

Abnormal lymph nodes found at screening mammography

The medio-lateral view taken at screening mammography often demonstrates the lower axilla. Normal lymph nodes are often seen in this view as well defined, elliptical soft tissue densities with a lucent notch at the fatty hilum.

The presence of pathological lymph nodes on screening mammography with an associated area of suspicion in the breast raises the level of concern about the breast lesion. Nodal status is highly significant in predicting the prognosis in breast cancer.^{1,2}

Occasionally however, abnormal lymph nodes are seen *without* accompanying breast pathology. The criteria used to determine pathological nodes can include size greater than 1.5cm, replacement or distortion of the fatty hilum, rounded or irregular shape, and increased density.³

Women who have an axillary lymphadenopathy identified on their screening mammogram, and who do not have any breast abnormalities, are referred back to their GP for further assessment. The range of investigations that may be necessary for these women falls outside the scope of BSSA's Assessment Clinic.

Once the screening results are available, one of BSSA's medical officers will contact both the woman and her GP to notify them of the need for investigation of the lymphadenopathy. We then send copies of the woman's films and a flow chart of suggested investigations to the GP.

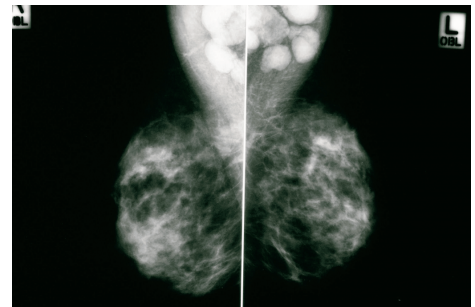
In some cases there is known existing pathology, and it may not be necessary to do extensive investigations. If there is no known pathology, women will usually require at least a clinical examination and complete blood picture, as well as ultrasound and fine needle aspiration biopsy of the abnormal nodes. In addition, it is important to remember that although no breast lesion has been seen on the screening mammogram, an occult breast cancer remains a possibility. A clinical breast examination should therefore be part of the assessment of these women.

Benign causes of lymphadenopathy include:

- infection, acute or chronic (eg cat scratch disease, HIV)
- rheumatoid arthritis and other arthropathies and connective tissue disorders (eg SLE)
- granulomatous diseases (eg sarcoidosis)
- silicone lymphadenopathy.

Malignant causes of lymphadenopathy include:

- lymphoproliferative diseases (lymphoma, leukaemia)
- breast cancer
- melanoma
- lung cancer.⁴



Bilateral axillary lymphadenopathy on medio-lateral view of a screening mammogram.

Clinical outcomes

Between 1996-2001, pathological lymph nodes *without* any breast abnormality were detected in 44 cases at BSSA, representing less than two women per 10,000 screened. Malignancy was diagnosed in 14 of these women (32%.) Although in some cases there was a known pre-existing malignancy such as chronic lymphatic leukaemia (CLL), most were newly diagnosed as a result of the mammographic finding. The commonest malignancy diagnosed was lymphoma. There was one new case of CLL, and two cases of breast cancer with an occult breast lesion.

Other centres have shown similar results. A review of over 95,000 screening mammograms reported by Murray & Given-Wilson (London 1997) showed 21 cases with abnormal lymph nodes and no breast lesion. Of these, 10 were benign (48%) and 11 malignant (52%). Another study by Bergkvist, Frodis et al (Sweden 1996) found 22 cases of pathological lymph nodes with no breast abnormality. Of these, 10 women (45%) were diagnosed with a new malignancy.

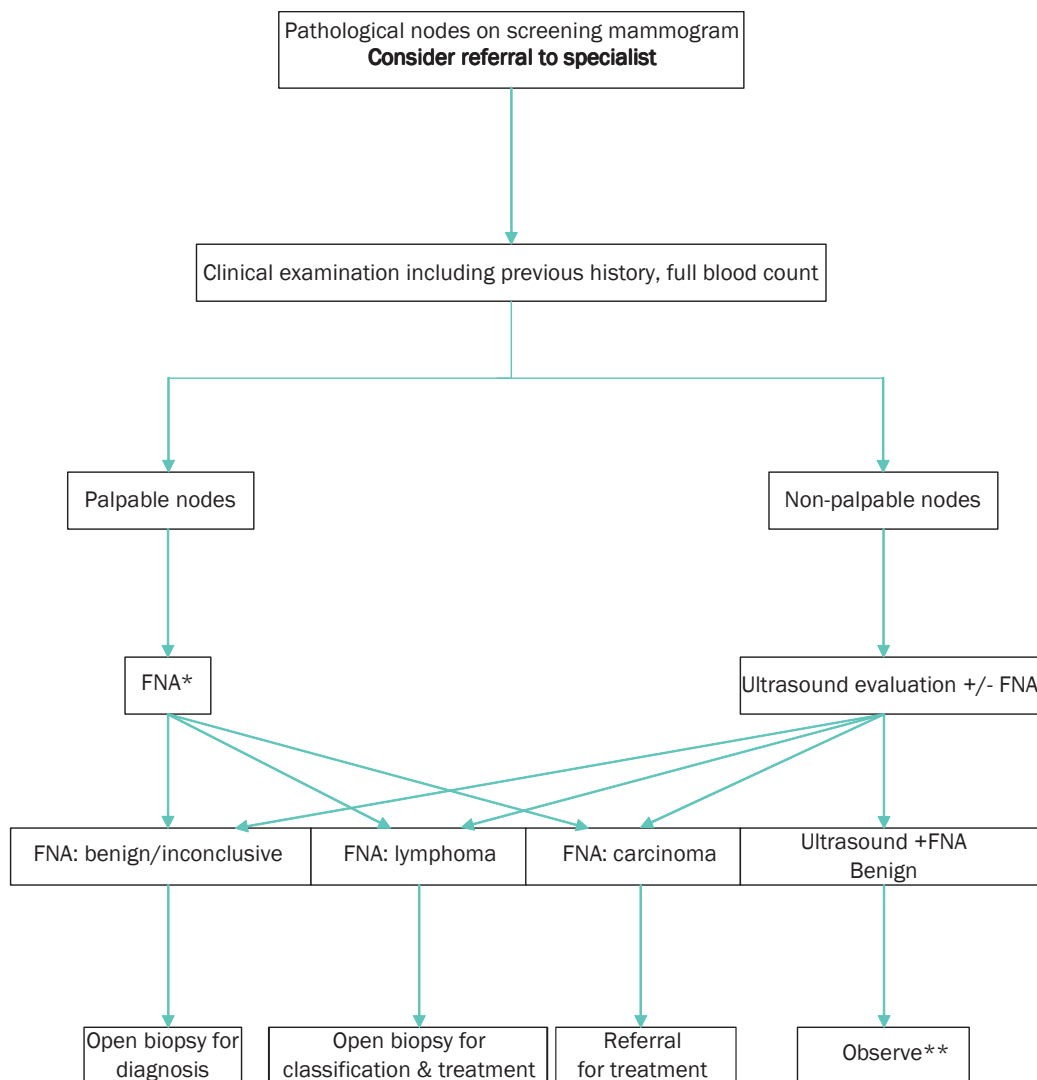
It is therefore recommended that all women whose screening mammograms show abnormal lymph nodes with no known cause have further investigation.

History and clinical examination, blood picture, axillary ultrasound and fine needle aspiration biopsy (FNA) may all be required, and in some cases excision biopsy is also necessary to establish a diagnosis.

As with women who have breast pathology identified on screening mammography, BSSA monitors the outcomes for women who have axillary lymphadenopathy identified on their screening films. We would appreciate being informed of your clinical findings, and the results of any investigations.

1. M Sundquist, S Thorstenson, L Brudin, S Wingren and B Nordenskjold. Incidence and prognosis in early onset breast cancer. *The Breast* (2002) 11, 30-35.
2. YS Rajesh, S Ellenbogen and B Banerjee. Preoperative axillary ultrasound scan: its accuracy in assessing the axillary nodal status in carcinoma. *The Breast* (2002) 11, 49-52.
3. Murray ME and Given-Wilson RM. The clinical importance of axillary lymphadenopathy detected on screening mammography. *Clinical Radiology* (1997) 52, 458-461.
4. Liebman J and Wong R. Findings on mammography in the axilla. *AJR* (1997) 169, 1385-1390.

Investigation of abnormal lymph nodes found at screening mammography



*FNA – Fine Needle Aspiration Biopsy.

** unless other tests or history suggest need for thorough investigation.