Breast and Cervical Cancer Control Program

General Guidelines in Interpreting Mammogram Results in Absence of Final Result by Radiologist

May 2012

NOTE: Mammogram results should be reported on the mammogram report for BOTH breasts if both are imaged. In certain instances, (i.e. work-up of abnormal findings on one breast), the radiologist may report a final result ONLY for the breast with the abnormality. In that instance, these guidelines can be used to classify mammogram results for breast findings NOT given a final result by the radiologist. Guidelines are NOT to replace the final mammogram result given by the radiologist.

Mammogram results are reported according to BI-RADS (Breast Imaging Reporting and Data System).

**ACR 0 - Assessment Incomplete- Need Additional Imaging Evaluation**

Description:

Category 0 is given if the Assessment is not completed yet, and additional imaging workup (spot compression, magnification, special magnification views and/or Ultrasound) is often recommended because the radiologist requires more information. MRI may be recommended in select circumstances. Further follow-up beyond the second imaging depends on the final BI-RADS results and is recommended for a variety of reasons: dense breast tissue possibly obscuring a lesion; evaluation of a round nodule; identifying specific types of calcifications, etc. Once the additional imaging work-up is obtained the radiologist will assign a final BI-RADS category based on the imaging result.

E.g. To confirm if a nodule is a cyst or solid mass, the radiologist recommends an Ultrasound, and assigns a ACR 0 category to the mammogram. The Ultrasound confirms the nodule as a benign cyst. This "completes the BIRADS" and because the cyst is benign the radiologist assigns an ACR 2 (benign finding) to the final report.

**ACR 1 – Negative**

Description

With category 1 the screening mammogram shows the breasts are symmetric, no grouped or suspicious microcalcifications, no well-formed mass, and no architectural distortion. Category 1 is also used to classify breasts that are comprised of mostly fatty tissue (defined as < 25% glandular tissue).

NOTE: For benign or probably benign mammogram results that have been previously evaluated and there is currently NO change in result from any previous exam, the radiologist may assign a ACR1 (Negative) to the final report.
ACR 2 - Benign Finding

Description

Category 2 is a normal assessment but the radiologist chooses to describe the benign finding(s) which may include any or several of the following:

- **Scattered fibroglandular tissue** (definition - breast density is 25-50% of breast) (most commonly described);
- Round opacities with macrocalcifications (typical calcified fibroadenoma or cyst);
- Round opacities corresponding to a typical cyst at ultrasonography;
- Oval opacities with a radiolucent center;
- Fatty densities or partially fatty images (lipoma, galactocele, oil cyst, hamartoma);
- Surgical scar;
- Scattered macrocalcifications (fibroadenoma, cyst, cytosteatonecrosis, secretory ductal ectasia, secretory calcifications, vascular calcifications);
- Breast implants, silicone granuloma.

Additional description on intramammary lymph nodes, vascular calcifications, implants, and any architectural distortion related to previous surgery may be included.

ACR 3 - Probably Benign Finding

With category 3, a follow-up of 6 months is usually recommended. Probably Benign Findings have < 2% risk of malignancy and are not expected to change over follow-up interval but the radiologist wants to establish its stability (i.e. The screening mammogram may show a finding of some kind, but the lesion is non-palpable). Findings typical of this category include:

- Heterogeneously dense breast tissue (definition: comprising 51%-75% of the breast tissue); ('Heterogeneous' means something contains many different items and has many different variations. With respect to breast density it implies that the fibrous tissue is prevalent throughout the breast, but not clustered together).
- Clusters of tiny calcifications if round or oval;
- Non-calcified solid nodules (no size limitation but non palpable), round, ovoid, well-defined;
- Selected focal asymmetric areas of fibroglandular density (not palpable): This might include concave-outward defined margins, interspersed with fat and without central increased fibular density on two projections;
- Miscellaneous focal findings, such as a dilated duct, or post biopsy architectural distortion without central density;

All slides in this presentation are the property of the presenter. Please do not duplicate slides without the written permission of the presenter.
• Generalized distribution in both breasts. For example, multiple similar lesions with tiny calcifications or nodules distributed randomly.

NOTE: In some scenarios a percutaneous biopsy might be considered, (E.g. complex cyst)

ACR 4 - Suspicious or Indeterminate Abnormality

A category 4 mammogram increases the concern for breast cancer and in most cases (unless low suspicion) a biopsy should be recommended. Typically, a lesion has been found, but does not initially appear to have the morphological characteristics of breast cancer. BI-RADS category 4 is therefore often subdivided into three smaller sub-categories: "A" for low suspicion of breast cancer, (~13%), "B" for moderate suspicion of breast cancer, (~36%), and "C" for high suspicion (~79%) of breast cancer. Findings typical of BI-RADS category 4 include:

• Fibrocystic change (most common confirmed diagnostic finding);
• Very dense breast tissue (definition: described as mostly, > 75%, glandular and fibrous tissue). At this level the sensitivity of the mammogram might even be reduced;
• Asymmetric, localized or evolving hyperdensities with convex contours;
• Indeterminate microcalcifications appearing amorphous, indistinct particularly if in a cluster or heterogeneous and pleomorphic;
• Round or oval non cystic opacities with microlobulated or obscured contours.

ACR 5 - Highly Suggestive of Malignancy

Description

Category 5 is usually reserved for lesions having a 95% probability of malignancy. After biopsy, the average rate of breast cancer in category 5 biopsies is about 75-97%. Finding(s) typical of category five include:

• Malignant microcalcifications; (E.g. linear with branching pattern; particularly if numerous, clustered and with a segmental distribution);
• Clusters of microcalcifications with a segmental or galactophorous distribution;
• Evolving microcalcifications or associated with an architectural distortion or opacity;
• Poorly circumscribed opacities with ill-defined and irregular contours;
• Spiculated opacities with radio-opaque center.