

Early and locally advanced breast cancer: adjuvant therapy

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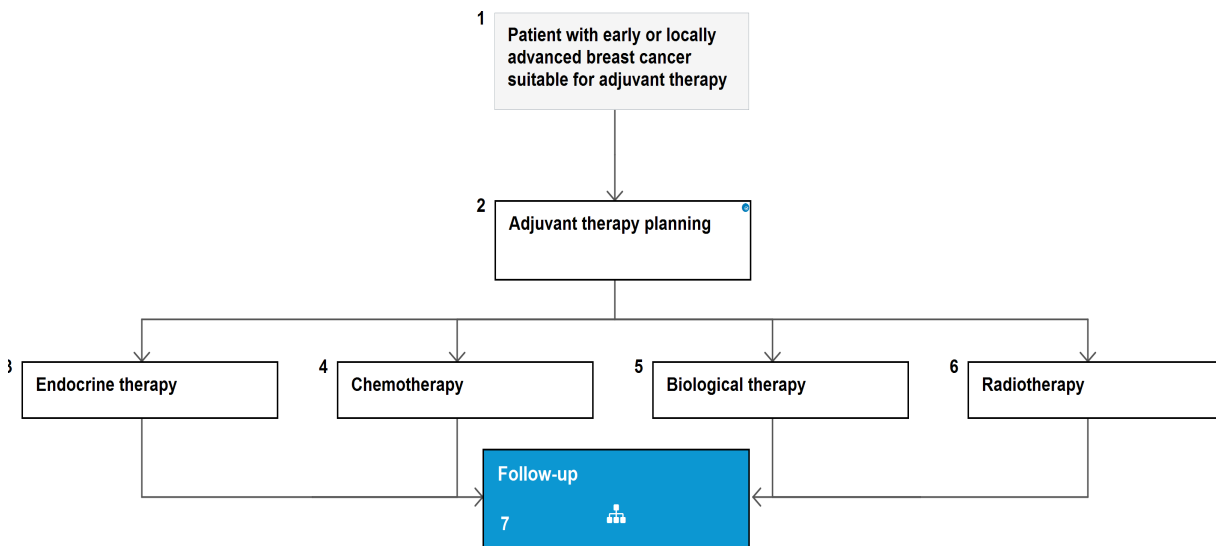
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<http://pathways.nice.org.uk/pathways/early-and-locally-advanced-breast-cancer>

Pathway last updated: 15 June 2016

This document contains a single pathway diagram and uses numbering to link the boxes to the associated recommendations.

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1 Patient with early or locally advanced breast cancer suitable for adjuvant therapy

No additional information

2 Adjuvant therapy planning

All patients with early invasive breast cancer

After surgery, consider adjuvant therapy at the MDT meeting. Record all decisions.

Make decisions about adjuvant therapy based on assessment of prognostic and predictive factors and potential benefits and side effects of the treatment. Make decisions following discussion of these factors with the patient.

Consider using [Adjuvant! Online](#) to support estimations of individual prognosis and absolute benefit of adjuvant treatment.

MammaPrint, Oncotype DX, IHC4 and Mammostrat

Oncotype DX is recommended as an option for guiding adjuvant chemotherapy decisions for people with oestrogen receptor positive (ER+), lymph node negative (LN-) and human epidermal growth factor receptor 2 negative (HER2-) early breast cancer if:

- the person is assessed as being at intermediate risk, and
- information on the biological features of the cancer provided by Oncotype DX is likely to help in predicting the course of the disease and would therefore help when making the decision about prescribing chemotherapy, and
- the manufacturer provides Oncotype DX to NHS organisations according to the confidential arrangement agreed with NICE¹.

NICE has recommended research on Oncotype DX, MammaPrint, IHC4 and Mammostrat. See the full guidance, [Gene expression profiling and expanded immunohistochemistry tests for guiding adjuvant chemotherapy decisions in early breast cancer management: MammaPrint, Oncotype DX, IHC4 and Mammostrat](#) (NICE diagnostic guidance 10) for these recommendations.

¹ The analysis leading to this recommendation was based on intermediate risk of distant recurrence being defined as a Nottingham Prognostic Index (NPI) score above 3.4. It is anticipated that an NPI score can be simply calculated from information that is routinely collected about people with breast cancer. Other decision-making tools or protocols are also currently used in the NHS and these may be used to identify people at intermediate risk also.

All patients with early breast cancer

Start adjuvant chemotherapy or radiotherapy as soon as clinically possible and within 31 days of surgery¹.

Assessment and treatment of bone loss in patients starting adjuvant treatment

Offer baseline DEXA to patients with early invasive breast cancer who:

- are starting adjuvant AI treatment
- have treatment-induced menopause
- are starting ovarian ablation/suppression therapy.

Do not offer DEXA to patients with early invasive breast cancer who are receiving tamoxifen alone, regardless of pretreatment menopausal status.

Offer bisphosphonates to patients identified by algorithms 1 and 2 in 'Guidance for the management of breast cancer treatment-induced bone loss. A consensus position statement from a UK expert group'².

See also the NICE pathway on [menopause](#).

Quality standards

The following quality statement is relevant to this part of the pathway.

3. Gene expression profiling

3 Endocrine therapy**ER-positive early invasive breast cancer, premenopausal women**

Do not offer ovarian ablation/suppression to women having tamoxifen and chemotherapy.

Offer ovarian ablation/suppression in addition to tamoxifen to women who have been offered chemotherapy but chosen not to have it.

ER-positive early invasive breast cancer, postmenopausal women who are not at low risk

Offer AI, either anastrozole or letrozole, as initial adjuvant therapy.

¹ Department of Health (2007). Cancer reform strategy. London: Department of Health. (At present no equivalent target has been set by the Welsh Assembly Government.)

² Reproduced in appendix 2 of the full guideline [CG80](#).

Offer tamoxifen if AI is not tolerated or contraindicated.

(Low-risk patients are those in the EPG or GPG [excellent or good prognostic group] in the Nottingham Prognostic Index [NPI], who have 10-year predictive survivals of 96% and 93%, respectively. They would have similar predictions using Adjuvant! Online.)

ER-positive early invasive breast cancer, postmenopausal women who are not at low risk and who have been treated with tamoxifen for 2–3 years

Offer AI, either exemestane or anastrozole, instead of tamoxifen.

(Low-risk patients are those in the EPG or GPG [excellent or good prognostic group] in the Nottingham Prognostic Index [NPI], who have 10-year predictive survivals of 96% and 93%, respectively. They would have similar predictions using Adjuvant! Online.)

ER-positive, lymph-node positive early invasive breast cancer, postmenopausal women who have been treated with tamoxifen for 5 years

Offer additional treatment with the AI letrozole for 2–3 years.

DCIS after breast conserving surgery

Do not offer tamoxifen.

Hormonal therapies

This guidance applies to the use of the aromatase inhibitors anastrozole, exemestane and letrozole, within the marketing authorisations for each drug at the time of this appraisal, for the treatment of early oestrogen-receptor-positive breast cancer; that is:

- anastrozole for primary adjuvant therapy
- exemestane for adjuvant therapy following 2–3 years of adjuvant tamoxifen therapy
- letrozole for primary adjuvant therapy and extended adjuvant therapy following standard tamoxifen therapy.

The aromatase inhibitors anastrozole, exemestane and letrozole, within their licensed indications, are recommended as options for the adjuvant treatment of early oestrogen-receptor-positive invasive breast cancer in postmenopausal women.

The choice of treatment should be made after discussion between the responsible clinician and the woman about the risks and benefits of each option. Factors to consider when making the

choice include whether the woman has received tamoxifen before, the licensed indications and side-effect profiles of the individual drugs and, in particular, the assessed risk of recurrence.

These recommendations are from [Hormonal therapies for the adjuvant treatment of early oestrogen-receptor-positive breast cancer](#) (NICE technology appraisal guidance 112).

NICE has produced information for the public explaining this [guidance](#).

4 Chemotherapy

Docetaxel

Docetaxel, when given concurrently with doxorubicin and cyclophosphamide (the TAC regimen) as per its licensed indication, is recommended as an option for the adjuvant treatment of women with early node-positive breast cancer.

This recommendation is from [Docetaxel for the adjuvant treatment of early node-positive breast cancer](#) (NICE technology appraisal guidance 109).

NICE has produced information for the public explaining this [guidance](#).

Paclitaxel

Paclitaxel, within its licensed indication, is not recommended for the adjuvant treatment of women with early node-positive breast cancer.

This recommendation is from [Paclitaxel for the adjuvant treatment of early node-positive breast cancer](#) (NICE technology appraisal guidance 108).

NICE has produced information for the public explaining this [guidance](#).

5 Biological therapy

Trastuzumab

Trastuzumab, given at 3-week intervals for 1 year or until disease recurrence (whichever is the shorter period), is recommended as a treatment option for women with early-stage HER2-positive breast cancer following surgery, chemotherapy (neoadjuvant or adjuvant) and radiotherapy (if applicable).

Cardiac function should be assessed prior to the commencement of therapy and trastuzumab treatment should not be offered to women who have an LVEF of 55% or less, or who have any of the following:

- a history of documented congestive heart failure
- high-risk uncontrolled arrhythmias
- angina pectoris requiring medication
- clinically significant valvular disease
- evidence of transmural infarction on ECG
- poorly controlled hypertension.

Cardiac functional assessments should be repeated every 3 months during trastuzumab treatment. If the LVEF drops by 10 percentage (ejection) points or more from baseline and to below 50% then trastuzumab treatment should be suspended. A decision to resume trastuzumab therapy should be based on a further cardiac assessment and a fully informed discussion of the risks and benefits between the individual patient and their clinician.

These recommendations are from [Trastuzumab for the adjuvant treatment of early-stage HER2-positive breast cancer](#) (NICE technology appraisal guidance 107).

NICE has produced information for the public explaining this [guidance](#).

6 Radiotherapy

Radiotherapy (breast) for patients with early invasive breast cancer

After breast conserving surgery: Patients should have breast radiotherapy.

After breast conserving surgery or mastectomy: Use external beam radiotherapy, giving 40 Gy in 15 fractions as standard practice.

After breast conserving surgery and breast radiotherapy, at high risk of local recurrence: Offer external beam boost to the site of local excision. Inform patients that cosmesis is likely to be worse, particularly in women with larger breasts.

After mastectomy, at high risk of local recurrence¹: Offer chest wall radiotherapy.

After mastectomy, at intermediate risk² of local recurrence: Consider entering patients into [SUPREMO trial](#) assessing value of postoperative radiotherapy.

After mastectomy, at low risk of local recurrence¹: Do not offer radiotherapy.

Radiotherapy (breast) for patients with DCIS

After breast conserving surgery: Offer breast radiotherapy. Discuss with patients the potential benefits and risks.

Radiotherapy (nodal) for patients with early breast cancer

Lymph-node negative: Do not offer radiotherapy to the axilla or SCF.

After ALND: Do not offer radiotherapy to the axilla.

Positive axillary SLNB or 4-node sample; ALND not possible: Offer radiotherapy to the axilla.

Lymph node-positive, = 4 involved nodes: Offer radiotherapy to the SCF.

Lymph node-positive, 1–3 involved nodes and other poor prognostic factors (for example, T3 and/or histological grade 3 tumours), and good performance status: Offer radiotherapy to the SCF.

After breast surgery: Do not offer radiotherapy to the internal mammary chain.

NICE has published interventional procedures guidance on [brachytherapy as the sole method of adjuvant radiotherapy for breast cancer after local excision](#) (NICE interventional procedure guidance 268).

7 Follow-up

[See early and locally advanced breast cancer / early and locally advanced breast cancer overview / follow-up care](#)

¹ Includes patients with 4 or more positive axillary lymph nodes or involved resection margins.

² Includes patients with 1–3 involved lymph nodes, lymphovascular invasion, histological grade 3 tumours, ER-negative tumours, and those aged < 40 years.

¹ For example, most patients who are lymph node-negative.

Glossary

AI

Aromatase inhibitor

ALND

Axillary lymph node dissection (also known as axillary clearance)

DCIS

Ductal carcinoma in situ

DEXA

Dual energy X-ray absorptiometry

ECG

Electrocardiograph

ER

Oestrogen receptor

HER2

Human epidermal growth factor 2

HRT

Hormone replacement therapy

LVEF

Left ventricular ejection fraction

MDT

Multidisciplinary team

MRI

Magnetic resonance imaging

SCF

Supraclavicular fossa

SLN

Sentinel lymph node

SLNB

Sentinel lymph node biopsy

SSRI

Selective serotonin reuptake inhibitor

Sources

Early and locally advanced breast cancer: diagnosis and treatment (2009) NICE guideline CG80

Hormonal therapies for the adjuvant treatment of early oestrogen-receptor-positive breast cancer (2006) NICE technology appraisal guidance 112

Docetaxel for the adjuvant treatment of early node-positive breast cancer (2006) NICE technology appraisal guidance 109

Paclitaxel for the adjuvant treatment of early node-positive breast cancer (2006) NICE technology appraisal guidance 108

Trastuzumab for the adjuvant treatment of early-stage HER2-positive breast cancer (2006) NICE technology appraisal guidance 107

Brachytherapy as the sole method of adjuvant radiotherapy for breast cancer after local excision (2008) NICE interventional procedure guidance 268

Gene expression profiling and expanded immunohistochemistry tests for guiding adjuvant chemotherapy decisions in early breast cancer management: MammaPrint, Oncotype DX, IHC4 and Mammostrat (2013) NICE diagnostic guidance 10

Your responsibility

The guidance in this pathway represents the view of NICE, which was arrived at after careful consideration of the evidence available. Those working in the NHS, local authorities, the wider public, voluntary and community sectors and the private sector should take it into account when carrying out their professional, managerial or voluntary duties. Implementation of this guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guidance, in their local context, in light of their duties to avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in this guidance should be interpreted in a way which would be inconsistent with compliance with those duties.

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Contact NICE

National Institute for Health and Care Excellence
Level 1A, City Tower
Piccadilly Plaza
Manchester
M1 4BT

www.nice.org.uk

nice@nice.org.uk

0845 003 7781