**Bi-RADS for Mammography**

Bi-RADS is to standardise great imaging reporting and to reduce confusion in great imaging interpretations.

**Standard Reporting**

***Describe the indication for the study***

Includes the patient history.

***Breast Composition***

***Describe any significant finding using standardised terminology***

Use the morphological descriptors: **mass, asymmetry, architectural distortion and calcifications**.These findings may have associated features, like for instance a mass can be accompanied with skin thickening, nipple retraction, calcifications etc.

***Compare to previous studies.***Awaiting previous examinations for comparison should only take place if they are required to make a final assessment

***Conclude to a final assessment category.*** Use BI-RADS categories 0-6 and the phrase associated with them.If Mammography and US are performed: overall assessment should be based on the most abnormal of the two breasts, based on the highest likelihood of malignancy.

**Give management recommendations.**

***Communicate unexpected findings with the referring clinician.***

Verbal discussions between radiologist, patient or referring clinician should be documented in the report.



**Mammography and Ultrasound Lexicon**

**BI-RADS Assessment Categories**

**Breast Imaging-Reporting and Data System**

**Mammography - Breast Imaging Lexicon**

**Breast Composition**

In the BI-RADS edition 2003 the assignment of the breast composition was based on the overall density resulting in ACR

category 1 ( <25% fibroglandular tissue),

category 2 ( 25-50%),

category 3 (50-75%)

category 4 (>75%).

In the BI-RADS edition 2013 the assignment of the breast composition is changed into a, b, c and d-categories followed by a description:

* **a***- The breast are almost entirely fatty.*  
  Mammography is highly sensitive in this setting.
* **b***- There are scattered areas of fibroglandular density.*
* The term density describes the degree of x-ray attenuation of breast tissue but not discrete mammographic findings.
* **c***- The breasts are heterogeneously dense, which may obscure small masses.*
* Some areas in the breasts are sufficiently dense to obscure small masses.
* **d** *- The breasts are extremely dense, which lowers the sensitivity of mammography.*



**Mass**

A 'Mass' is a space occupying 3D lesion seen in two different projections.

If a potential mass is seen in only a single projection it should be called a 'asymmetry' until its three-dimensionality is confirmed.

1. **Shape**: oval (may include 2 or 3 lobulations), round or irregular
2. **Margins**: circumscribed, obscured, microlobulated, indistinct, spiculated
3. **Density**: high, equal, low or fat-containing.

The images show a fat-containing lesion with a popcorn-like calcification.

All fat-containing lesions are typically benign.These image-findings are diagnostic for a hamartoma - also known as fibroadenolipoma.

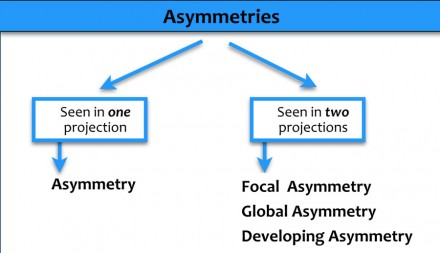
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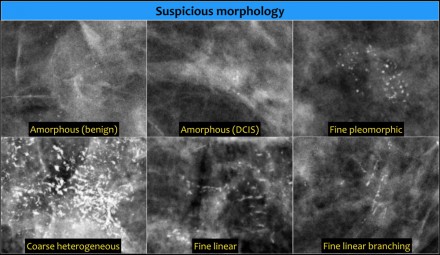
Here multiple round circumscribed low density masses in the right breast.

These were the result of lipofilling, which is transplantation of body fat to the breast.

**Asymmetries**

Findings that represent unilateral deposits of fibroglandulair tissue not conforming to the definition of a mass.

* **Asymmetry** as an area of fibroglandulair tissue visible on only ***one*** mammographic projection, mostly caused by superimposition of normal breast tissue.
* **Focal asymmetry** visible on two projections, hence a real finding rather than superposition.
* This has to be differentiated from a mass.
* **Global asymmetry** consisting of an asymmetry over at least one quarter of the breast and is usually a normal variant.
* **Developing asymmetry** new, larger and more conspicuous than on a previous examination.

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