

GUIDELINES

Diagnosis and treatment of early breast cancer, including locally advanced disease—summary of NICE guidance

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Why read this summary?

Breast cancer is the commonest cancer in women, with over 40 500 new cases diagnosed each year in England and Wales.^{1,2} Despite a steady decline in age standardised mortality rates owing to screening and better management, the disease still causes 10 900 deaths each year in England and Wales,^{1,2} with a huge social and emotional impact. This article outlines the most important recent recommendations from the National Institute for Health and Clinical Excellence (NICE) on the diagnosis and treatment of early and locally advanced breast cancer.³

Recommendations

NICE recommendations are based on systematic reviews of best available evidence. When minimal evidence is available, recommendations are based on the Guideline Development Group's opinion of what constitutes good practice. Evidence levels for the recommendations are in the full version of this article on bmj.com.

This new guideline covers women presenting with breast cancer in whom the primary tumour may have been non-palpable and detected by screening mammography through to women with cancers over 5 cm but in whom there is no evidence of spread beyond the breast and axillary lymph nodes. The guideline includes a large spectrum of disease, ranging from ductal carcinoma in situ (DCIS) to inflammatory breast cancer, and also includes breast cancer in men, which is rare. Advanced breast cancer is the subject of another guideline.⁴

Diagnosis and preoperative assessment

- Magnetic resonance imaging (MRI) of the breast is not recommended as a routine preoperative assessment of patients with invasive breast cancer or DCIS but can help when a discrepancy exists between the clinical and radiological assessment, when breast density prevents mammographic assessment, or when breast conservation surgery to assess tumour size is being considered in lobular cancer.

- Ensure that pretreatment ultrasonography of the axilla is carried out and ultrasound guided needle biopsy also if abnormal lymph nodes are detected.

Psychological support

- Members of the breast cancer clinical team should have completed an approved communication skills training programme.
- Allocate patients to a named breast care nurse specialist to support them throughout their care and follow-up.
- Ensure that specialist psychological support, including psychiatric services, is readily available when necessary.

Surgery to the breast and axilla

Surgery is the primary treatment for DCIS and early invasive breast cancer, preferably with breast conservation when possible.

- After breast conserving surgery for DCIS a minimum radial margin of excision of 2 mm is recommended, with pathological examination in line with the reporting standards of the NHS breast screening programme. If the margin is less than 2 mm consider re-excision after discussing the risks and benefits with the patient. Enter patients with screen detected DCIS into the Sloane Project (the UK prospective audit of screen detected non-invasive carcinomas of the breast).⁵ Breast units should audit their recurrence rates.
- When no evidence exists of lymph node involvement by ultrasonography or a negative ultrasound guided biopsy, the axilla should be staged by minimal surgery, preferably sentinel lymph node biopsy, rather than lymph node clearance. Perform sentinel lymph node biopsy using the dual technique with isotope and blue dye. Breast units should audit their axillary recurrence rates.
- Further axillary treatment, preferably by lymph node dissection as it gives additional staging

This is one of a series of *BMJ* summaries of new guidelines, which are based on the best available evidence; they highlight important recommendations for clinical practice, especially where uncertainty or controversy exists. The supporting evidence statements and further information about the guidance are in the full version on bmj.com.

information, is required if macrometastases or micrometastases are present in the sentinel lymph node or if there is histologically proved cancer in the preoperative ultrasound guided needle biopsy. Patients with isolated tumour cells in the sentinel nodes should have no further axillary surgery as they are regarded as lymph node negative.

- Discuss immediate breast reconstruction with all patients for whom mastectomy is advised, unless they have significant comorbidity or where adjuvant therapy may be compromised, and discuss the full choice of the different types of breast reconstruction, whether available locally or not.

Planning adjuvant treatment

- Measure the oestrogen receptor status of all invasive cancers using immunohistochemistry and report this quantitatively. The routine measurement of the progesterone receptor status is not needed. Assess the human epidermal growth factor receptor 2 status by using a standardised and qualitatively assured method. Ensure these results are available and recorded at the multidisciplinary team meeting to guide adjuvant treatment decisions.
- Consider adjuvant therapy at the multidisciplinary meeting for all patients with invasive breast cancer after surgery, taking into account the prognostic and predictive factors, the potential benefits and side effects, and the outcome of discussions with the patient.
- The web based tool Adjuvant! Online⁶ is useful for estimating the absolute benefit of adjuvant treatment for an individual.
- Start chemotherapy or radiotherapy as soon as possible within 31 days of completion of surgery.⁷

Endocrine therapy in invasive disease

- For postmenopausal patients with oestrogen receptor positive invasive breast cancer that is not considered to be low risk, offer an aromatase inhibitor, either anastrozole or letrozole, as initial adjuvant therapy. If tamoxifen was chosen as the primary adjuvant treatment an aromatase inhibitor, either exemestane or anastrozole, can be offered after two to three years of tamoxifen, or letrozole after five years of tamoxifen in higher risk patients. When aromatase inhibitors are poorly tolerated or contraindicated as the primary adjuvant treatment, tamoxifen should be given.

Trastuzumab therapy

- After surgery, chemotherapy and radiotherapy (when applicable) in patients who have breast cancer that is positive for human epidermal growth factor receptor 2 and who have satisfactory cardiac function, offer trastuzumab

every three weeks for one year or until disease progression. Trastuzumab is a humanised monoclonal antibody that targets the human epidermal growth factor receptor 2, which is overexpressed in about 15% of breast cancers. Periodic follow-up of cardiac function during the year is mandatory.

Managing bone health

- Offer baseline dual energy x ray absorptiometry to assess bone mineral density in patients starting aromatase inhibitor treatment, those who have had treatment induced menopause, or those having ovarian ablation or suppression, as all these treatments can cause considerable bone loss and consequent risk of fracture.
- Offer bisphosphonates to patients according to UK consensus guidance for managing breast cancer treatment induced bone loss.⁸

Adjuvant radiotherapy

- Recommend breast radiotherapy after breast conservation surgery in patients with invasive disease, and consider it after surgery for DCIS.
- After mastectomy, discuss chest wall radiotherapy in higher risk patients, mainly depending on lymph node involvement.
- A dose of 40 Gy in 15 fractions using external beam radiotherapy is recommended.
- Do not irradiate the nodal areas routinely.

Primary systemic therapy

- Endocrine therapy alone rather than primary surgery is not appropriate unless surgery is contraindicated.
- After preoperative chemotherapy for locally advanced or inflammatory breast cancer, offer mastectomy followed by radiotherapy. It would be exceptional to perform breast conservation.

Complications of local treatment and menopausal symptoms

- Provide patients with information before surgery or radiotherapy on the risk of lymphoedema and factors such as infection that may cause or exacerbate it, including postoperative physiotherapy regimens. If lymphoedema develops ensure rapid access to a lymphoedema service.
- Discontinue hormone replacement therapy in all patients diagnosed with invasive breast cancer, and do not offer it routinely to women with menopausal symptoms who have a previous history of the disease. Offer support, written information, and counselling for those women who might develop menopausal symptoms as a result of their treatment.

Follow-up

- After treatment for invasive cancer and DCIS, offer annual mammography for five years to all

patients. The frequency of screening after this should be stratified according to risk by the NHS breast screening programme (England) and Breast Test Wales.

- Discuss clinical follow-up (which can be in primary, secondary, or shared care) with the patient. Provide an agreed written care plan including details of the designated named healthcare professionals, dates for review of any adjuvant therapy and surveillance mammography, and other contacts such as the lymphoedema service.

Overcoming barriers

The challenge for clinicians and commissioners is applying this guideline in a way that provides informed choice and equity of access to services for all patients. Resources in training and infrastructure may be needed for the wider use of ultrasound and mammographic follow-up and will be necessary for identifying and supporting centres offering specialist MRI services. All women advised to have a mastectomy need advice on the appropriateness, timeliness, and types of reconstructive procedures from oncoplastic specialists, who may have to network across sites. For those whose treatments affect bone health, access to surveillance and early intervention are essential to reduce serious complications; this will require commissioner support to acquire scan time for dual energy x ray absorptiometry.

Many of these recommendations have cost implications. A costing tool developed by NICE is available, and an implementation pack will be available soon. Most of the recommendations can be implemented and audited by the multidisciplinary breast cancer teams under the supervision of the cancer networks.

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- 6 Adjuvant! Online. Decision making tools for health care professionals. 2003-8. www.adjuvantonline.com
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- 8 Reid DM, Doughty J, Eastell R, Heys SD, Howell A, McCloskey EV, et al. Guidance for the management of breast cancer treatment-induced bone loss: a consensus position statement from a UK expert group. *Cancer Treat Rev* 2008;34(suppl 1):S3-18.

CORRECTIONS AND CLARIFICATIONS

Fish oil and secondary prevention of cardiovascular disease

In this editorial by Eric Brunner and Hiroyasu Iso (*BMJ* 2008;337:a2541, print publication 17 Jan 2009, p 118-9) we spelt eicosapentaenoic acid wrongly, with three n's instead of two.

The blame game

In this Observations article by Iona Heath (*BMJ* 2009;338:b7, print publication 10 Jan, p 73) the journal citation in the third paragraph was correct apart from the abbreviated journal title. The correct citation is *Proc Biol Sci* [not *Soc*] 1997;264:1687-94.

Statins and familial hypercholesterolaemia

Editing introduced an error into this editorial by Andrew Neil and Steve E Humphries (*BMJ* 2009;338:a3041, print publication 24 Jan, p 185-6). The second sentence of the fifth paragraph should start: "Primary prevention resulted in a 48% reduction in coronary mortality [not "in LDL cholesterol"]".

A symphony of maladies

This article by Sarah Bache and Frank Edenborough in our Christmas issue 2008 (*BMJ* 2008;337:a2646, print publication 20-27 Dec, p 1458-60) referred to cello scrotum. It has now emerged that the reference that they provided for the first description of this condition (a letter published in the *BMJ* in 1974) was a hoax. The author of the 1974 letter

(a non-doctor) and his then wife (a doctor who was involved in writing the letter) confessed to the hoax in a rapid response posted on bmj.com in December 2008 (www.bmj.com/cgi/eletters/337/dec12_1/a2646#207015) and published as a letter in January 2009 (*BMJ* 2009;338:b288, print publication 31 Jan, p 254). We have not yet been able to verify whether they are right to conclude that the letter describing guitar nipple (Curtis P. Guitar nipple. *BMJ* 1974;2:226), which prompted their letter on cello scrotum, was also a hoax.

Retraction: Cello scrotum

It has emerged that this letter by J Murphy about cello scrotum (*Br Med J* 1974;2:335) was a hoax. The author (a non-doctor) and his former wife (a doctor who was involved in writing the letter) confessed to the hoax after the letter was cited in an article published in the *BMJ's* Christmas issue in 2008. Their rapid response was posted on bmj.com in December 2008 (www.bmj.com/cgi/eletters/337/dec12_1/a2646#207015).

Trusts back reading groups to boost health and wellbeing

In this News article by Oona Mashta we should have said that the Reader Organisation runs more than 80 [not eight] weekly read aloud groups in Merseyside (*BMJ* 2009;338:b163, print publication 24 Jan p 195).