	7.8	0	0.0	1286	71	2	0.1	0	0
West Midlands	1490	1162	78.0	75	5.0	2	0.1	1077	72	8	0.5	0	0
England	13362	10101	75.6	835	6.2	10	0.1	9209	69	47	0.4	0	0
England 2021/22	14210	10784	75.9	903	6.4	6	0.0	9822	69	53	0.4	0	0

Table 76: Availability of lymph node status for surgically treated non-invasive cancers

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	250	49	20	0	0	201	80	0	0
East of England	305	68	22	0	0	237	78	0	0
London	432	98	23	0	0	334	77	0	0
N East, Yorks & Humber	452	84	19	0	0	368	81	0	0
North West	439	89	20	0	0	350	80	0	0
South East	605	96	16	0	0	509	84	0	0
South West	440	76	17	0	0	364	83	0	0
West Midlands	371	90	24	0	0	281	76	0	0
England	3294	650	20	0	0	2644	80	0	0
England 2021/22	3553	764	22	0	0	2789	78	0	0

Table 77: Treatment for non-invasive cancers with known nodal status

Region	Conservation with known nodal status		Total Conservation	Mastectomy with known nodal status		Total mastectomy
	No.	%		No.	%	
East Midlands	5	3	194	44	81	54
East of England	17	7	243	51	89	57
London	14	4	338	84	89	94
N East, Yorks & Humber	17	5	373	67	89	75
North West	15	4	357	74	91	81
South East	14	3	514	82	93	88
South West	17	5	364	59	81	73
West Midlands	12	4	289	78	99	79
England	111	4	2672	539	90	601
England 2021/22	172	6	2886	592	90	660

Region	Total known nodal status	Positive		Negative	
		No.	%	No.	%
East Midlands	49	0	0	49	100
East of England	68	0	0	68	100
London	98	2	2	96	98
N East, Yorks & Humber	84	0	0	84	100
North West	89	0	0	89	100
South East	96	0	0	96	100
South West	76	0	0	76	100
West Midlands	90	1	1	89	99
England	650	3	0.5	647	99.5
England 2021/22	764	9	1	755	99

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	40	74	3	6	0	0.0	0	0.0	1	1.9	54	44	91
East of England	50	88	1	2	0	0.0	0	0.0	0	0.0	57	51	98
London	80	85	1	1	3	3.2	0	0.0	0	0.0	94	84	95
N East, Yorks & Humber	64	85	2	3	0	0.0	0	0.0	1	1.3	75	67	96
North West	73	90	1	1	0	0.0	0	0.0	0	0.0	81	74	99
South East	81	92	1	1	0	0.0	0	0.0	0	0.0	88	82	99
South West	59	81	0	0	0	0.0	0	0.0	0	0.0	73	59	100
West Midlands	77	97	1	1	0	0.0	0	0.0	0	0.0	79	78	99
England	524	87	10	2	3	0.5	0	0.0	2	0.3	601	539	97
England 2021/22	575	87	11	2	4	0.6	0	0.0	2	0.3	660	592	97

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	4	2	0	0	0	0.0	0	0.0	1	0.5	194	5	80
East of England	17	7	0	0	0	0.0	0	0.0	0	0.0	243	17	100
London	14	4	0	0	0	0.0	0	0.0	0	0.0	338	14	100
N East, Yorks & Humber	17	5	0	0	0	0.0	0	0.0	0	0.0	373	17	100
North West	13	4	0	0	1	0.3	0	0.0	1	0.3	357	15	87
South East	12	2	0	0	0	0.0	0	0.0	2	0.4	514	14	86
South West	17	5	0	0	0	0.0	0	0.0	0	0.0	364	17	100
West Midlands	12	4	0	0	0	0.0	0	0.0	0	0.0	289	12	100
England	106	4	0	0	1	0.0	0	0.0	4	0.1	2672	111	95
England 2021/22	163	6	3	0	1	0.0	0	0.0	5	0.2	2886	172	95

Region	Total known nodal status	Conservation			Mastectomy		
		Mean	Median	Maximum	Mean	Median	Maximum
East Midlands	49	2	1	7	2	1	12
East of England	68	3	2	10	2	2	6
London	98	2	2	5	3	2	21
N East, Yorks & Humber	84	2	1	4	2	2	7
North West	89	5	2	30	2	2	5
South East	96	1	1	3	2	2	8
South West	76	1	1	3	2	2	11
West Midlands	90	2	1.5	3	2	2	10
England	650	2	2	30	2	2	21
England 2021/22	764	2	2	19	2	2	18

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	1109	100	1106	100	0	0	62	95	24	39	35	62
East of England	1318	99	1311	99	0	0	75	85	26	35	38	75
London	1413	99	1403	99	2	0	104	94	38	37	60	104
N East, Yorks & Humber	1946	100	1941	100	0	0	101	83	40	40	44	101
North West	1648	100	1641	100	4	0	90	93	37	41	47	90
South East	2096	99	2080	99	2	0	97	93	42	43	48	97
South West	1743	99	1724	99	1	0	80	85	27	34	41	80
West Midlands	1423	100	1421	100	0	0	66	97	19	29	45	66
England	12696	100	12627	99	9	0	675	91	253	37	358	53
England 2021/22	13459	100	13404	100	8	0	780	90	311	40	393	50

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	196	41	21	3	2	44	93
East of England	256	64	25	0	0	64	100
London	284	64	23	3	1	67	96
N East, Yorks & Humber	369	60	16	3	1	63	95
North West	301	67	22	3	1	70	96
South East	412	86	21	0	0	86	100
South West	312	56	18	0	0	56	100
West Midlands	230	43	19	0	0	43	100
England	2360	481	20	12	1	493	98
England 2021/22	2552	540	21	15	1	555	97