
National Audit of Breast Cancer in Older Patients

Part of the National Clinical Audit and Patient Outcomes Programme

Annual report for public and patients October 2018

Results of the Prospective Audit in England and Wales for women
diagnosed between January 2014 and December 2016



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BCOP

National
Audit of
Breast Cancer
in Older Patients

The National Audit of Breast Cancer in Older Patients (NABCOP) was commissioned by the Healthcare Quality Improvement Partnership (HQIP) to find out about the quality of care provided to women aged 70 years and older by breast cancer services in England and Wales. The audit was set up to look at whether or not older women with breast cancer have different outcomes than younger women, and if there are differences between breast cancer teams in the patterns of care delivered to older women.

To do this, the audit looks at what care and treatment women receive once they have been diagnosed with breast cancer, and then compares:

1. women aged 70 years and older with women aged between 50 and 69 years; and
2. different English and Welsh breast cancer teams with each other.

This year, the audit has produced information on women diagnosed with breast cancer between **1 January 2014 and 31 December 2016**. The audit has used information from the National Cancer Registration and Analysis Service (NCRAS) and the Wales Cancer Network (WCN) to report on:

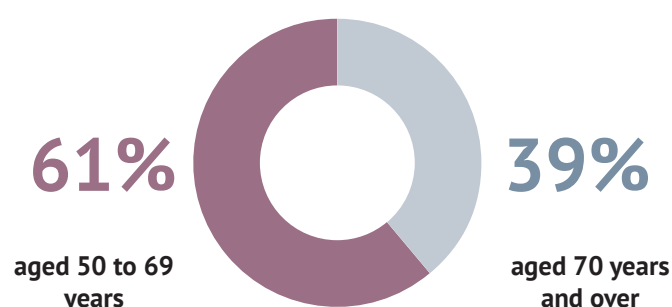
- how the breast cancer was diagnosed;
- how planned treatments take into account the stage of the cancer (its size and how far it has spread) and the woman's overall health;
- the type of treatments given to women; and
- how these patterns of care differ between women in the younger and older age groups and between types of breast cancer.

We have written this report for people with breast cancer as well as the public. It is a summary of the results from the NABCOP 2018 Annual Report (you can find the full 2018 Annual Report at <https://www.nabcop.org.uk/reports/nabcop-2018-annual-report/>). It describes:

- 1. what we know about women with breast cancer in England and Wales;**
- 2. how their breast cancer was diagnosed;**
- 3. if the women were seen by a breast clinical nurse specialist;**
- 4. the time from breast cancer being diagnosed to having surgery or starting chemotherapy;**
- 5. the type of surgery women with breast cancer have;**
- 6. how long women who have surgery for their breast cancer stay in hospital after this surgery;**
- 7. which women have radiotherapy after breast surgery; and**
- 8. which women have chemotherapy.**

Summary of findings

1. Describing women with breast cancer in England and Wales, between 2014 and 2016



In England and Wales 119,704 women aged 50 years and over were diagnosed with breast cancer between 2014 and 2016. Almost 4 in 10 of these women (39%) were aged 70 years and older.

Of the 119,704 women diagnosed with breast cancer, 12,729 of these women were diagnosed with ductal carcinoma in-situ (DCIS), and 106,975 were diagnosed with invasive breast cancer.

Ductal carcinoma in situ (DCIS)



A higher proportion of women aged 50 to 69 were diagnosed with DCIS (14%) compared with women aged 70 years and older (6%). This is likely to be because of the use of routine breast screening in women aged less than 70.

Invasive breast cancer



A higher percentage of women aged 70 years and older (94%) were diagnosed with invasive breast cancer compared to women aged 50 - 69 years (86%).

The key features of breast cancer in women aged 70 years and older, compared with women aged 50 to 69, are:

- a greater percentage had larger breast tumours; and
- a slightly higher percentage were diagnosed with cancer that had spread to the lymph nodes in the armpit (metastasis).

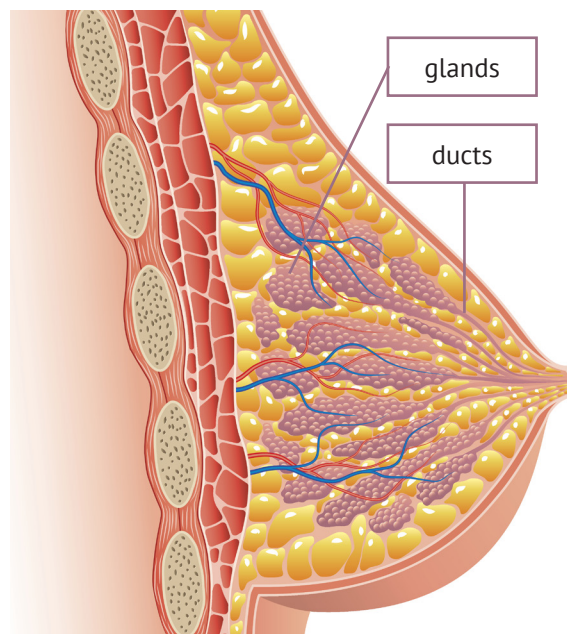
Box 1: What is breast cancer?

Cancer develops when there is uncontrolled growth of abnormal cells in part of the body.

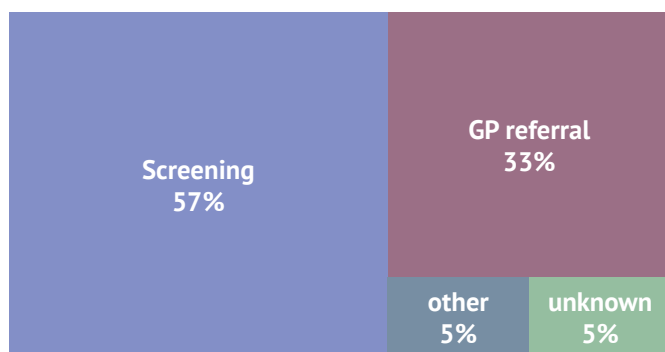
- In non-invasive breast cancer, these abnormal cells are restricted to the walls of the milk ducts (called **in-situ**). The most common type of non-invasive breast cancer is ductal carcinoma **in-situ** (DCIS).
- In invasive breast cancer, the cancerous cells spread beyond the walls of the milk ducts into other parts of the breast. Cancer cells can also spread to the lymph nodes in the armpit or other parts of the body (metastasis).

Features of an invasive breast cancer include how differently cancer cells appear compared with normal cells (grade) and whether or not the cancer cells are sensitive to hormones such as oestrogen (known as ER positive) and have a higher than normal level of a protein called human epidermal growth factor receptor (HER2). All breast cancers are also described by a 'stage', which describes the size and spread of the cancer.

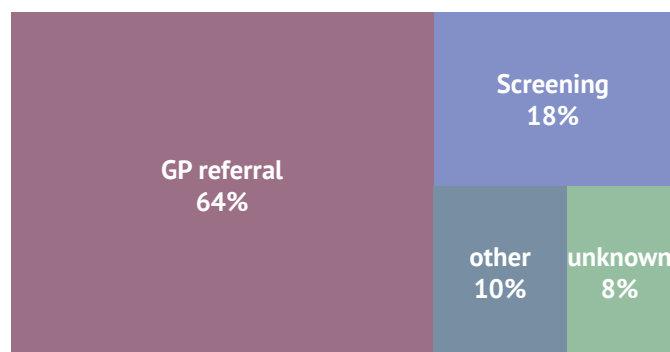
Figure 1 illustrates the anatomy of the breast showing where breast cancer can develop



2. Looking at how the breast cancer was diagnosed



Women aged 50 to 69 years



Women aged 70 years and over

Breast cancer can be diagnosed through a number of different care pathways (see box 2 on the next page).

- Among women aged 50 to 69 years, more than half (57%) of the women were diagnosed through screening.
- Among women aged 70 years and older, two-thirds (64%) were diagnosed after referral from their GP.

Among all women, the percentage diagnosed after an emergency referral was very low, at around 1%.

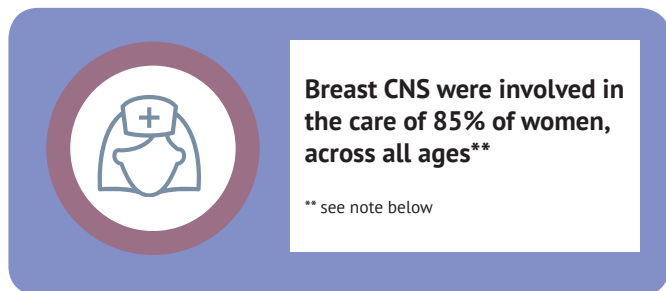
The percentage of women who were diagnosed after screening or GP referral was seen to vary by English and Welsh breast cancer teams.

3. Whether or not women were seen by a breast clinical nurse specialist (CNS)

It is recommended that a woman with breast cancer is assigned a named breast clinical nurse specialist (CNS) to provide information and support during their diagnosis and treatment.

Based on the information available on women in England (see note¹ below):

- More than 8 in 10 women with breast cancer were reported to have seen a breast CNS (85%); and
- access to a breast CNS was similar for all ages.
- There was variation across breast cancer teams in the percentage of women who had information on whether or not they had seen a breast CNS.



Box 2: Summary of the care pathway in England and Wales for women with breast cancer

How breast cancer is diagnosed

Most women have their breast cancer diagnosed after being referred to a hospital breast clinic by their local doctor (GP) because they have a symptom such as a lump. A second way in which breast cancer might be diagnosed is if a woman goes to routine breast screening. In England and Wales, women aged between 50 and 70 are invited for a mammogram (breast x-ray) every three years as part of a national breast screening programme. Women aged 70 years and older are not usually sent an invitation, but can continue to have a mammogram every three years if they ask for it. (In some areas, women aged between 47 and 73 may also be invited for a mammogram.)

Another way women are diagnosed with breast cancer is after being referred to a hospital breast clinic because tests for another health problem find something that could be breast cancer. This is more common in older women as they are more likely to have other health problems.

At the hospital breast clinic, most people have a breast examination by a doctor or nurse, and one or more of the following tests:

- a mammogram;
- an ultrasound scan of the breast, and often the lymph nodes under the arm; or
- a biopsy

Women who are diagnosed with breast cancer are cared for by a team of healthcare professionals, each with their own role and expertise. This team is known as the multidisciplinary team (MDT). They meet to plan how to manage patients and to discuss treatment options. Treatment options will depend on whether a person is diagnosed with invasive or non-invasive breast cancer.

Figure 2 provides an example of the steps described in this box.

¹ This information was not available for Welsh patients at the time of producing this report. We expect it will be in future.

Care pathway for breast cancer

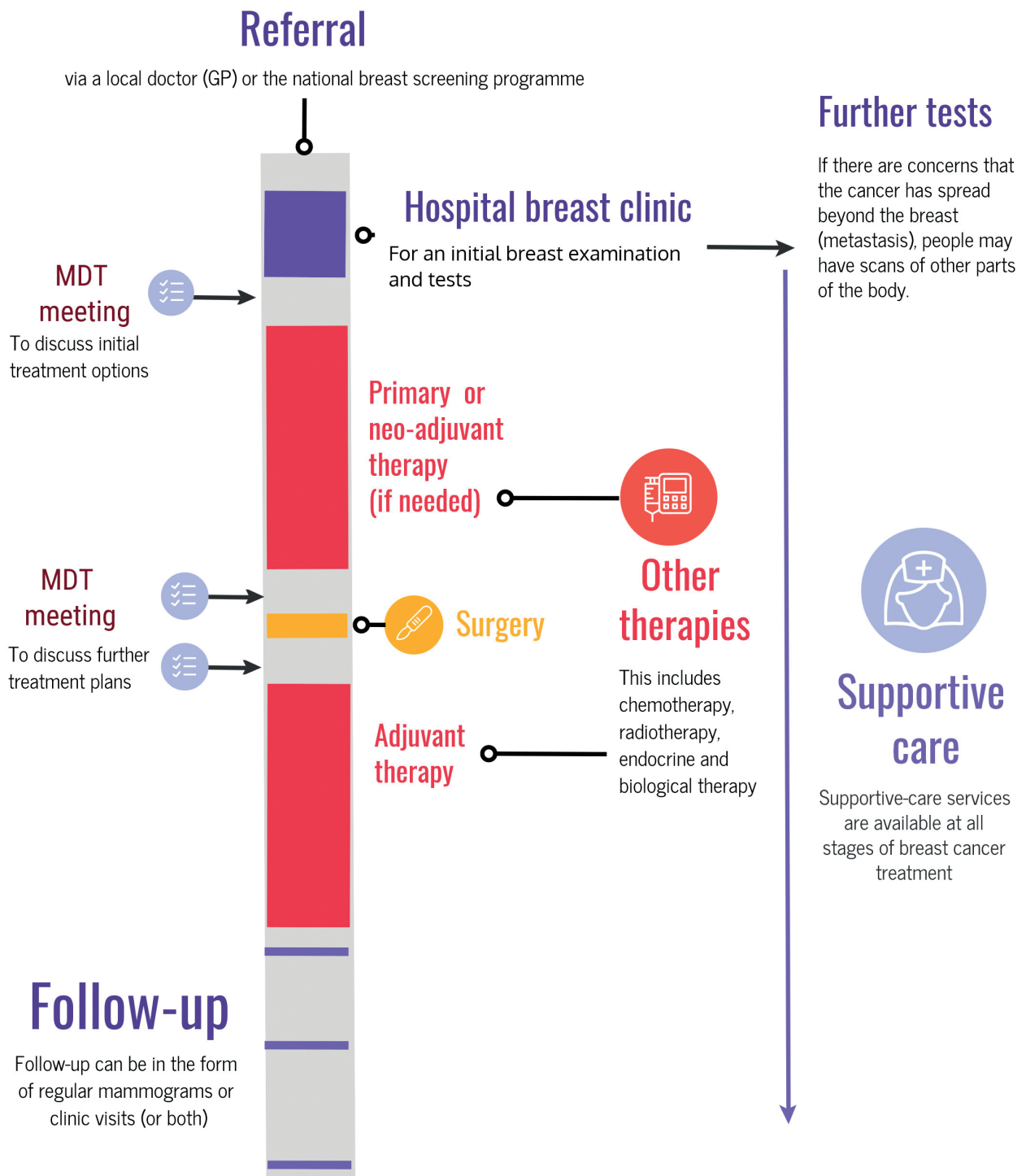


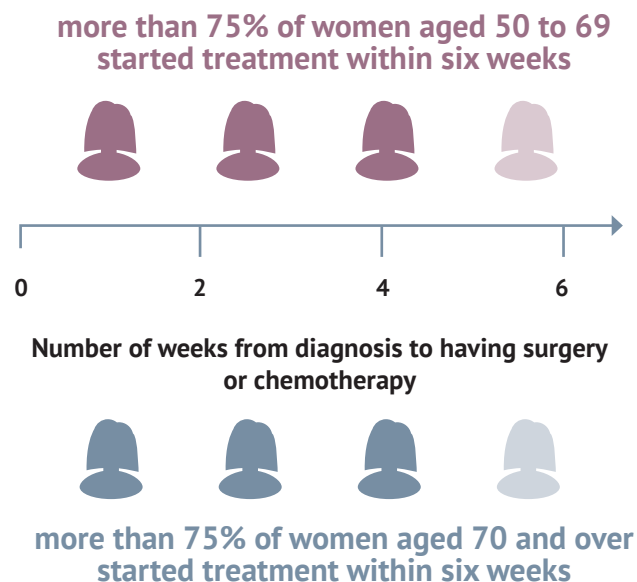
Figure 2: An example of a typical breast cancer care pathway in English and Welsh NHS hospitals.

4. Looking at the time from breast cancer diagnosis to having first surgery or starting chemotherapy

The time from diagnosis to having their first surgery or starting chemotherapy was similar for all women aged 50 and over.

For around 2 in 10 women (22%) it was more than six weeks from their breast cancer being diagnosed to them having surgery or starting chemotherapy (23% of women aged 50 to 69 years and 20% of those aged 70 years and over), but the time tended not to be much longer than this.

The time from diagnosis to their first treatment with surgery or chemotherapy was also not affected by age at any of the English and Welsh NHS hospitals.



Box 3: Treatments for women with breast cancer – surgery

Surgery is the first treatment for most women diagnosed with either invasive or non-invasive breast cancer. The two main types of breast surgery are:

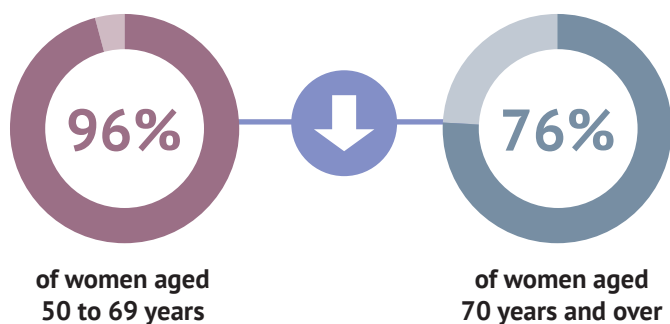
- mastectomy – which involves removing the cancer and all the breast tissue; or
- breast-conserving surgery (BCS) – which involves removing a portion of the breast which contains the cancer.

The type of surgery a woman has will depend on several factors, such as the size of the breast cancer compared to the breast size, if it is in more than one part of the breast and how much it has spread, as well as what each woman wants.

Most women with invasive breast cancer will also have the lymph nodes under their arm examined because breast cancer can sometimes spread there. If an ultrasound and biopsy show cancer in the lymph nodes, women usually have surgery to remove the nodes. This is known as an axillary clearance.

If the tests done before surgery do not show cancer in the lymph nodes, a sentinel-lymph-node biopsy (SNB) can be done. This checks if the first (sentinel) lymph node (or nodes) that drains the breast is clear of cancer cells. If they are clear, no more nodes will need to be removed. If they do contain cancer cells, often further surgery, or sometimes radiotherapy to the armpit, may be needed.

5. Looking at who had surgery for early invasive breast cancer in England and Wales



**had surgery for early invasive
breast cancer**

- The percentage of women who had surgery reduced from 96% for women aged 50 to 59 years to 76% for women aged 70 years and older.
- Only 19% of women aged 90 and over had surgery.

As expected, women were less likely to have surgery if they were less fit. Although the likelihood of having surgery was lower for less-fit women aged 70 years and older, compared with less-fit women aged 50 to 69.

There were also differences across English and Welsh breast cancer teams in the percentages of women aged 70 years and older who had breast surgery for early invasive breast cancer. The reasons behind these differences are not yet clear. We will explore this further in future annual reports.

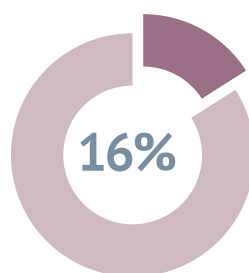
6. Looking at how long women who have surgery stay in hospital after this surgery

For many women who had surgery for their breast cancer, the time spent in hospital was short, with women usually admitted and discharged on the same day or within two days. Only 4% of women stayed in hospital for more than two days after breast-conserving surgery (BCS).

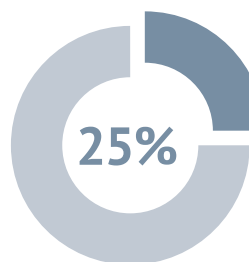
For women who had a mastectomy and sentinel-node biopsy (SNB) (without breast reconstruction), the percentage of women staying over two days varied.

- 25% of women aged 70 and older stayed in hospital for more than two days compared with only 16% of women aged 50 to 69.
- How long women stayed in hospital after surgery also varied between English and Welsh breast cancer teams across all age groups. This variation was greatest among women aged 70 and older, which might be expected due to reduced levels of overall fitness.
- However, the figure was more than 20% in women aged 70 years and older in 71 organisations, which might be an indication of local barriers to patients being discharged.

Women who had a mastectomy and sentinel node biopsy



**16% of women aged
50 to 69 stayed longer
than 2 days**



**25% of women aged
70 and over stayed longer
than 2 days**

Box 4: Other treatments for women with breast cancer

As well as surgery, there are other treatments used for breast cancer. These can include:

- chemotherapy;
- radiotherapy;
- hormone (endocrine) therapy;
- biological (targeted) therapy; and
- bisphosphonates.

The choice and order of treatments given to a woman depends on the characteristics of the tumour, as well as the physical fitness of the patient. Chemotherapy, hormone therapy and biological therapies may be given before surgery (known as neo-adjuvant [or primary systemic] therapy) or after surgery (known as adjuvant therapy). Hormone therapy can also be given instead of surgery. This is called primary endocrine therapy (PET).

In the next two sections, we report on the women who received radiotherapy or chemotherapy as part of their treatments for breast cancer.

We are not able to report on hormone and biological therapies, as this information was not available at the time of producing this report.

7. Which women have radiotherapy after breast surgery?

Guidelines recommend that if a woman has breast-conserving surgery (BCS) then radiotherapy should be considered after this for all patients with DCIS or early invasive breast cancer.

- Overall, 54% of women diagnosed with DCIS had radiotherapy after BCS. However, fewer women (41%) aged 70 and older at diagnosis had radiotherapy after breast surgery, when compared with women aged 50 to 69 years (57%).

- Among women with early invasive breast cancer, 85% of those aged 50 to 69 had radiotherapy to the breast after BCS. Fewer women aged 70 and older had radiotherapy after BCS – 80% for women aged 70 and older (72% of women aged 80 to 89).

There was limited variation in the pattern of radiotherapy after BCS across English and Welsh NHS hospitals among women aged 50 to 69, but the pattern varied a lot among women aged 70 and older.

Radiotherapy after breast surgery in women with DCIS

in women aged 50 to 69 years

57% 

57% of women with DCIS aged 50 to 69 had radiotherapy after breast surgery

in women aged 70 years and over

41% 

41% of women with DCIS aged 70 and over had radiotherapy after breast surgery

The use of radiotherapy after mastectomy is recommended only for patients with invasive breast cancer who are considered to have a moderate or high risk of the cancer returning (for example, cancer was found in the lymph nodes) and is not recommended after mastectomy for women with DCIS.

- Among women with early invasive breast cancer treated with mastectomy, the percentage of women who had radiotherapy to the chest wall reduced with age (37% of women aged 50 to 69 years and 31% of those aged 70 years and over).

There was also variation across English and Welsh NHS hospitals in the use of radiotherapy after mastectomy among women, no matter what their age.

8. Which women have chemotherapy for breast cancer

We know that chemotherapy given after surgery for breast cancer improves survival in patients with early invasive breast cancer. Although the benefit appears to be greater in younger patients, there is no good evidence of the benefit in improving outcomes for those over 80. Looking at the overall pattern of chemotherapy use for women with early invasive breast cancer, we saw patterns of treatment that were broadly consistent with clinical recommendations.

- There was more use of chemotherapy before and after surgery among women with higher-stage breast cancer.
- The use of chemotherapy after surgery was more common among women with oestrogen-receptor-negative (ER-) breast cancer and among those who tested positive for human epidermal growth factor receptor 2 (HER2+) breast cancer. This would clinically be expected.

There was also a reduced use of chemotherapy (both before and after surgery) with increasing age at diagnosis no matter what type and stage of the tumour. This is consistent with previous studies and might be expected given the increasing levels of poor health among older women. In the next annual report, we will provide more information on chemotherapy treatment patterns.

The next stage of the audit

Older women should be offered the best-possible breast cancer treatment and care. The findings from this year's work continue to show there is some variation in the care received by older and younger women. Breast cancer services can use these results to look at whether the care offered to older women with breast cancer can be improved.

We have used a set of indicators (measures) based on clinical guidelines and chosen after talking with the NABCOP Clinical Steering Group (CSG) and other breast cancer experts. The indicators are published on the NABCOP website (<https://www.nabcop.org.uk>). We chose these indicators because of their clinical importance. The information needed to work them out is currently collected nationally. The indicators can highlight variations in treatment and, as a result, support hospitals and clinicians to improve the quality of care.

Future annual reports from the NABCOP will continue to publish detailed information on the performance of NHS breast cancer teams in England and Wales using the information collected from individual patients. Other plans for future work include:

- using a set of outcome indicators, as well as the process indicators described in the 2018 annual report, to look at the care of older patients all along the care pathway; and
- describing breast cancer patients' experience of their care based on their responses to the Cancer Patient Experience Survey (CPES). (Information from <http://www.quality-health.co.uk/surveys/national-cancer-patient-experience-survey>).

Finding out more

This work uses data provided by patients and collected by the NHS as part of their care and support (see note below).

For more details on the results of this audit's work during its first year, see the full 2018 Annual Report at <https://www.nabcop.org.uk/reports/nabcop-2018-annual-report/>.

You can also find more information on the following websites.

- Breast Cancer Care – www.breastcancercare.org.uk
- Breast Cancer Now – www.breastcancernow.org
- Cancer Research UK – www.cancerresearchuk.org
- Flat Friends UK – www.flatfriends.org.uk
- The Haven website – www.thehaven.org.uk
- Independent Cancer Patients' Voice (ICPV) – www.independentcancerpatientsvoice.org.uk
- Macmillan Cancer Support – www.macmillan.org.uk
- NHS choices – www.nhs.uk/Conditions/Cancer-of-the-breast-female/Pages/Introduction
- use MY data – www.usemydata.org/citation²

Please visit www.nabcop.org.uk to keep up to date with progress and findings from this audit.

² Acknowledgement of the patient contribution as well as highlighting how the information has been used, as requested by 'use MY data'

Breast-conserving surgery (BCS) – Breast-conserving surgery is a procedure to remove the part of the breast that contains the cancer, without removing all breast tissue.

Breast reconstruction – The surgical recreation of the breast mound (or shape) after it has been removed (for example, after breast cancer surgery).

Chemotherapy – Drug therapy used to treat cancer. It may be used alone, or with other types of treatment (for example, surgery or radiotherapy).

CNS – Cancer nurse specialists are specially trained nurses who provide an essential role in supporting the various aspects of care for a cancer patient.

Endocrine therapy – Drug therapy used to treat 'hormone sensitive' breast cancer. This treatment reduces the levels of oestrogen and progesterone in the body or blocks their action.

ER status – Oestrogen receptor status – breast cancers can grow in response to the hormone oestrogen. Approximately 70% of invasive breast cancers are 'ER positive' (ER+) as they have receptors for oestrogen. These receptors (often termed molecular markers) are targets for endocrine therapy.

HER2 – HER2 (human epidermal growth factor) protein is a receptor that is present on normal breast cells. It is involved in the signalling and promotion of cell growth, and may be described as HER2/neu gene as this gene is responsible for the overproduction of HER2 protein in each cell. Breast cancer cells with higher levels HER2 receptors (HER2 positive) are more aggressive and may grow more quickly. These receptors (often termed molecular markers) are the target of anti-HER2 therapies such as trastuzumab.

Invasive breast cancer – Cancerous cells in the breast that have spread beyond the original lining of breast ducts or glands. The number staging system divides breast cancers into 4 stages, from 1 to 4; early breast cancer refers cancers at stages 1, 2 and 3a.

Lymph nodes – These glands are part of the lymphatic network in the body, which plays an important role in the immune system. Cancer can spread from its original area through the lymphatic network.

Mastectomy – A type of surgical procedure for breast cancer treatment, which involves removing all breast tissue.

MDT – The multidisciplinary team is a team of specialist healthcare professionals from various backgrounds (for example, doctors, nurses, administrative staff) who work together to organise and deliver care for patients with a specific condition (for example, breast cancer).

Metastasis – When cancer has spread from the place in which it started to other parts of the body. In breast cancer, areas of the body where the cancer can spread to include the armpit, liver, lung and bones.

Non-invasive breast cancer – Cancerous cells are restricted to the walls of the breast duct or gland of origin. The most common type of non-invasive breast cancer is ductal carcinoma in-situ (DCIS).

PET – In primary endocrine therapy, patients are treated with endocrine therapy rather than surgery as their treatment for breast cancer.

Radiotherapy – Using high-energy x-ray beams to kill cancer cells, targeting one body part (for example the breast).

Screening – Breast screening involves women being invited to have an x-ray examination called a mammogram. It aims to diagnose women early because it can allow clinicians to identify cancers when they are too small to feel. Typically, all women aged between 50 and 70 are invited for breast cancer screening every three years.

Sentinel node biopsy – A sentinel node biopsy (SNB) allows clinicians to identify whether cancer cells have spread outside the breast to the lymph nodes in the armpit.

This report was prepared by the members of the NABCOP project team, with the teams caring for older breast cancer patients in England and Wales, as well as patients and patient representatives.



The Royal College of Surgeons of England is an independent professional body committed to enabling surgeons to achieve and maintain the highest standards of surgical practice and patient care. As part of this, it supports audit and the evaluation of clinical effectiveness for surgery.

www.rcseng.ac.uk

Registered charity no: 212808



The Association of Breast Surgery is a registered charity dedicated to advancing the practice of breast surgery and the management of breast conditions for the benefit of the public. It is a multi-professional membership association, which promotes training, education, clinical trials and guideline composition and adoption.

www.associationofbreastsurgery.org.uk

Registered charity number: 1135699

Patient groups with representation within the NABCOP Clinical Steering Group



Breast Cancer Care is the only specialist UK-wide charity providing information and support for women, men, family, and friends affected by breast cancer. From the moment someone notices something isn't right, through to their treatment and beyond, we're there to help people affected by breast cancer feel more in control.

www.breastcancercare.org.uk

Registered charity number: England and Wales 1017658, Scotland SC038104



We are Breast Cancer Now, the UK's largest breast cancer charity – and we're dedicated to funding research into this devastating disease. We believe that if we all act now, by 2050, everyone who develops breast cancer will live. www.breastcancernow.org

Registered charity number: England and Wales (number 1160558), Scotland (SC045584) and Isle of Man (number 1200)



Independent Cancer Patients' Voice (ICPV) is a patient advocate group independent of (not linked to) established UK cancer charities and aware of the value of medical research to both public health and to the national economy.

www.independentcancerpatientsvoice.org.uk

Registered charity number: 1138456

Commissioned by:



The Healthcare Quality Improvement Partnership (HQIP) is led by a consortium of the Academy of Medical Royal Colleges, the Royal College of Nursing and National Voices. Its aim is to promote quality improvement, and in particular to increase the impact that clinical audit has on healthcare quality in England and Wales. HQIP holds the contract to manage and develop the National Clinical Audit Programme, comprising more than 30 clinical audits that cover care provided to people with a wide range of medical, surgical and mental health conditions. The programme is funded by NHS England, the Welsh Government and, with some individual audits, also funded by the Health Department of the Scottish Government, DHSSPS Northern Ireland and the Channel Islands.

www.hqip.org.uk

Registered charity number: 1127049

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