Advanced breast cancer: diagnosis and treatment

23 February 2009

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Overview

This guideline covers care and support for people with advanced (stage 4) breast cancer. It aims to help them and their healthcare professionals make shared decisions about tests and treatments to improve outcomes and quality of life.

Who is it for?

- Healthcare professionals
- Commissioners and providers of breast cancer services
- Palliative care services
- People with advanced breast cancer, their families and carers

New and updated recommendations

We have reviewed the evidence on imaging assessment and monitoring for people with suspected advanced breast cancer, and platinum-based chemotherapy for people with triple negative advanced breast cancer. You are invited to comment on the new and updated recommendations. These are marked as **[2026]**.

We have also added recommendations covering relevant technology appraisal guidance in section 1.3 on systemic anticancer therapy. While we cannot accept comments on the content of these technology appraisals, we would welcome any feedback about how we have presented and positioned them within the guideline.

We have not reviewed the evidence for the recommendations shaded in grey, and cannot accept comments on them. In some cases, we have made minor wording changes for clarification.

See update information for a full explanation of what is being updated.

Recommendations

People have the right to be involved in discussions and make informed decisions about their care, as described in NICE's information on making decisions about your care.

Making decisions using NICE guidelines explains how we use words to show the strength (or certainty) of our recommendations, and has information about prescribing medicines (including off-label use), professional guidelines, standards and laws (including on consent and mental capacity), and safeguarding.

Healthcare professionals should follow our general guidelines for people delivering care:

- Patient experience in adult NHS services
- Service user experience in adult mental health
- Shared decision making
- Medicines adherence
- Medicines optimisation
- Multimorbidity
- Decision making and mental capacity.

1.1 Providing information and supportive care

1.1.1 Commissioners and healthcare professionals involved in the care of patients with advanced breast cancer should provide:

- assessment and discussion of patients' needs for physical, psychological, social, spiritual and financial support to be undertaken at key points (such as diagnosis; at commencement, during, and at the end of treatment; at relapse and when death is approaching)
- mechanisms to promote continuity of care, which may include the nomination of a person to take on the role of "key worker" for individual patients. **[2009, amended 2026]**

1.1.2 For information about identifying, treating and managing depression in people aged 18 and over who also have a chronic physical health problem such as cancer, see the recommendations in the NICE guideline on depression in adults with a chronic physical health problem. **[2026]**

1.1.3 Discuss opportunities for people with advanced breast cancer to be involved in research, at their treatment centre or others, including the benefits and risks of entering clinical trials and other studies. Support them to take part in research if they want to. **[2026]**

For a short explanation of why the committee made the new 2026 recommendations and how they might affect practice, see the rationale and impact section on providing information and supportive care.

1.2 Diagnosis and assessment

Imaging assessment

1.2.1 To assess the presence and extent of distant metastases for diagnosis and staging, offer:

- FDG PET-CT, or
- contrast-enhanced computed tomography (CECT) if FDG PET-CT is not suitable, is inaccessible (for example, the person cannot easily travel to an appointment) or is unavailable.

See also the NICE HealthTech guidance on point-of-care creatinine devices to assess kidney function before CT imaging with intravenous contrast. Also see the recommendations in the NICE guideline on acute kidney cancer on assessing risk factors in adults having iodine-based contrast media and preventing acute kidney injury in adults having iodine-based contrast media. **[2026]**

1.2.2 When deciding on imaging modality, or interpreting imaging results, take into account that:

- FDG PET-CT has higher sensitivity

- some breast cancers, including some invasive lobular breast cancers and some cancers of low grade, may show lower levels of FDG uptake. **[2026]**

1.2.3 If there is uncertainty about the presence and extent of distant metastases after contrast-enhanced CT or FDG PET-CT, or further characterisation is needed, offer 1 or more of the following:

- FDG PET-CT, but only if contrast-enhanced CT was used previously and the availability, inaccessibility or suitability of FDG PET-CT is no longer an issue preventing its use (see recommendation 1.2.1)
- contrast-enhanced CT, but only if FDG PET-CT was used previously
- MRI
- ultrasound
- bone scintigraphy
- plain radiography. **[2026]**

1.2.4 For recommendations about the diagnosis of brain metastases see section 1.6 on investigation of suspected brain metastases in the NICE guideline on brain tumours (primary) and brain metastases in over 16s. **[2026]**

1.2.5 For recommendations about the diagnosis of spinal metastases see section 1.3 on recognising spinal metastases or MSCC and section 1.5 on imaging investigations in the NICE guideline on spinal metastases and metastatic spinal cord compression. **[2026]**

For a short explanation of why the committee made the 2026 recommendations and how they might affect practice, see the rationale and impact section on diagnosis and assessment.

Full details of the evidence and the committee's discussion are in evidence review B: FDG PET-CT and contrast-enhanced CT for diagnosing and monitoring distant metastases.

Pathological assessment

1.2.6 For people whose breast cancer has progressed, consider reassessing their hormone receptor (HR) and human epidermal growth factor receptor 2 (HER2) status if a change in receptor status will lead to a change in management. **[2017, amended 2026]**

Monitoring disease status

1.2.7 Use the same primary imaging modality (FDG PET-CT or CECT) for monitoring response to treatment as was used for initial staging of metastatic disease. **[2026]**

1.2.8 Do not use bone scintigraphy to monitor the response of bone metastases to treatment. **[2009]**

For a short explanation of why the committee made the 2026 recommendation and how it might affect practice, see the rationale and impact section on monitoring disease status.

Full details of the evidence and the committee's discussion are in evidence review B: FDG PET-CT and contrast- enhanced CT for diagnosing and monitoring distant metastases.

1.3 Systemic anticancer therapy

See also the NICE Advanced breast cancer: summary of systemic anticancer treatment.

1.3.1 Base the decision about whether to use systemic anticancer therapy (SACT), and the choice of SACT if indicated, on factors such as:

- the person's preferences, fitness and existing comorbidities
- the tumour characteristics
- their response to, and any side effects from, previous lines of therapy
- the potential side effects of any suitable SACT regimens, and how they are delivered (for example, oral or intravenous) and scheduled

- NHS funding and commissioning criteria (see the NHS England Cancer Drugs Fund list)
- the availability of relevant clinical trials, for example, from Be Part of Research and ISCRN: The UK's clinical study registry. **[2026]**

For a short explanation of why the committee made the 2026 recommendation and how it might affect practice, see the rationale and impact section on systemic anticancer therapy for advanced breast cancer.

Full details of the evidence and the committee's discussion are in evidence review A: platinum-containing chemotherapy regimens.

Triple-negative advanced breast cancer

1.3.2 Pembrolizumab with paclitaxel or nab-paclitaxel is recommended as an option for untreated, triple-negative, advanced breast cancer with a PD-L1 combined positive score of 10 or more and an immune cell staining of less than 1%. For full details, see NICE's technology appraisal guidance on pembrolizumab plus chemotherapy (TA801, 2022).

1.3.3 Atezolizumab with nab-paclitaxel is recommended as an option for untreated, triple-negative, advanced breast cancer with a PD-L1 expression at a level of 1% or more. For full details, see NICE's technology appraisal guidance on atezolizumab with nab-paclitaxel (TA639, 2020).

1.3.4 Sacituzumab govitecan is recommended as an option for treating triple-negative, advanced breast cancer after 2 or more systemic therapies. For full details, see NICE's technology appraisal guidance on sacituzumab govitecan (TA819, 2022).

1.3.5 For medicines recommended as options for treating HER2-negative, advanced breast cancer with germline BRCA1 or BRCA2 mutations after an anthracycline and a taxane, see NICE's technology appraisal guidance on:

- olaparib (TA1040, 2025)

- talazoparib (TA952, 2024).

Chemotherapy

1.3.6 If chemotherapy is indicated for people with triple-negative advanced breast cancer, offer systemic sequential chemotherapy. **[2009, amended 2026]**

1.3.7 When offering systemic sequential chemotherapy for triple-negative advanced breast cancer, options include (but are not limited to) the following (in no order of preference):

- anthracyclines
- capecitabine
- carboplatin
- taxanes
- vinorelbine. **[2026]**

Eribulin, and gemcitabine with paclitaxel, are recommended as chemotherapy options for treating advanced breast cancer. For full details, see NICE's technology appraisal guidance on:

- eribulin (TA423, 2016) after at least 2 chemotherapy regimens
- gemcitabine with paclitaxel (TA116, 2007).

1.3.8 Consider using combination chemotherapy to treat patients with advanced breast cancer for whom a greater probability of response is important and who understand and are likely to tolerate the additional toxicity. **[2009]**

For a short explanation of why the committee made the 2026 recommendations and how they might affect practice, see the rationale and impact section on chemotherapy for people with triple negative advanced breast cancer.

Full details of the evidence and the committee's discussion are in evidence review A: platinum-containing chemotherapy regimens.

HER2-positive advanced breast cancer

1.3.9 For medicines recommended as options for first-line treatment of HER2-positive advanced breast cancer in some people, see NICE's technology appraisal guidance on:

- pertuzumab with trastuzumab and docetaxel (TA509, 2018)
- trastuzumab with paclitaxel (TA34, 2002).

1.3.10 Trastuzumab deruxtecan is recommended as an option for treating HER2-positive advanced breast cancer after 1 or more anti-HER2 treatments, with managed access through the Cancer Drugs Fund. For full details, see NICE's technology appraisal guidance on trastuzumab deruxtecan (TA862, 2023).

1.3.11 Trastuzumab emtansine is recommended as an option for treating HER2-positive, advanced breast cancer that has previously received trastuzumab and a taxane, separately or in combination. For full details, see NICE's technology appraisal guidance on trastuzumab emtansine (TA458, 2017).

1.3.12 Trastuzumab monotherapy is recommended as an option for treating HER2-positive, advanced breast cancer that has received at least 2 chemotherapy regimens. For full details, see NICE's technology appraisal guidance on trastuzumab (TA34, 2002).

1.3.13 For medicines recommended as options for treating HER2-positive, advanced breast cancer after 2 or more anti-HER2 therapies, see NICE's technology appraisal guidance on:

- tucatinib with trastuzumab and capecitabine (TA786, 2022)
- trastuzumab deruxtecan (TA704, 2021) through the Cancer Drugs Fund.

Chemotherapy

1.3.14 If chemotherapy is indicated for people with HER2-positive advanced breast cancer, offer systemic sequential chemotherapy. **[2009, amended 2026]**

1.3.15 When offering systemic sequential chemotherapy for HER2-positive advanced breast cancer, options include (but are not limited to) the following (in no order of preference):

- anthracyclines
- capecitabine
- taxanes
- vinorelbine. **[2026]**

Eribulin, and gemcitabine with paclitaxel, are recommended as chemotherapy options for treating advanced breast cancer. For full details, see NICE's technology appraisal guidance on:

- eribulin (TA423, 2016) after at least 2 chemotherapy regimens.
- gemcitabine with paclitaxel (TA116, 2007).

1.3.16 Consider using combination chemotherapy to treat patients with advanced breast cancer for whom a greater probability of response is important and who understand and are likely to tolerate the additional toxicity. **[2009]**

For a short explanation of why the committee made these recommendations and how they might affect practice, see the rationale and impact section on chemotherapy for people with HER-2 negative advanced breast cancer.

Hormone-receptor-positive, HER2-negative advanced breast cancer

1.3.17 For medicines recommended as options for first-line endocrine treatment of hormone receptor-positive, HER2-negative, advanced breast cancer in some people, see NICE's technology appraisal guidance on:

- abemaciclib with an aromatase inhibitor (TA563, 2019)
- ribociclib with an aromatase inhibitor (TA496, December 2017)

- palbociclib with an aromatase inhibitor (TA495, December 2017).

1.3.18 For medicines recommended as options for treating hormone receptor-positive, HER2-negative, advanced breast cancer after previous endocrine treatment in some people, see NICE's technology appraisal guidance on:

- palbociclib with fulvestrant (TA836, 2022)
- abemaciclib with fulvestrant (TA725, September 2021)
- ribociclib with fulvestrant (TA687, March 2021)
- everolimus with exemestane (TA421, 2016).

1.3.19 Capivasertib with fulvestrant is recommended as an option for treating hormone receptor-positive, HER2-negative advanced breast cancer with 1 or more PIK3CA, AKT1 or PTEN gene alterations that has progressed after a cyclin-dependent kinase (CDK) 4 and 6 inhibitor plus an aromatase inhibitor. For full details, see NICE's technology appraisal guidance on capivasertib with fulvestrant (TA1063, 2025).

1.3.20 Alpelisib with fulvestrant is recommended as an option for treating hormone receptor-positive, HER2-negative, PIK3CA-mutated, advanced breast cancer that has progressed after a CDK4/6 inhibitor plus an aromatase inhibitor. For full details, see NICE's technology appraisal guidance on alpelisib with fulvestrant (TA816, 2022).

1.3.21 Elacestrant is recommended as an option for treating oestrogen receptor-positive, HER2-negative, ESR1 mutated, advanced breast cancer that has progressed after at least 1 line of endocrine treatment plus a CDK4/6 inhibitor. For full details, see NICE's technology appraisal guidance on elacestrant (TA1036, 2025).

1.3.22 For medicines recommended as options for treating HER2-negative, advanced breast cancer with germline BRCA1 or BRCA2 mutations after endocrine therapy or an anthracycline and a taxane, see NICE's technology appraisal guidance on:

- olaparib (TA1040, 2025)
- talazoparib (TA952, 2024).

Chemotherapy

1.3.23 If chemotherapy is indicated for people with hormone-receptor-positive, HER2-negative advanced breast cancer, offer systemic sequential chemotherapy. **[2009, amended 2026]**

1.3.24 When offering systemic sequential chemotherapy for hormone-receptor-positive, HER2-negative advanced breast cancer, options include (but are not limited to) the following (in no order of preference):

- anthracyclines
- capecitabine
- taxanes
- vinorelbine. **[2026]**

Eribulin, and gemcitabine with paclitaxel, are recommended as chemotherapy options for treating advanced breast cancer. For full details, see NICE's technology appraisal guidance on:

- eribulin (TA423, 2016) after at least 2 chemotherapy regimens
- gemcitabine with paclitaxel (TA116, 2007).

1.3.25 Consider using combination chemotherapy to treat patients with advanced breast cancer for whom a greater probability of response is important and who understand and are likely to tolerate the additional toxicity. **[2009]**

For a short explanation of why the committee made these recommendations and how they might affect practice, see the rationale and impact section on chemotherapy for people with hormone-receptor-positive, HER2-negative advanced breast cancer.

Treatments not recommended

1.3.26 For medicines not recommended for treating advanced breast cancer, see NICE's technology appraisal guidance on:

- trastuzumab deruxtecan (TA992, 2024) for treating HER2-low advanced breast cancer
- eribulin (TA515, March 2018) after only 1 chemotherapy regimen
- fulvestrant (TA503, January 2018) for untreated oestrogen-receptor-positive breast cancer
- bevacizumab with capecitabine (TA263, August 2012)
- lapatinib or trastuzumab with an aromatase inhibitor (TA257, June 2012)
- fulvestrant (TA239, December 2011) for oestrogen-receptor-positive breast cancer that has relapsed or progressed on or after anti-oestrogen therapy
- bevacizumab with a taxane (TA214, February 2011).

Neurotrophic tyrosine receptor kinase (NTRK) fusion-positive solid tumours

1.3.27 Larotrectinib is recommended as an option through the Cancer Drugs Fund for treating locally advanced or metastatic NTRK fusion-positive solid tumours when there are no other satisfactory treatment options. For full details, see NICE's technology appraisal guidance on larotrectinib (TA630, May 2020).

1.4 Managing treatment side effects and menopausal symptoms

Lymphoedema

Recommendations in this section have been stood down as they have been superseded by the February 2025 update on lymphoedema early identification, risk reduction and management in the NICE guideline on early and locally advanced breast cancer: diagnosis and management.

Cancer-related fatigue

1.4.1 Offer all people with advanced breast cancer who have significant cancer-related fatigue an assessment to identify any treatable causative factors, and offer appropriate management as necessary. **[2009]**

1.4.2 Provide clear, written information about cancer-related fatigue, organisations that offer psychosocial support and patient led groups. **[2009]**

1.4.3 Give all people with advanced breast cancer who have cancer-related fatigue information about, and timely access to, a suitable exercise programme. **[2009]**

Menopausal symptoms

See the section covering people with a personal history of breast cancer in the NICE guideline on menopause and the section on menopausal symptoms in the NICE guideline on Early and locally advanced breast cancer.

1.5 Managing uncontrolled local disease and metastases

See also the NICE guidelines on: end of life care for adults and care of dying adults in the last days of life.

Uncontrolled local disease

1.5.1 Ensure all people presenting with uncontrolled local disease have:

- their care needs assessed by a breast cancer multidisciplinary team, and
- the therapeutic options for controlling the disease and relieving symptoms discussed by the team, and with the person. **[2009]**

1.5.2 Ensure people with ulcerated tumours are seen by a wound care team to:

- plan a dressing regimen with the person, and
- supervise management with the breast care team. **[2009]**

1.5.3 Ensure all people with uncontrolled local disease are assessed by a palliative care team so they can:

- plan a symptom management strategy with the person, and
- provide psychological support. **[2009]**

Bone metastases

1.5.4 Consider bisphosphonates for people newly diagnosed with bone metastases to prevent skeletal-related events and reduce pain. **[2009]**

1.5.5 Denosumab is recommended as an option for preventing skeletal-related events in adults with bone metastases from breast cancer only if bisphosphonates would otherwise be prescribed. For full details, see the NICE's technology appraisal guidance on denosumab (TA265, 2012).

1.5.6 Use external beam radiotherapy in a single fraction of 8 Gy to treat people with bone metastases and pain. **[2009]**

1.5.7 Ensure people at risk of a long bone fracture have their disease assessed by an orthopaedic surgeon to see if prophylactic surgery is a suitable option. **[2009]**

Spinal metastases

For recommendations about the management of spinal metastases see the NICE guideline on spinal metastases and metastatic spinal cord compression.

Brain metastases

1.5.8 In the NICE guideline on Brain tumours (primary) and brain metastases in over 16s see:

- section 1.7 on the management of confirmed brain metastases
- Section 1.8 on follow-up for brain metastases
- Section 1.9 on the care needs of people with brain tumours
- section 1.10 on neurorehabilitation needs of people with brain tumours
- section 1.12 on surveillance for the late onset side effects of treatment.

1.5.9 Offer referral to specialist palliative care to people if active treatment for brain metastases would be inappropriate. **[2009]**

Recommendations for research

The 2009 and 2026 guideline committees made the following recommendations for research.

1 Uncontrolled local disease

The relevant research organisations should be encouraged to address the topic of uncontrolled local disease and devise appropriate research studies. This might include development of a national register.

For example, what are the best methods of controlling local disease in people with stable advanced breast cancer who have progressive recurrent local disease? **[2009, amended 2026]**

Why this is important

The problem of how best to manage uncontrolled local disease is very poorly addressed by the current evidence. Although it is probably quite an uncommon condition, it is likely that across the country there are enough people to generate evidence from well-coordinated national studies. A national register should be considered as part of this because of the current uncertainties about the frequency of the problem.

Understanding effectiveness of different interventions and the underlying biology of local recurrence could lead to better local treatments in both the primary and secondary setting. **[2009, amended 2026]**

2 Platinums for people with BRCA mutation

What is the clinical and cost effectiveness of a platinum-containing chemotherapy regimen compared with a non-platinum-containing chemotherapy regimen in people with advanced breast cancer who have a germline BRCA mutation? **[2026]**

For a short explanation of why the committee made this recommendation for research, see the rationale and impact section on chemotherapy for people with triple negative advanced breast cancer.

Full details of the evidence and the committee's discussion are in evidence review A: platinum-containing chemotherapy regimens.

3 Imaging modalities to detect distant metastases in people with lobular breast cancer with suspected metastatic disease

In adults with lobular breast cancer and suspected metastatic disease, what is the diagnostic accuracy and cost effectiveness of different imaging modalities [such as whole-body MRI, fibroblast activation protein inhibitor (FAPI) PET-CT and 18F-fluoroestradiol (FES) PET-CT] for detecting distant metastases? **[2026]**

> For a short explanation of why the committee made this recommendation for research, see the rationale and impact section on diagnosis and assessment.
>
> Full details of the evidence and the committee's discussion are in evidence review B: FDG PET-CT and contrast- enhanced CT for diagnosing and monitoring distant metastases.

Rationale and impact

These sections briefly explain why the committee made the recommendations and how they might affect practice.

Providing information and supportive care

Recommendations 1.1.1 to 1.1.3

Why the committee made the recommendations

The cancer service guidance that underpinned recommendation 1.1.1 has been retired, but the committee felt that the points were still valid and opted to retain the recommendation.

The committee recognised the increased risk of depression in people with advanced breast cancer and so included a cross reference to the NICE guideline on depression in adults with a chronic physical health problem.

The committee agreed that it is important that people with advanced breast cancer have opportunities to be involved in research to help improve the evidence base underlying which treatments are clinically effective. The opportunities should not be limited to their centre, but taking part in research in other centres may involve

travelling further or more frequently, and practical issues such as this should be discussed with the person. There may also be non-clinical studies, for example looking at their views and experiences of treatment.

How the recommendations might affect practice

The recommendation reflects current good practice, but may help standardise it where localised variations occur.

Return to recommendations

Diagnosis and assessment

Recommendations 1.2.1 to 1.2.5

Why the committee made the recommendations

The committee considered the evidence and their own experience on FDG PET-CT and contrast-enhanced CT (CECT), and agreed that both imaging methods were suitable for detecting distant metastases in most people with suspected advanced breast cancer (including people with and without a previous diagnosis of breast cancer).

Evidence suggested that both FDG PET-CT and CECT have high specificity, meaning they are reliable for ruling out distant metastases. FDG PET-CT also showed high sensitivity, with fewer missed cases of distant metastases, while CECT may have lower sensitivity, potentially missing more cases. The committee noted that, in practice, the same type of scan is usually used for diagnosis and monitoring. Health economic modelling results suggested that FDG PET-CT, while more expensive than CECT, was cost effective when used for both diagnosis and monitoring because of this higher level of diagnostic accuracy. Although the tracer used for an FDG PET-CT involves radiation, radiation exposure was considered similar for both tests, and the committee acknowledged ongoing efforts to reduce dose levels. For these reasons, the committee agreed to recommend FDG PET-CT as the preferred option.

The committee noted that CECT is currently the most commonly used imaging test for diagnosing distant breast cancer metastases, and is widely available. FDG PET-

CT is not available in all areas, making it less easily accessible for many people. While the committee agreed people should not be denied the opportunity to access FDG PET-CT imaging, they recognised it may not be suitable for all as someone may not wish to, or be able to, travel to other centres to access it. In addition, there may not currently be capacity in the system (based on the availability of machines and radiologists to interpret the scans) for large numbers of people to access FDG PET-CT without increasing their waiting time, and in doing so potentially delaying diagnosis. The committee therefore recommended CECT if FDG PET-CT is not suitable, inaccessible or unavailable.

The committee were aware that FDG PET-CT may be unsuitable or less useful for detecting metastases of certain types of breast cancer. Lobular breast cancer can be more difficult to detect on imaging than other types of breast cancer, and some lobular or low-grade breast cancers may not take up the tracer used in FDG PET-CT very well, making scans harder to interpret. The committee noted that information about grade and cancer type may not always be available before scans to diagnose distant metastases, and clinical judgement is needed when deciding whether to offer additional imaging, and what type of imaging that should be.

There was a small amount of evidence about the diagnostic accuracy of FDG PET-CT for people with lobular breast cancer, which showed the diagnostic accuracy was poor compared to those for people with non-lobular breast cancer. Despite the lack of diagnostic accuracy evidence for CECT for people with lobular breast cancer, the committee agreed that, in their experience, the accuracy is likely to be similar to FDG PET-CT. Because of the lack of evidence, the committee made a research recommendation to investigate imaging modalities for diagnosing distant metastases in this group.

Alternate imaging options from the previous version of the guideline were retained and listed to address situations where there is uncertainty after the initial imaging or where further characterisation is needed (for example, to look for bone metastases using bone scintigraphy or to assess the risk of bone fractures).

The committee were aware of detailed guidance relating to the diagnosis of brain metastases and spinal cord metastases in other NICE guidance, and included cross references to this content.

How the recommendations might affect practice

The recommendations are likely to increase demand for the use of FDG PET-CT for diagnosing distant breast cancer metastases. In places where FDG PET-CT imaging is already available, the recommendations are likely to increase its use. In other areas the recommendations may lead to the introduction of FDG PET-CT for this indication, but would depend on increasing the availability of PET-CT machines and radiologists who are able to interpret the scans.

Return to recommendations

Monitoring disease status

Recommendation 1.2.7

Why the committee made the recommendation

There was no direct evidence on the effects of using FDG PET-CT or CECT to monitor disease status in people with advanced breast cancer. However, based on their experience, the committee agreed that these scans are likely to perform similarly for monitoring as they do for diagnosing distant metastases. They therefore considered the evidence on diagnosing distant metastases, as well as their own experience and the results of the economic model, when making this recommendation.

The economic model showed that when FDG PET-CT was used for diagnostic imaging, there was a high likelihood that using the same imaging modality for monitoring would be cost effective. But there was some uncertainty around this because of a lack of evidence for this specific use case.

Based on their experience, the committee highlighted the importance of using the same type of scan for both diagnosis and monitoring as this helps clinicians interpret changes more accurately and make clearer decisions about treatment. Differences in

scan type could make it harder to tell whether any changes are from treatment or just differences in imaging.

How the recommendation might affect practice

The recommendation reflects current practice in many centres, although there may be some variation. Where there is an increase in use of FDG PET-CT for diagnosing distant metastases in people with breast cancer, this will likely also mean an increase in its use for monitoring disease status in future. Implementing this may require increasing the availability of PET-CT machines and radiologists who are able to interpret the scans in areas where this is not currently used to monitor advanced breast cancer.

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Systemic anticancer therapy for advanced breast cancer

Recommendation 1.3.1

Why the committee made the recommendation

The committee reviewed evidence about platinum-based chemotherapy regimens for people with triple negative advanced breast cancer, and discussed what factors affect the choice of regimen for this group. They agreed that the factors discussed applied to all receptor subtype groups and types of SACT.

The committee agreed that the decision about which SACT regimen to use was nuanced and depended on the person's preferences and clinical judgement, taking into account many factors. They also agreed that choice of regimen would depend on the previous tumour response, the person's fitness and what side effects they had experienced with any previous lines of SACT.

How the recommendation might affect practice

The recommendation reflects current good practice, but may help standardise it where localised variations occur.

Return to recommendation

Chemotherapy for people with triple negative advanced breast cancer

Recommendation 1.3.7

Why the committee made the recommendation

Evidence suggested that chemotherapy regimens that contain platinums and those that do not may have similar impacts on overall survival and progression-free survival in people with triple negative advanced breast cancer.

The committee highlighted that the evidence suggested an increased risk of some side effects (for example, neutropenia, and nausea or vomiting) with chemotherapy regimens including platinums, compared with those without. However, the evidence was very uncertain due to the studies being at a high risk of bias, and there being a large variation in results between studies for some outcomes. It also included a variety of different comparator drugs, all of which have different side-effect profiles, but only side effects most commonly expected with platinums were reported in the studies. Because of this and the evidence for overall survival and progression-free survival, the committee agreed that they were unable to recommend using platinum-based chemotherapy over non-platinum chemotherapy for people with triple negative breast cancer (TNBC). However, they noted that the choice of the type of chemotherapy or other SACT is a complex one that needs to be tailored to the individual and agreed that for some people with triple negative advanced breast cancer platinum-based chemotherapy would be a suitable option.

The committee recognised that clinical practice has changed greatly over time and that a single sequence of chemotherapies for everyone with advanced breast cancer is no longer relevant. However, they noted that chemotherapies in the 2009 recommendation are still in use, and they agreed to add carboplatin to this list of potential options for TNBC. They agreed that the 2009 recommendation on offering systemic sequential chemotherapy also remained relevant.

There was very little evidence for the effectiveness of platinum-based chemotherapy for people with advanced breast cancer who have a germline BRCA mutation, and this was limited to people who also had TNBC. The committee were unable to recommend a different chemotherapy regimen for people who have TNBC with, or

without, a germline BRCA mutation because of the limited number of included trials and small number of participants in them. Therefore, they drafted a research recommendation to try to fill these gaps in the evidence base.

How the recommendation might affect practice

The recommendation reflects current practice and is not expected to result in significant changes.

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Chemotherapy for people with HER-2 negative advanced breast cancer

Recommendation 1.3.15

Why the committee made the recommendation

The committee used the same process for updating the chemotherapy recommendations for people with HER2-positive advanced breast cancer as was used with TNBC, based on the same rationale. However, platinum chemotherapy was excluded as the effectiveness of this was not reviewed as part of this update for people who did not have TNBC.

How the recommendation might affect practice

The recommendation reflects current practice and is not expected to result in significant changes.

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Chemotherapy for people with hormone-receptor-positive, HER2-negative advanced breast cancer

Recommendation 1.3.24

Why the committee made the recommendation

The committee used the same process for updating the chemotherapy recommendations for people with hormone-receptor-positive, HER2-negative advanced breast cancer as was used with TNBC, based on the same rationale.

However, platinum chemotherapy was excluded as the effectiveness of this was not reviewed as part of this update for people who did not have TNBC.

How the recommendation might affect practice

The recommendation reflects current practice and is not expected to result in significant changes.

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Finding more information and committee details

To find NICE guidance on related topics, including guidance in development, see the NICE webpage on breast cancer.

For full details of the evidence and the guideline committee's discussions, see the full guideline. You can also find information about how the guideline was developed, including details of the committee.

NICE has produced tools and resources to help you put this guideline into practice. For general help and advice on putting our guidelines into practice, see resources to help you put NICE guidance into practice.

Update information

February 2026: We reviewed the evidence and made new and updated recommendations and research recommendations on providing information and supportive care, diagnosis and assessment, and systemic anticancer therapy. These recommendations are marked **[2026]**, **[2017, amended 2026]** and **[2009, amended 2026]**. We also added links to relevant technology appraisal guidance in the sections on diagnosis and assessment and systemic anticancer therapy. Some recommendations have been stood down as they no longer reflect current practice.

February 2025: Recommendations in the section on lymphoedema have been stood down as they have been superseded by the update on lymphoedema early identification, risk reduction and management in the NICE guideline on early and locally advanced breast cancer: diagnosis and management.

August 2017: We reviewed the evidence and updated recommendations in section 1.1 on assessing oestrogen receptor (ER) and human epidermal growth factor receptor 2 (HER2) status on disease recurrence. These recommendations are marked **[2017]**.

Minor changes since publication

January 2022: Minor changes to redirect NICE Pathways links.

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