

Multidisciplinary Diagnostic Evaluation of Suspicious Focal Breast Lesions - Case Study

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Abstract

The diagnostic assessment of focal breast lesions often requires the use of complementary imaging modalities in addition to standard ultrasound and mammography.

The correct sequence of examinations is of particular importance in order to avoid interpretative limitations resulting from previous invasive procedures. A 71-year-old female patient presented for routine screening mammography of both breasts. Mammography revealed two spiculated masses (17 mm and 6 mm) and scattered central microcalcifications in the right breast; BI-RADS 5 (high probability of breast cancer – over 95%). The smaller lesion demonstrated a different appearance in the CC and MLO views, which raised doubts regarding its nature and the need for further diagnostic evaluation. In view of the planned core-needle biopsy and the risk of artefacts afterwards, it was decided to perform contrast-enhanced spectral mammography beforehand. This examination showed only one pathological focus with a diameter of 12 mm, located superficial to the fascia. Ultrasound of the right breast demonstrated a hypoechoic, poorly demarcated solid mass measuring 10 × 9 × 9 mm, Tsukuba 4, BI-RADS 5 ACR B. A diagnostic vacuum-assisted biopsy was performed. Histopathological examination revealed invasive ductal carcinoma NOS, grade 2 (B5).

This case highlights the importance of a multiprofile, coordinated diagnostic approach in the evaluation of breast lesions. The use of contrast-enhanced spectral mammography prior to biopsy allowed precise confirmation that only a single lesion was present, its localisation, and prevented diagnostic value loss of the imaging. The discrepancy in the number of lesions visualised using different imaging techniques confirms the necessity of combining various modalities to obtain a comprehensive characterisation of the disease process and to plan appropriate treatment.