Breast cancer - presentation of breast abnormalities

Consider urgent referral to breast clinic (within 2 weeks)

Refer urgently to designated breast clinic (to be seen within 2 weeks)

Go to triple assessment clinic
Breast cancer - suspected

1 Background information

Quick info:

Scope:
- diagnosis and management of breast cancer in adult women across both primary and secondary care settings
- chemotherapy (including hormonal manipulation) and radiotherapy treatment options
- different surgical interventions, including:
  - lumpectomy
  - mastectomy
  - axillary nodal clearance
  - sentinel lymph node biopsy
  - breast reconstruction
- familial breast cancer and breast cancer screening in the UK
- triple-assessment multidisciplinary team (MDT) breast clinic
- complications of breast cancer treatment, eg early menopause, osteoporosis, infertility

Definition:
- early breast cancer (subdivided into two major categories):
  - ductal carcinoma in situ (DCIS):
    - often detected by microcalcification on mammography (some cases of DCIS are invisible as it can be non-calcifying)
    - not commonly palpable
    - not spread outside boundaries of breast structures
  - invasive cancer:
    - infiltration of cancer into the breast stroma
    - potential to spread to lympho-vascular spaces and metastases
- advanced breast cancer – tumour has spread significantly within the breast or to other organs of the body
- Paget's disease:
  - defined as malignant cells of the nipple
  - begins in the ducts below the nipple
  - commonly presents as an eczema-like condition around the nipple
  - has the potential to metastasize elsewhere in the breast and to other parts of the body

Incidence:
- in the UK:
  - breast cancer is the most commonly occurring cancer [1]
  - accounts for approximately 32% of cancers in women [2]
  - the lifetime risk of breast cancer is 11% [2]
  - 6-19% of women with breast cancer have a family history of the disease
- advanced breast cancer:
  - data from the West Midlands cancer intelligence unit indicates that [3]:
    - approximately 5% of women and men diagnosed with breast cancer had metastases at the time of diagnosis
    - 35% of patients develop metastases in the 10 years following diagnosis
- recurrent disease – at least one third of patients develop recurrent disease [4]

Risk factors:
- alcohol consumption
- older age
- early onset of menstruation
- postmenopausal and overweight
- previous history of breast cancer
- family history of breast, ovarian, or related cancer
- precursor lesions of breast cancer (eg atypical hyperplasia, lobular carcinoma in situ, ductal carcinoma in situ)
- increased breast density
- nulliparity
- hormone replacement therapy (HRT)
- current or recent use of oral contraceptives
- older age at first birth
- environmental factors
- certain genetic mutations
- early menarche
- late menopause (age 55 years or older)
- Jewish ancestry
- radiation exposure
Breast cancer - suspected

• high total energy intake

References:

2 Information resources for patients and carers

Quick info:
Patients and carers can access this care map through NHS Choices at http://healthguides.mapofmedicine.com/choices/map/breast_cancer1.html

The following resources have been produced by organisations certified by The Information Standard:
• 'Breast awareness' (URL) from BUPA at http://www.bupa.co.uk/health_information/
• 'Breast cancer' (URL) from Breast Cancer Care at http://www.breastcancercare.org.uk
• 'Breast cancer' (URL) from BUPA at http://www.bupa.co.uk/health_information/
• 'Breast cancer' (URL) from Cancer Help UK at http://www.cancerhelp.org.uk
• 'Breast cancer' (URL) from Datapharm at http://www.medguides.medicines.org.uk
• 'Breast cancer' (URL) from Macmillan Cancer Support at http://www.macmillan.org.uk
• 'Breast Cancer' (URL) from Patient UK at http://www.patient.co.uk
• 'Breast cancer (early & locally advanced)' (PDF) from National Institute for Health and Clinical Excellence (NICE) at http://www.nice.org.uk
• 'Breast Cancer - hereditary factors' (URL) from Patient UK at http://www.patient.co.uk
• 'Breast cancer in men' (URL) from Macmillan Cancer Support at http://www.macmillan.org.uk
• 'Breast cancer - risk factors' (URL) from Cancer Research UK at http://www.cancerresearchuk.org
• 'Breast lump investigation' (URL) from BUPA at http://www.bupa.co.uk/health_information/
• 'Breast lump removal (lumpectomy)' (URL) from BUPA at http://www.bupa.co.uk/health_information/
• 'Breast Lumps' (URL) from Patient UK at http://www.patient.co.uk
• 'Breast reconstruction' (URL) from Macmillan Cancer Support at http://www.macmillan.org.uk
• 'Breast reconstruction surgery' (URL) from BUPA at http://www.bupa.co.uk/health_information/
• 'Breast screening' (URL) from Patient UK at http://www.patient.co.uk
• 'Secondary breast cancer' (URL) from Macmillan Cancer Support at http://www.macmillan.org.uk
• 'Understanding NICE guidance: Advanced breast cancer' (PDF) from National Institute for Health and Clinical Excellence (NICE) at http://www.nice.org.uk
• 'Understanding NICE guidance: Familial breast cancer' (PDF) from National Institute for Health and Clinical Excellence (NICE) at http://www.nice.org.uk

Information for carers and people with disabilities is available at:
• 'Caring for someone' (URL) from Directgov at http://www.direct.gov.uk
• 'Disabled people' (URL) from Directgov at http://www.direct.gov.uk


The Map of Medicine is committed to providing high quality health and social care information for patients and carers. For details on how these resources are identified, please see Map of Medicine Patient and Carer Information.

NB: This information appears on each page of this care map.

3 Updates to this care map

Quick info:
Date of publication: 31-Oct-2011

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This care map was published by International. A printed version of this document is not controlled so may not be up-to-date with the latest clinical information.
Breast cancer - suspected

Interim update:
This care map has been updated with the following guideline:
Date of publication: 29-Apr-2011

Interim update:
This care map has been updated with the following guideline:
Date of publication: 31-Jan-2011

Interim update:
The clinical content of this care map has been accredited by the National Cancer Action Team.
Date of publication: 29-Oct-2010

Interim update:
This care map has been updated according to feedback from the National Cancer Action Team.
Date of publication: 30-Jul-2010

Three information points now appear at the top of each care map page. These provide:
• easy access to scope and background information on each page of the care map whilst reducing repetition between care points
• easy access to patient resources/leaflets
• information on care map updates

This care map was updated in line with the following guidelines: [1-4,7-17,19,21,23].
Further information was provided by the following references: [5,6,18,20,22]. For further information, please see the care map's Provenance certificate.

Practice-based knowledge has been contributed to this care map by:
• Mr Clive Griffith: Consultant Cancer Surgeon, Royal Victoria Infirmary, Newcastle upon Tyne, UK (clinical facilitator)
• Dr Jeremy Braybrooke: Consultant Medical Oncologist, University Hospitals Bristol NHS Foundation Trust, Bristol, UK
• Dr Dorothy Goddard: Consultant Breast Radiologist, Breast Unit Clinical Lead and Trust Lead Clinician for Cancer, Bath Breast Unit, Royal United Hospital, Bath, UK
• Dr Diane Hemming: Consultant Histopathologist, Queen Elizabeth Hospital, Gateshead, UK
• Dr Rosie Loftus: Lead Macmillan GP Adviser, The Parks Medical Practice, Kent, UK
• Ms Amanda Walshe: Senior Macmillan Breast Care Nurse Specialist, Northumbria Healthcare NHS Trust, North Tyneside, UK
• Selected members of Map of Medicine (MoM) Clinical Editorial team and Fellows board

The care map has been completely restructured and redrafted in line with the Map of Medicine editorial methodology and to bring it in line with current clinical practice.

NB: This information appears on each page of this care map.

4 Breast cancer - presentation of breast abnormalities

Quick info:
Clinical presentation:
• suspected early stage breast cancer:
  • lump in the breast or axilla
  • ulceration
  • skin nodule
  • skin distortion
  • nipple eczema
  • recent nipple retraction or distortion
  • unilateral nipple discharge which stains clothes
• advanced stage breast cancer:
  • bone pain and occasionally bone fractures
  • dyspnoea and persistent cough
  • paralysis due to spinal cord compression
  • nausea
  • abdominal discomfort
  • general malaise and weight loss
• Paget's disease:
  • thickened, reddened, weeping, or crusted area on nipple
Breast cancer - suspected

- nipple discharge
- ulceration

- inflammatory breast cancer:
  - breast swelling
  - redness
  - discomfort and pain
  - oedematous, indurated, and erythematous breast

- screening:
  - women age between 50-70 years should be invited for screening
  - familial breast cancer

This information was drawn from the following references:


5 Screening

Quick info:
Women should be provided with information about [8]:

- the screening test:
  - use of compression
  - mammographic views
  - examination times
- how they will receive their results
- organisation of the screening programme
- harms and benefits of screening
- the importance of breast awareness

Mammographical screening:

should be performed annually for those age between 40 and 49 years [2] with a significant family history of breast cancer [5,9]

should be performed every 3 years from age 50 years (part of the NHS Screening Programme) [2]:

the breast screening interval is being expanded to women age 47-73 years, with full implementation of this by 2012 [5]

individualised strategies for women age 30-39 and older than age 50 with the following [2]:
  - BRCA1, BRCA2, or TP53 mutations present in family
  - high risk of breast cancer
  - many breast units routinely perform mammography from age 35 years, but expert opinion recommends that mammography should be routinely performed from age 40 years [5]

Magnetic resonance imaging (MRI) surveillance should be considered in the following cases [9]:

- BRCA1 and BRCA2 mutation carriers age 30-49 years [2]
- TP53 mutation carriers age 20 years or older [2]
  - between age 30-39 years – 10 year risk greater than 8% [2]
  - between age 40-49 years [2]:
    - 10 year risk greater than 20%
    - 10 year risk greater than 12% and mammography indicates dense breast pattern
    - high chance of carrying BRCA1 or TP53 mutations between age 30 and 49 years if the patient has:
      - a 50% risk of carrying one of these mutations in a tested family
      - a 50% risk of carrying BRCA1 or TP53 in an untested or inconclusive tested family with at least a 60% of carrying the mutation

References:

Breast cancer - suspected

6 History and examination

Quick info:
Ask about:
- lumps and nodularity – establish how any lumps were first noted:
  - accidentally
  - by breast self-examination
  - during a screening clinical breast examination or mammogram
- other breast symptoms, such as:
  - pain
  - redness
  - discharge
  - skin changes
  - nipple changes
- axillary lymph nodes – pain, lumps
- history of trauma to chest area
- family history of breast cancer:
  - whether a faulty gene has been identified in the family
  - whether any first or second degree relative has had breast cancer – if so, determine whether other cancers have occurred in the family
- history of enlarged lymph nodes
- personal history of breast cancer
- treatment and drug history:
  - hormonal replacement therapy (HRT) or oral contraceptive use
  - personal history of breast biopsy or surgery which has detected:
    - atypical ductal hyperplasia
    - atypical lobular hyperplasia
    - lobular carcinoma in situ
  - age (risk increases with age)
  - Jewish ancestry (increased risk of hereditary breast cancer in Ashkenazi Jews)
  - age at menarche (risk increases with early menarche)
  - obstetric history (nulliparity and first live birth after age 30 years are risk factors)
  - menopausal status – ask if patient is pre, post- or peri- menopausal, and note age of menopause if the patient is postmenopausal (postmenopausal patients are at higher risk and late menopause is a risk factor)
  - alcohol use

Examination should, with patient's consent, include:
- inspection for the following:
  - mass
  - nodules
  - skin retraction (may be revealed by asking the patient to place arms on hips, contract pectoral muscles, and then raise arms)
  - pitted skin (peau d'orange)
  - swelling
  - nipple discharge
  - nipple erythema, eczema, ulceration
  - nipple retraction, distortion
  - fungation
- examination of the lump:
  - assess for hard lump
  - fixation
  - skin tethering
- assessment of nipple changes:
  - if present, the colour of any nipple discharge
  - whether the discharge is:
Breast cancer - suspected

- sufficient to stain clothing
- bloody
- spontaneous or stimulated
- from a single or multi-duct
- persistent or intermittent
- accompanying changes in appearance of the breast, such as:
  - dimpling of the skin
  - nipple soreness
  - itch
  - redness
  - nipple inversion
  - change in shape or contour
- to examine nipple discharge either:
  - squeeze the nipple gently yourself; or
  - ask the patient to squeeze the nipple

This information was drawn from the following references:

7 Consider urgent referral to breast clinic (within 2 weeks)

Quick info:
All patients with the following should be referred to specialist care:
- lump:
  - National Institute of Health and Clinical Excellence (NICE) recommend referral if patient over age 30 years presents with a discrete lump [4]
  - Scottish Intercollegiate Guidelines Network (SIGN) recommend referral if the patient presents with a:
    - new lump in pre-existing nodularity [11]
    - non-lactational abscess or mastitis which does not settle after a course of antibiotics [11]
    - new asymmetrical nodularity that persists after review after menstruation [11]
    - breast abscess in a patient greater than age 40 years [11]; however expert opinion states that abscesses require early or urgent referral without specific age requirements [5]
    - cyst persistently refilling or a recurrent cyst [11]
    - unilateral axillary lymph node lump [11]
    - lump that enlarges [10]
  - features associated with breast cancer, eg fixed and hard [10]
- pain:
  - SIGN recommend referral if the patient presents with [11]:
    - persistent unilateral pain in postmenopausal women
    - pain associated with lump
    - intractable pain that interferes with lifestyle
- nipple symptoms:
  - NICE recommend referral if the patient presents with [4]:
    - nipple eczema
    - new nipple retraction (less than 3 months)
    - unilateral nipple discharge that stains clothing
  - SIGN recommend referral if the patient presents with [11]:
    - persistent discharge which is blood stained or single duct, in patient younger than age 50 years
    - bilateral discharge which stains outer clothing
    - discharge in patients older than age 50 years
    - nipple eczema not responsive to topical steroids [2]
- skin changes:
  - NICE recommend referral if the patient presents with [4]:
    - ulceration
    - nodules
    - distortion
  - SIGN recommend referral if the patient presents with [11]:

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- skin tethering
- fixation
- breast inflammation or abscess not settled after antibiotics
- abscess or inflammation in women older than age 40 years
- previous confirmed breast cancer with further lump or suspicious symptoms [2]
- men age 50 years and older – firm subareolar mass with or without nipple retraction, or associated skin changes [2]

References:

Breast cancer - suspected

Key Dates

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Accreditations

The care map is accredited by:

The Chief Knowledge Officer of the NHS:

Disclaimer

The care map is accredited by:

National Cancer Action Team (NCAT):

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Evidence summary for Breast cancer - suspected

This pathway has been developed according to the Map of Medicine editorial methodology (http://mapofmedicine.com/whatisthemap/editorialmethodology). The content of this pathway is based on high-quality guidelines [1-4,7-13,15-17,19,21,23-25], critically appraised meta-analyses and systematic reviews [18,20,22]. Practice-based knowledge has been added by contributors with front-line clinical experience [5,6], including any literature endorsed by the contributor group [14].

Search date: Mar-2010

References

This is a list of all the references that have passed critical appraisal for use in the care map Breast cancer

ID Reference
http://www.cks.nhs.uk/breast_cancer_managing_fh#398061001
5 Contributors representing the National Cancer Action Team. 2010.
http://www.cancerscreening.nhs.uk/breastscreen/publications/nhsbsp60v2.pdf
http://www.cks.nhs.uk/breast_cancer_suspected#396937001
http://www.sign.ac.uk/pdf/sign84.pdf

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ID Reference

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National Cancer Action Team (NCAT)

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