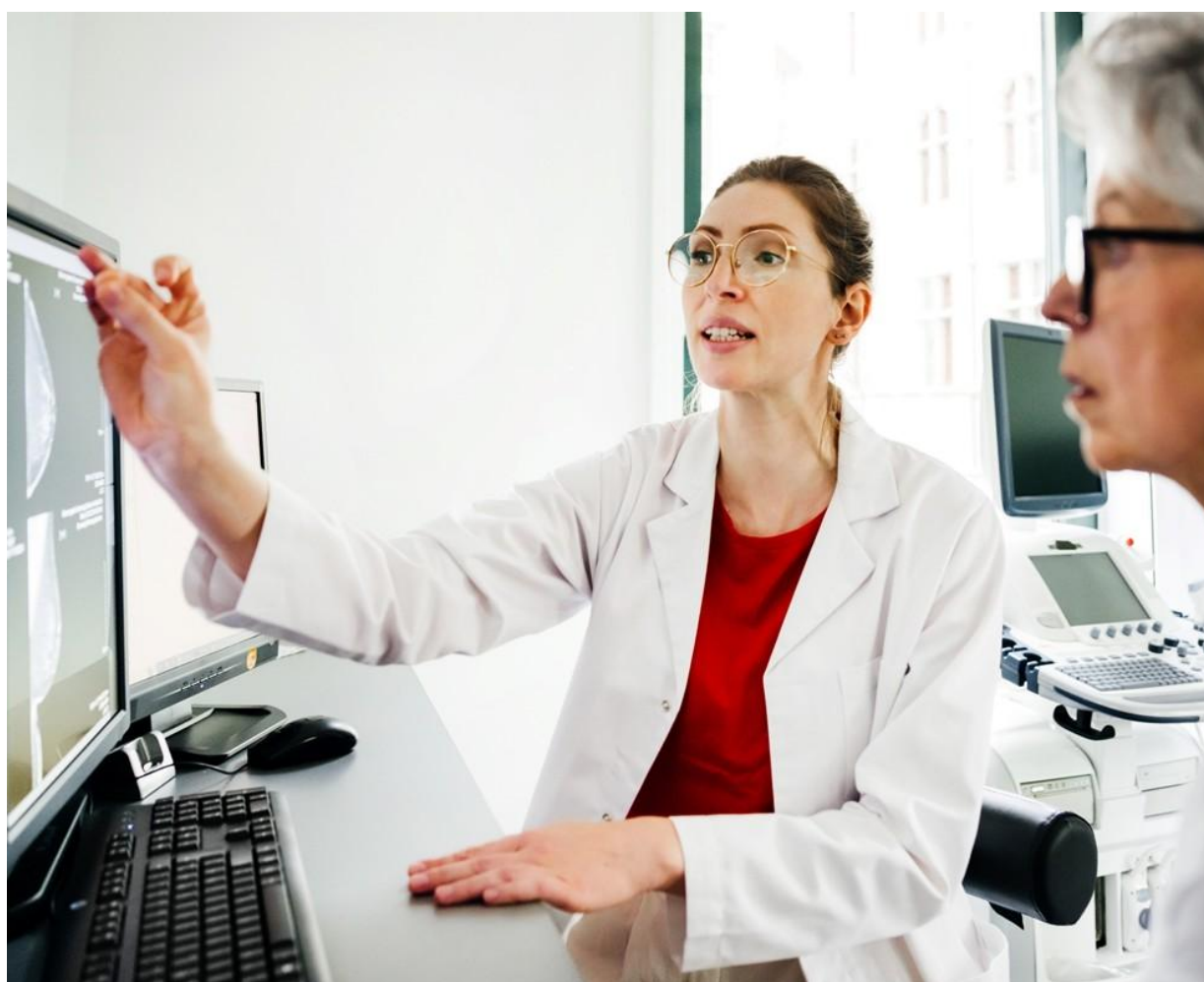


National Audit of Primary Breast Cancer

State of the Nation Patient and Public Report 2025

A summary of findings for patients and the public

An audit of care received by people diagnosed with primary breast cancer
in England and Wales during 2020 to 2022



Citation for this document:

National Audit of Primary Breast Cancer (NAoPri) State of the Nation Patient and Public Report 2025. London:
National Cancer Audit Collaborating Centre, Royal College of Surgeons of England, 2025.

The SotN Patient and Public report was co-produced by the members of the NAOpri project team and Patient and Public Involvement (PPI) forum.



**Royal College
of Surgeons
of England**

The Royal College of Surgeons of England is an independent professional body committed to supporting surgeons to help them achieve and maintain the highest standards of surgical practice and patient care. As part of this, it helps with carrying out audits and evaluating clinical effectiveness for surgery.
Registered charity number: 212808



The Association of Breast Surgery is a registered charity that is dedicated to improving breast surgery and how breast conditions are managed for the benefit of the public.

For more information, visit www.associationofbreastsurgery.org.uk.
Registered charity number: 1135699



The UK Breast Cancer Group (UKBCG) is a forum for clinical and medical oncologists. The UKBCG acts as a stakeholder to NICE, NHS England and other organisations and carries out key pieces of work (with other organisations when necessary) with the aim of improving patient care.

For more information, visit <https://ukbcg.org/>.
Registered charity number: 1177296

Patient groups represented on the NAOpri Patient and Public Involvement (PPI) forum



Breast Cancer Now is a charity that's led by world-class research which works towards providing life-changing care. They help anyone affected by breast cancer, the whole way through their care and treatment, providing support for today and hope for the future.

For more information, visit <https://breastcancernow.org/>.
Registered charity numbers: 1160558 (England and Wales), SC045584 (Scotland) and 1200 (The Isle of Man)



Independent Cancer Patients' Voice (ICPV) is a patient advocate group that is not linked to established UK cancer charities. They know how valuable medical research is to both public healthcare and the national economy.

For more information, visit www.independentcancerpatientsvoice.org.uk.
Registered charity number: 1138456



Men's Virtual Meet-Up (VMU) are a patient advocacy group for men diagnosed with breast cancer, to help them feel seen and heard, and to know they are not alone.

For more information, visit <https://www.themensvmu.org/>.
Registered charity number: 1196494



Flat Friends UK is dedicated to supporting women who have had mastectomy surgery without breast reconstruction (including those who may face decisions about reconstruction in the future).

For more information, visit <https://flatfriends.org.uk/>.
Registered charity number: 1168730



Lobular Breast Cancer UK works to save more lives by campaigning for increased information and targeted research, quicker diagnosis and more effective treatment guidelines across the UK.

For more information, visit <https://lobularbreastcancer.org.uk/>.
Registered charity number: 1191402



The Inflammatory Breast Cancer (IBC) Network UK is a charity supporting people affected by IBC. We provide guidance and peer support, raise awareness and collaborate with clinicians and researchers to improve the diagnosis, treatment and outcomes for patients living with this rare and aggressive form of breast cancer.

For more information, visit <https://www.ibcnetworkuk.org/>.
Registered charity number: 1177635 (England and Wales) and SC052303 (Scotland)

Commissioner



The Healthcare Quality Improvement Partnership (HQIP) is led by a group from the Academy of Medical Royal Colleges, the Royal College of Nursing and National Voices. It aims to promote quality improvement in patient outcomes and increase the effect that clinical audits, outcome review programmes and registries have on the quality of healthcare in England and Wales.

For more information visit <https://www.hqip.org.uk/national-programmes>.

Acknowledgements

This report uses information which was provided by patients and collected as part of their care and support.



For patients diagnosed in England, information was collected, maintained and quality assured by the National Disease Registration Service (NDRS), which is part of NHS Digital.



For patients diagnosed in Wales, information was collected, maintained and quality assured by the Wales Cancer Network (WCN), which is part of Public Health Wales.

Copyright

© 2025 Healthcare Quality Improvement Partnership (HQIP)

All rights reserved. No part of this document can be copied or reproduced in any way (including by photocopying or storing it digitally) without written permission from the copyright owner, the Healthcare Quality Improvement Partnership (HQIP).

Contents

1. What is the NAOpri?	1
2. What is primary breast cancer?	1
3. What is this report about?	1
4. What data does the NAOpri use?	1
5. Where can I find more information about the NAOpri?	1
6. Who is the SotN report about?	2
7. How complete is primary breast cancer data?	2
8. How are people diagnosed and supported with primary breast cancer?	3
9. How is primary breast cancer treated?	4
10. What are the outcomes for patients with primary breast cancer?	6
11. What you can do	7
12. Information and support about breast cancer	7
13. Glossary	8

Acronyms (see Glossary below for full explanation of terms)

- BCS – Breast conserving surgery
- CNS – Clinical Nurse Specialist
- COSD – Cancer Outcomes and Services Dataset
- EIBC – Early Invasive Breast Cancer
- ER – Oestrogen receptor
- HER2 – Human epidermal growth factor receptor-2
- IBC – Inflammatory breast cancer
- IBR – Immediate breast reconstruction
- MDT – Multidisciplinary team
- NABCOP – National Audit of Breast Cancer in Older Patients
- NAOpri – National Audit of Primary Breast Cancer
- NACT - Neo-adjuvant chemotherapy
- NHS – National Health Service
- NICE – National Institute for Health and Care Excellence
- SACT – Systemic Anti-Cancer Therapy
- SotN – State of the Nation
- TDA – Triple Diagnostic Assessment
- TNBC – Triple Negative Breast Cancer

1. What is the NAOpri?

The National Audit of Primary Breast Cancer (NAOpri) is a national clinical audit. It aims to find out about the health and healthcare of people with primary breast cancer in England and Wales, and to improve patient care by highlighting areas where improvements could be made.

The NAOpri builds on work from the National Audit of Breast Cancer in Older Patients (NABCOP), which ran from 2016 to 2022. The NAOpri has been expanded to include younger people and men.

2. What is primary breast cancer?

Primary breast cancer is breast cancer which, when diagnosed, was only found in the breast or nearby lymph nodes with no spread to other parts of the body. This includes non-invasive (stage 0) and invasive (stage 1A to 3C) breast cancer.

The National Audit of Metastatic Breast Cancer (NAOMe) reports on patients who have breast cancer which has spread beyond the breast and nearby lymph nodes (stage 4). You can read more about the NAOMe [here](#).

We do not currently report specific information for bilateral breast cancer cases. This is because various difficulties arise in the analysis and reporting of results when someone has more than one set of tumour characteristics, for example, the ER status and HER2 status may be different in each breast cancer.

3. What is this report about?

This is a summary of the main findings and recommendations from the second NAOpri State of the Nation (SotN) report.

You can download the full report, as well as additional information including data from individual NHS organisations, [here](#). This also allows you to see the results from your own Breast Unit.

The purpose of this clinical audit is to assess the patterns of care and outcomes for people with primary breast cancer in England and Wales, and help NHS services to improve the quality of their data and the care they provide. The results of this audit are based on data relating to people in England and Wales diagnosed and treated for primary breast cancer between 2020 and 2022. The breast cancer care described for this period includes changes introduced in the NHS during

the COVID-19 pandemic. As a result, data for 2020 to 2021 may be different. It is important to note that breast cancer is a heterogeneous disease, and treatment approaches may vary depending on individual patient circumstances.

We produced this report with the NAOpri Patient and Public Involvement Forum, who represent and support the rights and interests of patients.

In this summary, speech bubbles (like this one) tell you which pages in the full SotN report give more information.

SotN report page

4. What data does the NAOpri use?

The NAOpri uses data from electronic medical records that is routinely recorded as part of patient care in English and Welsh hospitals.

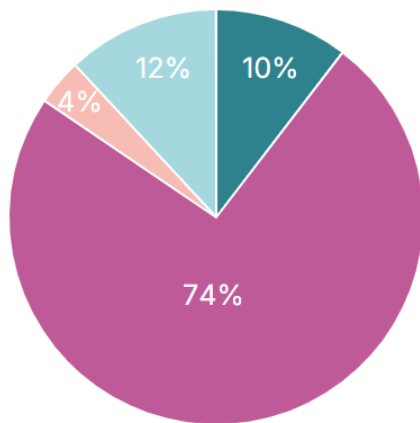
For more information, see page 3 of the full SotN report.

5. Where can I find more information about the NAOpri?

- Follow us on: X [@NAOpri_News](#), Bluesky [@NAOpri-news](#) and [LinkedIn](#)
- Read our newsletters on the National Cancer Audit Collaborating Centre (NATCAN) website [here](#).
- Email us: breastcanceraudits@rcseng.ac.uk

6. Who is the SotN report about?

In total, 135,115 people were diagnosed with primary breast cancer between 2020 and 2022 in England and Wales.



● Non-invasive (Stage 0) ● Early invasive (Stage 1 to 3A)
● Locally advanced (Stage 3B to 3C) ● Stage unknown

People with primary breast cancer included in the SotN report, by broad groupings of disease stage.

This included 134,161 (99%) women and 954 (1%) men across 121 Breast Units.

Most people (7 in 10) included in the report had Early Invasive Breast Cancer (EIBC) (Stage 1A to 3A). 1 in 10 people had non-invasive breast cancer. The smallest group (4 in 100) had locally advanced breast cancer. Around 1 in 10 people did not have sufficient data regarding their staging to be categorised.

SotN report page 7

7. How complete is primary breast cancer data?

The chart (right) shows the percentage of people in England and Wales with primary breast cancer who had complete data for each data item shown. Complete data means information required by the audit about the person's cancer was recorded in their electronic medical records, and then submitted by the hospitals to the national cancer information systems in England and Wales.

For HER2 status and performance status (a measure of people's ability to carry out daily activities) for England and Wales, as well as Clinical Nurse Specialist contact in England, data were completed in fewer than 80% of people.

Why does this matter?

Treatment options depend on the specific type of breast cancer a person has and their fitness for treatment. It is important that this information is recorded accurately on national cancer databases to allow the NAOpri to better understand patterns of breast cancer care in the NHS.

Data completeness for important data items.

	England	Wales
Tumour grade	97%	99%
ER status	86%	85%
HER2 status	78%	76%
Performance status	65%	28%
Clinical Nurse Specialist	78%	93%

For HER2 status and performance status for England and Wales, as well as Clinical Nurse Specialist contact in England, data were completed in fewer than 80% of people.



Key findings from NAOpri SotN Report 2025

Each Breast Unit should ensure that their multidisciplinary team (MDT) has someone responsible for checking the quality of the data they send nationally. This should include checking that important details are fully recorded, such as tumour characteristics (e.g., ER and HER2 status), fitness (especially for people aged 70 and over), and whether a clinical nurse specialist was involved.



NAOpri 2025 SotN Recommendation

8. How are people diagnosed and supported with primary breast cancer?

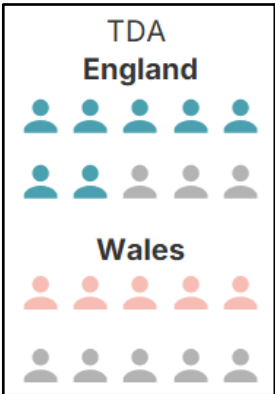
SotN report page 11

Triple Diagnostic Assessment (TDA)

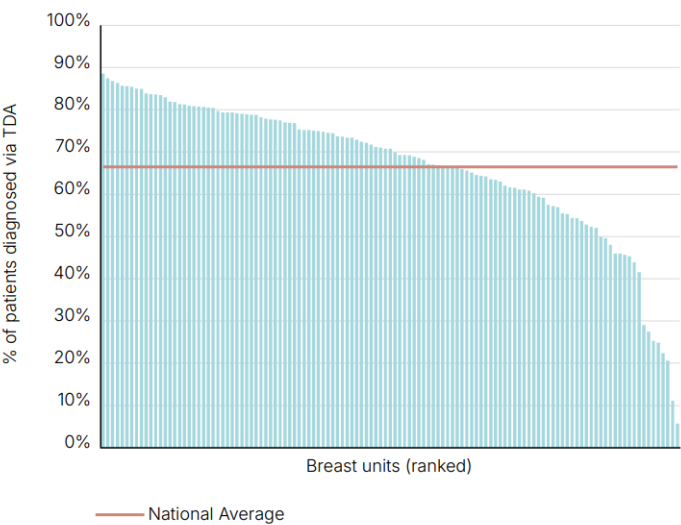
A TDA helps to make sure that breast cancer is diagnosed as quickly as possible. It involves having an examination, scans (a mammogram and/or ultrasound), and biopsies at the first hospital clinic visit.

This measure only includes people who present with symptoms from their breast cancer (people diagnosed at breast screening are not included). This is because people who are diagnosed at screening would not necessarily be expected to have all their investigations on the same day as their initial mammogram.

In England, around 7 in 10 people underwent Triple Diagnostic Assessment (TDA). In Wales, around 5 in 10 people underwent TDA. Of note, the dedicated data item that should capture this information for England was not available. This meant that an algorithm was used instead to estimate how many people had TDA in England. Details about this algorithm can be found in the methodology supplement for the SotN report. Data for Wales was captured from a specific data item.



There was significant variation in the percentage of people who had TDA at each Breast Unit, as shown by the graph below. Each blue bar represents a Breast Unit, and the pink line represents the national average for England and Wales, combined. In some breast units, less than half of people appeared to have TDA.



Why does this matter?

TDA has been shown to speed up diagnosis and therefore reduces stress and increases satisfaction.

Graph showing the percentage of people at each Breast Unit who have TDA in a single hospital visit.

In England, around 7 in 10 people underwent Triple Diagnostic Assessment (TDA). In Wales, around 5 in 10 people underwent TDA. There was significant variation in the use of TDA at each Breast Unit.



Key findings from NAOpri SotN Report 2025

People with breast cancer should have access to Triple Diagnostic Assessment (TDA) in a single hospital visit. Breast Units should identify ways to improve the number of people who have access to this service.



NAOpri 2025 SotN Recommendation

Clinical Nurse Specialist (CNS)

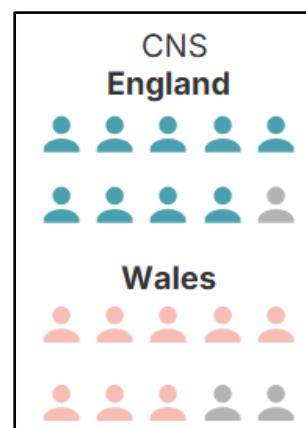
SotN report page 11

CNS are also known as Breast Care Nurses. In England, among people with Clinical Nurse Specialist (CNS) data recorded, 9 in 10 people were reported to see a CNS at diagnosis. For Wales, 8 in 10 people were reported to see a CNS at diagnosis. Of note, data completeness for this data item was only 78% for England compared to 93% for Wales. This means that true levels of performance are uncertain, and data completeness needs to be improved.

Why does this matter?

The National Institute for Health and Care Excellence (NICE) includes contact with a Clinical Nurse Specialist (CNS) in their quality standards of breast cancer care. Assigning a CNS to a person with primary breast cancer leads to better health outcomes.

Having a dedicated CNS promotes continuity of care as they can give information and support for the person with breast cancer throughout their treatment. They can improve the patient's experience and make sure the patient's views are considered.

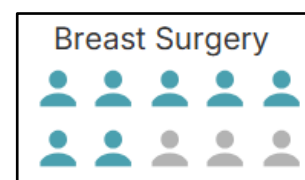


9. How is primary breast cancer treated?

SotN report page 4

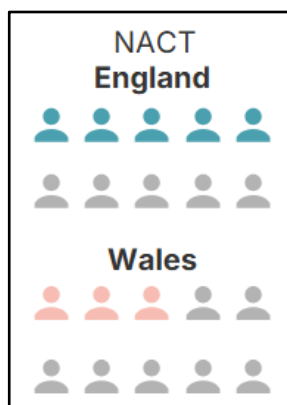
Breast surgery

Of those people who had surgery for their breast cancer within 12 months of diagnosis, 7 in 10 people in England and 7 in 10 people in Wales had breast conserving surgery as their first operation. The remaining individuals had a mastectomy as their first operation.



Use of neo-adjuvant chemotherapy (NACT)

SotN report page 12



Among people with stage 2 and stage 3A triple negative breast cancer (TNBC; negative receptors for oestrogen, progesterone and HER2) or HER2 positive breast cancer, 5 in 10 people in England and 3 in 10 people in Wales received neo-adjuvant chemotherapy (NACT) (chemotherapy as a first treatment before surgery).

There was significant variation in the use of NACT at each Breast Unit. In 23 Breast Units, less than 40% of people with stage 2 and 3A triple negative or HER2 positive breast cancer received NACT and in 23 Breast Units more than 60% of people received NACT.

Why does this matter?

National guidelines recommend offering NACT to people where chemotherapy may help to shrink the breast cancer before surgery (sometimes making breast conserving surgery possible rather than a mastectomy) and/or treat involved lymph nodes in the armpit.

There was significant variation in the use of neo-adjuvant chemotherapy (NACT) for people with stage 2 and stage 3A TNBC or HER2 positive breast cancer.



Key findings from NAOpri SotN Report 2025

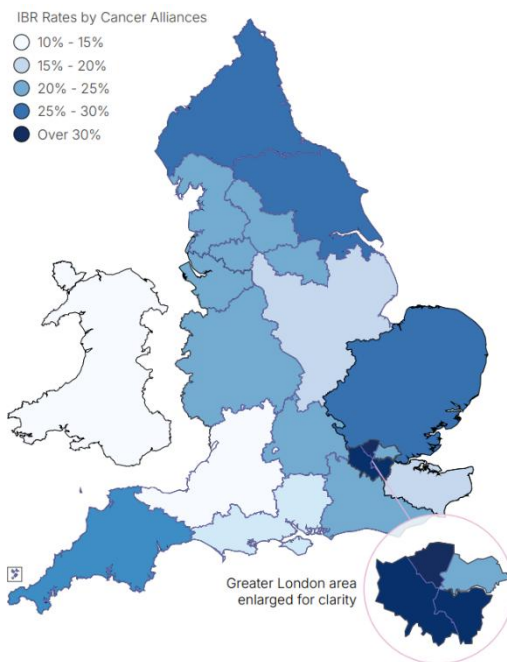
Use of immediate breast reconstruction after mastectomy

Among women who had a mastectomy, 2 in 10 women in England and 1 in 10 women in Wales had an immediate breast reconstruction (IBR) at the time of their mastectomy. Women who were older and had more advanced breast cancer were less likely to have IBR.

In line with national guideline recommendations, people who are eligible for neo-adjuvant chemotherapy (NACT) should be offered it, where appropriate. Breast Units should review their use of NACT to facilitate more consistent use across different hospitals in England and Wales.



NAoPri 2025 SotN Recommendation



There was significant variation in the use of IBR after mastectomy in each region (Cancer Alliance). This is shown on the map to the left. There was also significant variation in the use of IBR after mastectomy at each Breast Unit which varied from 2% to 42%. This variation was evident even after accounting for differences in case-mix (e.g., patient and tumour characteristics).

Why does this matter?

The National Institute for Health and Care Excellence (NICE) recommends that all women who are having a mastectomy should be offered immediate breast reconstruction, unless it can't be done because of underlying health problems or poor fitness. Whether or not women choose to proceed with reconstruction after being offered is a personal choice.

Map showing the percentage of people in each region (Cancer Alliance) in England and Wales who have an immediate breast reconstruction after a mastectomy. These percentages have been adjusted to account for important differences between patients (e.g., patient fitness) to make the comparisons fairer.

Overall, 2 in 10 women who had a mastectomy had an immediate breast reconstruction (IBR). There was significant variation in the use of IBR after mastectomy across regions (Cancer Alliances) and individual Breast Units in England and Wales.



Key findings from NAO Pri SotN Report 2025

Breast Units should review their use of immediate breast reconstruction (IBR) after mastectomy. Where use is lower than would be expected, Breast Units should act to improve this by ensuring it is offered to all women as part of a balanced shared decision-making process.



NAoPri 2025 SotN Recommendation

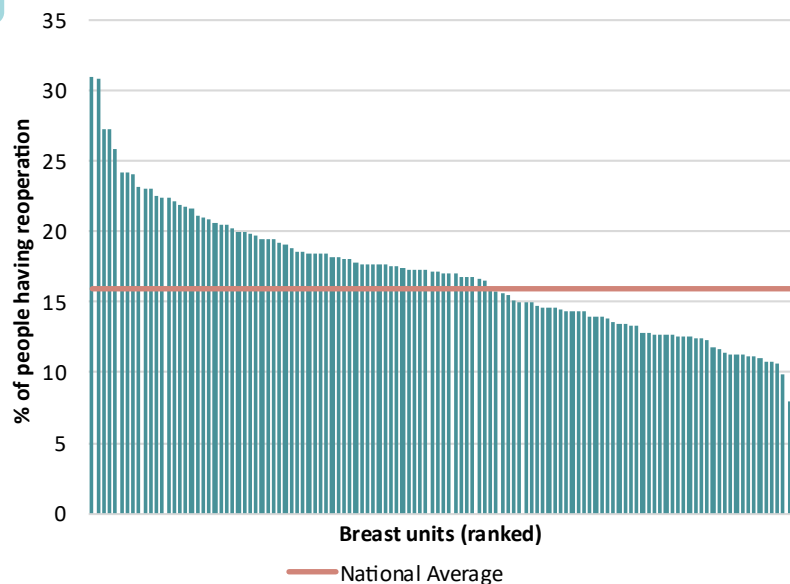
10. What are the outcomes for patients with primary breast cancer?

Re-operation

SotN report page 14

Among people with early breast cancer (stage 0 to stage 3A) who had breast conserving surgery (BCS), 2 in 10 people in England and 2 in 10 people in Wales had a further operation to remove cancer from their breast within 12 months of their initial operation. A re-operation can include either further breast conserving surgery or a mastectomy.

There was significant variation in the re-operation rate between Breast Units in England and Wales. This is shown on the graph to the right. Each blue bar represents a Breast Unit, and the pink line represents the national average for England and Wales, combined. 2 in 10 Breast Units had a re-operation rate that was higher than 20%.



Graph showing the percentage of people at each Breast Unit who had a re-operation after their initial breast conserving surgery (BCS).

Why does this matter?

National guidelines recommend offering further surgery after BCS where invasive or non-invasive cancer is present at the margins of the tissue removed in the first operation. Re-operation is associated with poorer cosmetic outcomes, adds to treatment burden, and can have a negative impact on quality of life. It can also delay additional treatments required after surgery.

Overall, 2 in 10 people had a re-operation following their initial breast conserving surgery (BCS). There was significant variation in the re-operation rates between Breast Units in England and Wales.



Key findings from NAO Pri SotN Report 2025

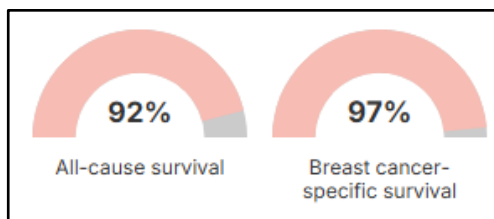
Breast Units should review their local re-operation rates following breast conserving surgery (BCS). Where re-operation rates are higher than might be expected, Breast Units should look at their practices and identify areas where improvements might be made to ensure best practice.



NAOPri 2025 SotN Recommendation

Survival

SotN report page 14



Overall, among people diagnosed with primary breast cancer (stage 1 to stage 3A) in England and Wales, 3-year all-cause survival was 92% and 3-year breast cancer-specific survival was 97%. 3-year survival for each NHS organisation can be found on the [Data Viewer](#).

Breast cancer-specific survival only includes deaths from breast cancer whereas all-cause survival includes death from any cause.

11. What you can do

Accurate information is important for achieving healthcare equality for all patients and across regions. Ask your breast cancer team to ensure information about your breast cancer is submitted to national cancer databases.

You can find data for the NHS organisation where you are receiving care [here](#).

12. Information and support about breast cancer



Find out more

You can find more information about the NAOpri at

<https://www.natcan.org.uk/audits/primary-breast/>

For general information about breast cancer, and how patient information is used to improve outcomes, please use the links to visit the websites listed in the boxes to the right.

Where to find information and support about breast cancer	
Breast Cancer Now	https://breastcancernow.org/ Helpline - 0808 800 6000
NHS England Breast Screening for women aged 71 or over	www.gov.uk/government/publications/breast-screening-for-women-aged-71-or-over
Cancer Research UK	www.cancerresearchuk.org
Flat Friends UK	www.flatfriends.org.uk
Macmillan Cancer Support	https://www.macmillan.org.uk/cancer-information-and-support/breast-cancer
NHS choices	www.nhs.uk/conditions/breast-cancer/
Lobular Breast Cancer UK	https://lobularbreastcancer.org.uk/
Inflammatory Breast Cancer Network UK	www.ibcnetworkuk.org
Maggie's	https://www.maggies.org/
Men's Virtual Meet-Up (VMU)	https://www.themensvmu.org/
Where to find information on how patient information is securely collected and shared, and opportunities for you to participate in research	
Independent Cancer Patients' Voice (ICPV)	www.independentcancerpatientsvoice.org.uk
use MY data	www.usemydata.org

13. Glossary

Term	Definition
Adjuvant treatment	Cancer treatment, such as chemotherapy, endocrine therapy or radiotherapy, given after surgery.
Axillary node clearance/ dissection	This describes surgery to remove the majority of lymph nodes in the armpit. Also known as an axillary node dissection.
Bilateral breast cancer	Breast cancer which, when diagnosed, was found in both breasts.
Biopsy	A procedure to remove a small sample of the cancer. It is important for making a diagnosis.
Breast Conserving Surgery (BCS)	Surgery to remove the breast cancer without removing all of the breast. Also known as a 'lumpectomy' or 'wide local excision' (WLE).
Breast reconstruction surgery	Surgery which aims to create a breast shape after mastectomy.
Chemotherapy	Treatment with drugs that kill cancer cells. This is a type of systemic anti-cancer therapy (SACT).
Clinical Nurse Specialist (CNS)	A highly experienced nurse who plays a crucial role in supporting patients throughout their diagnosis, treatment, and follow-up care for breast cancer. Also known as Breast Care Nurses (BCN).
Comorbidity	A medical condition that already exists.
Cancer Outcomes and Services Data set (COSD)	The COSD sets out the data that NHS England must record for all cancer patients. For more information, visit: https://digital.nhs.uk/ndrs/data/data-sets/cosd
Delayed reconstruction	Breast reconstruction surgery performed after a mastectomy as a separate surgery.
Disease stage	The stage of a cancer describes its size and whether it has spread from where it started.
Early Invasive Breast Cancer (EIBC)	Invasive breast cancer stages 1–3A.
Endocrine (hormone) therapy	Drug therapy used to treat oestrogen and or progesterone receptor positive breast cancer. It is a type of systemic anti-cancer therapy (SACT). Also known as 'hormone therapy'. This stops oestrogen from helping the cancer to grow.
Human Epidermal Growth Factor Receptor-2 (HER2)	A protein found on the surface of some breast cancer cells which helps them to grow.
Human Epidermal Growth Factor Receptor (HER2) status	A description of the level of HER2 seen in a breast cancer. A breast cancer that has a higher-than-normal level of HER2 is described as HER2 positive. HER2 status helps determine whether specific systemic anti-cancer therapies can be used.
Immediate reconstruction	Breast reconstruction surgery performed during the same surgery as a mastectomy.
Inflammatory Breast Cancer (IBC)	A rare type of breast cancer that presents a unique diagnostic and treatment challenge.

Invasive breast cancer	This is when cancerous cells have spread into breast tissue beyond the original breast duct or glands.
Lobular breast cancer	A distinct type of breast cancer that accounts for around 10-15% of new diagnoses.
Locally advanced breast cancer	Invasive breast cancer stages 3B and 3C. This includes breast cancer which might have spread to the skin of the breast or underlying chest muscles. It can also include breast cancer which has spread to 10 or more lymph nodes in the armpit, nodes above or below the collarbone, and lymph nodes next to the breastbone.
Mastectomy	Surgery to remove the whole breast.
Multidisciplinary team (MDT)	The team of specialists who deliver breast cancer care are known as a multidisciplinary team.
Neo-adjuvant treatment	Cancer treatment given before surgery e.g., neo-adjuvant chemotherapy (NACT).
Non-invasive breast cancer	This is when cancerous cells are only in the ducts or lobules of the breast and haven't spread to surrounding breast tissue. The most common type is called ductal carcinoma in-situ (DCIS).
Oestrogen Receptor (ER)	A protein found on the surface of cancer cells that the hormone oestrogen binds (sticks) to.
Oestrogen Receptor (ER) Status	A description of the level of oestrogen receptors seen in a breast cancer. Breast cancers which are ER positive are sensitive to oestrogen and can be treated with endocrine (hormone) therapy.
Performance status	A fitness assessment tool (scored 0-5) used to measure how disease(s) impacts a person's ability to manage activities of daily living.
Primary breast cancer	Breast cancer which, when diagnosed, was found only in the breast or nearby lymph nodes.
Progesterone Receptor (PR)	A protein found on the surface of cancer cells that the hormone progesterone binds (sticks) to.
Progesterone Receptor (PR) status	A description of the level of progesterone receptors seen in a breast cancer. Breast cancers which are PR positive are sensitive to progesterone and can be treated with endocrine therapy.
Radiotherapy	High energy X-rays used to kill cancer cells. It is used in primary breast cancer after surgery as a part of local treatment. For example, post-mastectomy radiotherapy (PMRT) is radiotherapy given to the chest wall following a mastectomy. Radiotherapy is used in metastatic breast cancer to treat localised metastatic disease, for example a bone metastasis.
Sentinel lymph node	The first lymph node which shows spread from a cancer.
Systemic Anti-Cancer Therapy (SACT)	These are drug treatments for cancer which aim to treat the whole body. For example, chemotherapy and endocrine therapy.
Triple Diagnostic Assessment (TDA)	An assessment which includes breast physical examination, scans and biopsies (as needed) during a single visit to get a quick breast cancer diagnosis. Some people need more complex investigations, which would happen at a different time.
Triple negative breast cancer (TNBC)	Breast cancer that is ER negative, PR negative and HER2-negative.