

Mammography

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Mammography in two planes and ultrasonography are the first line investigations for imaging the breast. Magnetic resonance imaging (MRI) is a valuable adjunctive diagnostic tool because of its high sensitivity for breast pathology. Mammography is also used as an initial screening tool for asymptomatic women in population-based programmes. Radiographs are taken by placing the breast in direct contact with ultrasensitive film and exposing it to low-voltage, high-amperage x-rays. The dose of radiation is approximately 1 mGy per film (Figure 58.7). Mammography should be the first investigation in older women who present with breast symptoms.

Mammographic features of cancer are shown in Figure 58.8. Ancillary signs of malignancy such as lymphadenopathy, breast oedema and skin or areolar thickening or retraction may be seen in advanced cases. The mammographic and ultrasonographic features are not diagnostic of cancer; biopsy is required for definitive diagnosis in lesions with a Breast Imaging Reporting and Data System (BI-RADS) score of 4 or 5 (Table 58.1). Mammography reporting The American College of Radiology has developed guide lines - BI-RADS - to achieve uniformity and objectivity in the interpretation and reporting of mammograms and ultrasound. The mammographic assessments are categorised from BI-RADS 0 to BI-RADS 6 (Table 58.1). Gy is short for Gray, the SI unit for the absorbed dose of ionising radiation. Louis Harold Gray, 1905-1965, Director, British Empire Cancer Campaign Research Unit in Radiobiology, Mount Vernon Hospital, Northwood, UK. -).

(b) Use the pad of three fingers
and (c) the dial of a clock method
Figure 58.5 Fibroadenoma.

Ultrasonography shows a well-circum

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scribed, solid mass suggestive of
/f_i adenoma in a young
woman. Breast Imaging Reporting
and Data System (BI-RADS) score
3 (Table 58.1). Figure 58.6
Imaging features of breast
carcinoma on ultrasonogra

phy. This shows a solid, irregular-shaped mass, taller than wider, with angular irregular margins.
Breast Imaging Reporting and Data System (BI-RADS) score 5 (Table 58.1).

Revision #1

Created 2025-12-31 15:21:47 UTC by Omar Ayman

Updated 2025-12-31 15:21:47 UTC by Omar Ayman