(Updated: 4/21/15)

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General

Q. When will the new edition of BI-RADS® be available?

A. The hardcopy BI-RADS® Atlas 5th Edition was published in January 2014 and is currently available for order online (http://www.acr.org/Education/Education-Catalog) or by telephone at (800) 227-7762.

Q. When will the digital edition of BI-RADS® be available?

A. The BI-RADS® Atlas 5th Edition e-book was published in September 2014 and is currently available for order online (http://www.acr.org/Education/Education-Catalog) or by telephone at (800) 227-7762.

Q. Where are the rest of the BI-RADS® Frequently Asked Questions?

A. Many of the FAQs have been included within the text of the atlas, within the guidance chapters for each modality and the Follow-up and Outcome Monitoring section and are available on the BI-RADS® page on the ACR website.

- Mammography FAQs
- Breast Ultrasound FAQs
- Breast MRI FAQs
- Follow-up and Outcome Monitoring FAQs

**Corrections to ACR BI-RADS® Atlas 5th Edition**

**Q.** If we have purchased the BI-RADS® Atlas and there are corrections, how can we find out what corrections were made?

**A.** Any significant corrections to the BI-RADS® Atlas 5th Edition will be published here in the BI-RADS® Frequently Asked Questions. Minor corrections, such as typos, will be made in future printings of the hardcopy.

### Front Material

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<td>Corrected fax # to (703) 648-9176 and added e-mail contact</td>
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<td>(<a href="mailto:BI-RADS@acr.org">BI-RADS@acr.org</a>) to the Permission Agreement</td>
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### Mammography

No revisions.

### Ultrasound

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## Follow-up and Outcome Monitoring

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<td>IV.</td>
<td>Last two sentences of item #10 corrected to read, &quot;Because no breast cancer is found within 1 year of the screening examination and the first diagnostic examination, these are classified as false-positive (FP) and true-negative (TN), respectively. Because breast cancer indeed is diagnosed within 1 year of the second (6-month) examination and the last (13-month) examination, these are classified as false-negative (FN) and true-positive (TP), respectively.&quot;</td>
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<td>67-72</td>
<td>VII</td>
<td>Sample Forms and Example for Basic Clinically Relevant Audit Data Collection and Calculations – removed since manual audits are no longer performed and to eliminate inconsistencies with text</td>
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### Data Dictionary

Please contact BI-RADS @acr.org for the most current Data Dictionary.

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**Appendix – Sample Lay Letters**

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<td>Sample Lay Letters</td>
<td>Second page of Lay Letter for Negative or Benign Finding(s) and Patient has Physical Findings, Signs or Symptoms (to be used with BI-RADS® 1-2) added (signature block &amp; ACS Guidelines text box)</td>
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<td>Sample Lay Letters</td>
<td>Second page of Sample Lay Letter for Review of Previous Mammograms if Not Available at time of Current Mammogram added (ACS text box)</td>
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**Mammography**

Q. I’d like to know which BI-RADS category is appropriate for the following subset of our patients. We commonly receive scripts requesting “screening mammogram with ultrasound if indicated”, or “screening mammogram with ultrasound if needed”, or “screening mammogram with ultrasound if medically necessary”, or some other similar iteration. Many of these patients will have heterogeneously dense tissue or extremely dense tissue and be otherwise negative or negative with benign finding. With the script worded as such, is it appropriate to assess these cases as category 0 since the referring physicians seem to be requesting both exams, and we would have to schedule and bring the patient back another day for a follow-up screening whole breast ultrasound?

A. There are 2 scenarios:
• If the exam is normal, then the assessment should be category 1 or 2, depending upon whether the interpreting physician chooses to describe benign findings in the breast imaging report (category 1 for no findings described, category 2 for at least one benign finding described). That’s all that is required. If the patient is asymptomatic and has no abnormal findings at clinical breast exam, but the interpreting physician identifies an abnormality that requires additional imaging evaluation, the correct BI-RADS® assessment is category 0.

• If the patient is symptomatic or has an abnormal finding at clinical breast exam, then this is a diagnostic exam. The area of concern should be appropriately worked up. If an ultrasound is included with the workup, a combined diagnostic mammography and US report should be rendered, containing a final combined BI-RADS® assessment (category 1-5). If the diagnostic mammogram and US are done separately, for whatever reason, then the diagnostic mammogram should be given a BI-RADS® assessment with the additional recommendation for US if appropriate. If US then is done subsequently, the final BI-RADS® assessment for this exam should complete the diagnostic exam. The audit section (some material is available on the web at: http://www.acr.org/Quality-Safety/Resources/BIRADS/Monitoring) and FAQs from the mammography section (http://www.acr.org/~media/ACR/Documents/PDF/QualitySafety/Resources/BIRADS/01%20Mammography/03%20%20BIRADS%20Mammography%20FAQs.pdf) provide more detailed information on this topic.

Note that it is not appropriate to assess a normal screening mammography exam as category 0 simply because one is recommending downstream supplementary screening with MRI or US (whether for high-risk status or dense breasts). In this scenario, assess the screening mammography exam as category 1 or 2, provide the concordant management recommendation (routine screening), and add a “However, …” sentence stating that because of the patient’s high-risk status or because she has dense breasts, supplementary screening with MRI or US is recommended.

Q. On a screening mammogram, when referring to a very dense breast that had no mammographic evidence of cancer, I would include in my report a recommendation for breast MRI. However, the insurers (and Medicare) are declining payment because of the BI-RADS category 1 assessment. The assessment must be based on what I see on the mammogram, in this case, category 1 (Negative). Yet, should I also give a recommendation to do an MRI that may find small cancers in a dense breast?

A. BI-RADS® does not provide guidance on specific clinical situations in which supplementary screening should or should not be performed. But it does require that assessment be based on imaging findings, so a normal screening mammogram should be assessed as category 1 or 2. As stated previously, the interpreting physician has the option to recommend supplementary screening, but patients who choose to undergo supplementary screening should be prepared to pay out-of-pocket if their insurance declines payment.


Q. There is confusion at my facility among the radiologists and the technologists regarding the exact wording of breast density under the findings section of the report. The density categories used to be numbered (1, 2, 3, and 4); it now appears that they are lettered (a, b, c, and d). Most or our radiologists have been using the written descriptions for breast density, specifically: almost entirely fatty, scattered areas of fibroglandular density, heterogeneously dense, extremely dense as descriptors alone. My specific question is: Are we to drop the word descriptors and replace the words with a, b, c, or d? Is it a requirement for reporting that

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letters be used? It seems redundant to use the word descriptors and adds a layer of unnecessary confusion if so.

A. The verbal descriptors of breast density should be used in the report, neither letters nor numbers. The reason that the lists of the assessment categories and densities were given numbers and letters, respectively, was to minimize confusion in their shorthand use.

Q. Please explain why we should not use an of assessment category 3 in screening. In particular, what is wrong in using category 3 when dealing with calcifications in screening mammography?

A. Use of a probably benign (category 3) assessment at screening essentially defers diagnostic work-up for 6 months. It is strongly recommended that category 3 assessments be issued only after appropriate workup. This modification has been made based on recent studies (see below) indicating that full diagnostic imaging evaluation will identify both benign and malignant lesions promptly instead of waiting for 6 months.

There are two major advantages to the recommended approach.

- The first is more prompt identification of truly benign findings (simple cysts, some intramammary lymph nodes, some cases of grouped skin calcifications, etc.). A large-scale BCSC study, involving more than 1 million mammograms, has shown that recall imaging significantly increases the identification of characteristically benign lesions, thus promptly establishing a benign diagnosis, eliminating 6 months of potential anxiety, and obviating short-interval follow-up examination. (Kerlikowske K, Smith-Bindman R, Abraham LA, et al. Breast cancer yield for screening mammographic examinations with recommendation for short-interval follow-up. Radiology 2005; 234(3):684–692.)

- The second is more prompt identification of some rapidly growing cancers (the same BCSC study also suggested that recall imaging leads to the prompt diagnosis of some aggressively growing cancers by identifying these tumors when they are smaller and more likely to be node-negative, rather than 6 months later at initial short-interval follow-up examination.)

Discouraging the use of category 3 assessments at screening mammography is not limited to BI-RADS® recommendations. The first pay-for-performance initiative within Medicare’s Physician Quality Reporting System (PQRS) that concerns breast imaging involves reporting the percentage of screening mammography examinations that are assessed as category 3, with the stated goal of reducing this to “approaching 0%” in clinical practice.

Also, note that a category 3 assessment rendered from a screening exam, without prompt diagnostic workup, is considered a positive screening exam. The rationale for making category 3 at screening positive is that it recommends additional imaging evaluation prior to routine screening in 1 year. Use of category 3 assessment at screening is no longer a strategy to reduce recall rate.

Q. Given this patient history:

- Mother had breast cancer at age 45
- Patient’s current age is 38
- Patient started imaging in 2007 with diagnostic mammography and ultrasound
- Screening mammogram in 2008
- Diagnostic ultrasounds in 2010 and 2012
- Screening mammogram 3/13/13 – BI-RADS category 2
- Screening ultrasound 3/13/13 – BI-RADS category 3
- 6 month follow-up ultrasound 9/23/13 – BI-RADS category 3
- Breast MRI due to family hx 9/26/13 – BI-RADS category 2
- Screening mammogram 4/1/14 – BI-RADS category 2

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6 month follow-up ultrasound 4/1/14 – BI-RADS category 3

One of the coders for our radiologists' office called to say that the 4/1/14 mammogram cannot be a screening mammogram since she had a finding on her breast ultrasound. She quoted the Medicare guidelines stating that if a breast is symptomatic (in this case, the US finding) then it cannot be asymptomatic (screening mammogram).

Do all mammograms for category 3 US and MRI cases need to be diagnostic? Our doctors dictate - nothing seen on mammogram or normal mammogram – for these cases.

A. The 4/1/14 mammogram should be a screening exam because the patient is asymptomatic and the previous mammograms were normal. The same would be true for any subsequent screening MRIs. It makes sense that a probably benign US assessment causes the subsequent surveillance US exams to be diagnostic, but this does not apply to exams using other modalities at which the US finding is not visible.

The provided scenario occurs frequently due to the very high rate of false positives at US screening. This is not just limited to false positive biopsies. US screening also has a high rate of category 3 assessments (all category 3 assessments at screening are positive), and at least 98% of category 3 assessments are, by definition, false positive. As the scientific literature for US screening becomes more robust, it is hoped that fewer category 3 and category 4 assessments will be justified, bringing the FP rate of US screening closer to that of mammography screening.

Q. The category 3 lay letter for patients (as well as the BI-RADS category 3 description) states: Probably Benign, however, in 6 months, you should have a follow-up mammogram. According to the surveillance imaging (BI-RADS category 3), after two consecutive category 3, six-month follow-ups, the radiologist wants to monitor this benign finding in one year. The radiologist codes it as a BI-RADS category 3 (Lesion stability and no findings; Bilateral Mammography in 12 months to further follow the probably benign finding and for screening of the rest of both breasts). Is it permissible to implement a second category 3 patient lay letter, stating category 3, return in 12 months for mammogram?

A. Note that the lay letters provided in the BI-RADS® appendix are samples. In the introduction to this section, facilities are encouraged to “use as is, modify them, or create your own lay reports." For the situation you describe, you may very well want to create a second category 3 patient lay letter, tailoring it to the request for a 12-month follow-up exam after two consecutive 6-month follow-up exams are performed. Probably benign assessments continue for the full duration of surveillance imaging, whether the recommended interval is 6 months or 1 year. This is done to inform the referring clinician and patient that the next breast imaging exam is required for surveillance of a finding that cannot yet be considered benign, to maximize compliance with the surveillance protocol.

Q. We are now doing a large volume of screening ultrasound exams following screening mammograms on dense-breasted women. Previously, when we did a diagnostic ultrasound exam following a diagnostic mammogram we produced one breast imaging report with two sections (one for the mammogram and one for the ultrasound) with a single BI-RADS® overall impression and recommendation. How should we report a normal screening mammogram that was followed by an abnormal screening ultrasound that identified a mammographically occult, benign appearing nodule requiring 6-month follow-up ultrasound only? We would like to continue using one report with mammography and ultrasound sections rather than separate screening mammography and ultrasound reports; however, a single screening mammography/US report could have a category 3 assessment on the screening exam recommending 6-month follow-up ultrasound alone. Furthermore, the patient would subsequently get an automated layman’s letter letting her know mammogram was normal. Does the 5th Edition of the BI-RADS® Atlas forbid assigning a category 3 assessment to a screening exam?
A. When two breast imaging examinations (usually mammography and ultrasound) are performed on the same patient on the same day, BI-RADS® encourages radiologists to produce a single report for both examinations. The report should describe the findings for each examination in separate paragraphs, with a single (combined) assessment for the two examinations. The rationale behind a combined report is that when the two examinations individually have different findings and assessments, the interpreting radiologist is much better equipped to integrate the findings and conclusions than either the referring clinician or the patient. Note that the FDA supports this approach as well.

This would apply to combined diagnostic mammography and ultrasound examinations performed after recall for a screening-detected abnormality, and also to combined screening mammography and ultrasound examinations. In the scenario described in the question above (a mammographically occult finding that is assessed as probably benign at ultrasound), the mammography component would be assessed as negative (category 1) and the ultrasound component would be assessed as probably benign (category 3). The combined assessment would be probably benign (category 3). Management recommendations would be for short-interval follow-up with diagnostic ultrasound (targeted at the probably benign finding, limited to a small part of one breast) and routine screening mammography in one year. The patient might receive an automated letter stating that her screening mammography was normal, recommending routine screening mammography in one year only with mammography. However, it would be prudent to amend this letter to also describe the more abnormal (in this case, probably benign) ultrasound outcome (just as you should amend a patient letter following combined diagnostic mammography and ultrasound for which the mammography was read as normal but the ultrasound was read as suspicious). Note that even though MQSA does not require a facility to amend the patient letter for a concurrently performed ultrasound examination (MQSA applies only to mammography), when appropriate, it would be prudent to do so, not only for optimal patient care but also to reduce malpractice exposure.

The new edition of BI-RADS® does not forbid category 3 assessments at screening. Rather, it discourages them, recommending instead complete diagnostic imaging evaluation (usually both mammography and ultrasound) before a making a final assessment (probably benign or otherwise). If a radiologist ignores this BI-RADS® guidance, the new rules for auditing consider any category 3 assessment at screening to be “positive” (that is, similar to recommending recall) because the recommendation is for something other than routine screening in 1 year. In the case of screening mammography, the effect would be to audit the screening examination as if it recommended recall, except that the patient would not return for her diagnostic examination until 6 months later. In the case of screening ultrasound producing a category 3 assessment, the correct BI-RADS® approach to auditing is to consider the examination as a category 0 screening ultrasound assessment immediately recalled for a category 3 diagnostic ultrasound assessment (even though there was billing only for a single ultrasound examination).

Some radiology practices may choose to record separate assessments (only for auditing purposes, not in the physician or patient report) for two concurrent examinations that have different assessments. This is not required, but it would make auditing of the two component examinations more realistic. For example, in the given scenario, if the patient did not have a breast cancer diagnosis within one year of screening, the screening mammography examination would be audited as true-negative, the screening ultrasound examination would be audited as false-positive, and the diagnostic ultrasound examination would be audited as true-negative (category 3 assessments at diagnostic imaging are “negative” assessments because biopsy is not recommended).

Q. Is there BI-RADS® guidance concerning the standardization of breast skin markers in the 5th Edition?

A. No – this is because there has been no consensus in establishing the use of specific-shaped markers to represent palpable versus skin lesions; however, the following two practices are recommended:
1. To properly inform interpreting physicians within a given mammography facility, the facility should adopt a policy requiring consistent use of two different shapes of radiopaque devices for palpable and skin lesions, respectively.

2. To properly inform interpreting physicians outside the facility, there should be an indication of the type of underlying lesion marked by every radiopaque device (palpable versus skin lesion), either as a permanent annotation on the appropriate mammographic image(s) or as a description in the mammography report.

Q. Should a post-lumpectomy patient who has (apparently) had the tumor completely excised automatically be assigned a category 3?

A. No, one should not automatically make a category 3 assessment because of a recent surgical procedure.

- After lumpectomy, the usual mammographic appearance is interval appearance of architectural distortion caused by the surgery. Assuming that the interpreting physician interprets the mammographic findings to be post-surgical rather than suspicious for malignancy, a benign (category 2) assessment is correct if the post-surgical findings are described in the mammography report. Most radiologists are comfortable accepting interval architectural distortion at the known surgical site to be benign at initial post-lumpectomy mammography, especially if the exam is performed within 6 months of surgery.

- A category 3 assessment should be assigned in the post-lumpectomy setting only in rare cases, if ever. Remember that category 3 assessments should not be made when one is “not sure” whether a finding is benign or suspicious. In this scenario, one should choose between a category 2 and category 4 assessment.

- During the post-lumpectomy period, a category 4 assessment is appropriate in the uncommon event that a subsequent mammogram shows increased architectural distortion (instead of anticipated stabilization or decreased distortion).

Many radiologists never use category 3 in the setting of post-lumpectomy mammography, preferring to classify the great majority of exams as category 2 and the few for which there is concern as category 4.

Ultrasound (US)

Q. We are now doing a large volume of screening ultrasound exams following screening mammograms on dense-breasted women. Previously, when we did a diagnostic ultrasound exam following a diagnostic mammogram we produced one breast imaging report with two sections (one for the mammogram and one for the ultrasound) with a single BI-RADS® overall impression and recommendation. How should we report a normal screening mammogram that was followed by an abnormal screening ultrasound that identified a mammographically occult, benign appearing nodule requiring 6-month follow-up ultrasound only? We would like to continue using one report with mammography and ultrasound sections rather than separate screening mammography and ultrasound reports; however, a single screening mammography/US report could have a category 3 assessment on the screening exam recommending 6-month follow-up ultrasound alone. Furthermore, the patient would subsequently get an automated layman's letter letting her know mammogram was normal. Does the 5th Edition of the BI-RADS® Atlas forbid assigning a category 3 assessment to a screening exam?
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Some radiology practices may choose to record separate assessments (only for auditing purposes, not in the physician or patient report) for two concurrent examinations that have different assessments. This is not required, but it would make auditing of the two component examinations more realistic. For example, in the given scenario, if the patient did not have a breast cancer diagnosis within one year of screening, the screening mammography examination would be audited as true-negative, the screening ultrasound examination would be audited as false-positive, and the diagnostic ultrasound examination would be audited as true-negative (category 3 assessments at diagnostic imaging are “negative” assessments because biopsy is not recommended).

Magnetic Resonance Imaging (MRI)

Q. A patient has a lumpectomy with positive margins and an MRI is ordered to check for residual. The plan is to re-excite regardless, but the surgeon wants to be sure there isn’t bulky residual or one particular area that needs to be excised. The MRI shows only postoperative changes. Would this be assigned a category 6 or a category 2? If it shows findings suspicious for residual should it be a category 4?
A. Remember that the assessment rendered should match the imaging findings, not the plan for clinical management. If planned management does not match the imaging findings (a so-called discordance scenario), the report should include a final "However, …" sentence that describes the discordance as well as why planned management is different than usual.

First, you describe one of the "discordance" scenarios, in which the assessment does not match the appropriate management. If the MRI exam shows only benign (post-surgical) findings in a patient who has had lumpectomy with positive resection margins, the correct assessment is benign (category 2). However, the recommended management should be surgical excision when clinically appropriate.

Second, you describe a scenario in which MRI shows findings suspicious for residual cancer in a patient who has had lumpectomy with positive resection margins. This should be assessed as category 6 if the suspicious findings are contiguous with or nearby the lumpectomy site (residual as opposed to second primary cancer), with recommended management being surgical excision when clinically appropriate.

However, if the suspicious findings are in a different location than the site of lumpectomy (for example, in a different quadrant, very distant from the lumpectomy site, or in the contralateral breast), then you may be dealing with a second primary cancer, and the correct assessment is suspicious (category 4), management being prompt tissue diagnosis.

Follow-up and Outcome Monitoring

Q. I consult regularly with a breast surgeon, before we jointly decide whether a biopsy or surveillance is the best management recommendation. The atlas does not seem to address this situation. Should these images be reported as BI-RADS category 3, or category 4, or possibly category 0, in the interim? Category 0 specifies additional imaging, not a surgical consult. Is there a provision for “waiting for consult”?

A. The BI-RADS® assessment category is chosen only by the interpreting physician, who is 100% responsible for that choice. However, if the interpreting physician decides to accede to the management requests of a treating physician, that is acceptable, but this scenario should be described in the report as follows:

- Assign whatever assessment category is correct for the imaging findings.
- Follow this with a concordant management recommendation for that assessment.
- Then add a sentence, beginning with "However, …" describing why, in the particular case, a different management plan will be implemented.

One such scenario could be an imaging-justified category 3 assessment, recommending short-interval follow-up, accompanied by "However, the patient has declined mammographic surveillance and has requested prompt biopsy instead." Or, it could be "However, after discussion with the patient's surgeon, Dr. X, subsequent management will involve biopsy instead of mammographic surveillance." If the report is made before discussion with a treating physician whose input may affect subsequent management, then the report should simply be based on imaging findings with concordant management recommendation for that assessment. Subsequently, if different management is planned after discussion with the treating physician, an addendum should be issued that retains the original assessment but adds the "However, …" sentence.

It is important to remember that neither BI-RADS® nor MQSA allows for use of a category 0 assessment while awaiting discussion with the treating physician.

Q. BI-RADS® allows for tracking outcomes of cross-modality studies both at the modality (mammography, ultrasound, MRI) level and the combined level. Does the atlas allow for separate tracking outcomes of tomosynthesis (DBT)?
A. No. BI-RADS® auditing does not discriminate between mammography and tomosynthesis at this time.

Q. For audit purposes, what is the most accurate interpretation of “within 1 year”? (Is it literally 365 days or could it be anytime during the 12th month?)

A. BI-RADS® defines one year as 365 days (See the Follow-up and Outcome Monitoring section of the BI-RADS® Atlas, 5th Edition – Glossary of Statistical Terms: #7. Cancer. Also, note that a 365-day year is used by the National Mammography Database, which will be used to define future national benchmarks). The cancer ascertainment interval should match the routine screening interval of your facility. This is one of the set-up questions that the facility must enter before reporting software is ready to work.

Q. Is the determination of a false-negative (FN) based on the imaging-to-imaging findings or imaging-to-pathology findings?

A. The truth (cancer versus no cancer) for a finding is determined by the pathology. (See the Follow-up and Outcome Monitoring section of the BI-RADS® Atlas, 5th Edition – Glossary of Statistical Terms: #3. Tissue diagnosis and #8,9,10,11 True-Positive, True-Negative, False-Positive, and False-Negative.)

Q. If a patient has screening mammography and supplementary screening with MRI or US, how are false negative outcomes determined?

A. This is a complex issue that is discussed in detail below. Briefly, BI-RADS® considers combined reporting good, but combined auditing of limited value.

When more than one breast imaging modality is utilized for the same patient on the same date, both BI-RADS® and the FDA encourage the interpreting physician to issue a single combined report that integrates the findings of all breast imaging examinations (a separate paragraph describing the findings at each component examination, followed by a combined assessment and management recommendations for all examinations). During the set-up of reporting software, BI-RADS® now requires each breast imaging facility to decide whether to audit only combined examinations versus auditing both combined examinations and the separate component examinations. The former choice will yield outcomes data only for the overall breast imaging examinations performed, whereas the latter choice also will yield outcomes for the component examinations, permitting a better understanding of the strengths and limitations of the different breast imaging modalities in screening and diagnostic settings at the breast imaging facility. However, acquisition of the additional outcomes data, although beneficial, requires that all interpreting physicians in the breast imaging facility must enter not only a combined assessment but also component-examination assessments for each combined examination performed. And separate-modality auditing also requires a high level of understanding of how the interplay among modalities affects outcomes data.

Given this background information, the answer to the question about false-negative (FN) screening outcomes (at mammography, US, and MRI) will depend on the type of auditing performed. Assuming (for the sake of simplicity) that combined assessments always reflect the more abnormal assessment among component examinations, combined-assessment auditing for mammography/US/MRI screening examinations will have more positive (and correspondingly fewer negative) outcomes than separate-modality auditing because imaging-detected abnormalities will count as positive whether identified only at mammography or US or MRI, at more than one modality, or at all modalities. Since some of these positive examinations will lead to cancer diagnosis, there will be more true-positive (TP) and fewer FN combined examinations. The infrequent FN outcomes from combined-modality auditing may appear to paint a rosy picture, but this picture simply indicates that fewer cancers are missed if one looks for cancer using different approaches.
Additional separate-modality auditing likely will result in the most TP outcomes for screening MRI (because MRI is the most sensitive examination), but the difference will not be as large as the benchmarks commonly reported in the breast imaging literature. This is because the limited benchmarks for screening MRI are derived from very high-risk women (the even more limited benchmarks for screening US also are derived from different mixes of high-risk women), whereas screening mammography benchmarks come from the examination of all women. Higher risk women have a greater prior probability of having detectable cancer; hence, more cancers will be detected simply due to differences in the patient populations examined. Inter-modality comparison of audit data is neither instructive nor clinically relevant unless the modalities are used to examine the same patient population. So a breast imaging facility should evaluate its separate-modality outcomes only among women who undergo combined-modality screening.

Specifically addressing FN outcomes in the context of separate-modality auditing, the more screening modalities that are utilized, the more FN outcomes that will be observed. This is because positive screening examinations are very likely to result in prompt tissue diagnosis, so that cancers uniquely identified at screening with one modality will be found within the cancer ascertainment period, thereby contributing to the FN count for each of the other modalities. If screening is limited to only one modality, some (probably most) of the cancers that would have been detected at another modality will not surface clinically within the cancer ascertainment period, so fewer FN outcomes will be counted. For example, let us consider screening mammography. When this is the only screening modality used, FN exams will involve only those cancers that become palpable or otherwise symptomatic within the cancer ascertainment period. Add screening with clinical breast examinations and more cancers will be found (hence more FN screening mammography exams); add screening US to the mix and still more cancers will be found (more FN screening mammography exams); and then add screening MRI and the large number of additional cancers found will further contribute to FN screening mammography exams.

Q. After a screening mammogram, the radiologist requested prior images; no images were received in 30 days; and another radiologist recommended the patient be recalled for additional imaging. In the audit, who does the recall get charged to: the original reader who asked for prior studies or the reader who recommended the recall for an addendum? Does this also mean that the call-back is counted in recall statistics against the second reader, or does it count towards the first reader who read the study?

A. When a category 0 “awaiting prior exams” assessment is updated with an assessment either with or without prior exams, the updated assessment replaces the initial one. Whoever makes the updated assessment takes responsibility for the exam. A screen recall awaiting prior exams or to overcome technical deficiency is not used for auditing purposes; instead, the updated assessment is what is audited.

Miscellaneous

Q. In the Atlas, the Lay Letter for Probably Benign Finding (BI-RADS® 3) states: “However, in 6 months, you should have a follow-up mammogram to confirm that this area has not changed.” According to the Surveillance Imaging chart on (page 152 hardcopy), after 2, six-month follow ups with category 3 assessments, a 12-month follow up should be done. May we change the BI-RADS® 3 Lay Letter to indicate that a follow-up mammogram should take place in 12 months instead of 6?

A. Yes. Note that the lay letters provided are samples. In the Introduction to this section, we encourage facilities to “use as is, modify them, or create your own lay reports.” For the situation you describe, you certainly may want to create a 2nd category 3 patient lay letter, tailoring it to the request for a 12 month follow-up exam after two consecutive 6 month follow-up exams are performed.