

UAB MEDICINE BREAST IMAGING SCREENING GUIDELINES

Purpose: Regular screening mammograms help ensure that breast cancer can be detected as early as possible. To facilitate appropriate imaging-based screening, it is essential to implement evidence-based screening guidelines to promote optimal decision-making and proper utilization of image-based breast screenings. These guidelines are recommendations for ordering and obtaining breast imaging-based screenings, and they are in accordance with the American College of Radiology (ACR) Appropriateness Criteria for Breast Screening.

- UAB Medicine Breast Imaging Guidelines: No Personal History of Breast Cancer
- UAB Medicine Breast Imaging Guidelines: Personal History of Breast Cancer
- UAB Medicine Breast Imaging Guidelines: Special Cases

LEGEND

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| ABUS | Automated Breast Ultrasound |
| ACR | American College of Radiology |
| CEDM | Contrast- Enhanced Digital Mammography |
| DBT | Digital Breast Tomosynthesis |
| LTR | Lifetime Risk for Developing Breast Cancer |
| MG | Mammogram |
| NCCN | National Comprehensive Cancer Network |
| T-C 7, 8 | Tyrer-Cuzick Risk Assessment Model Version 7, Version 8 |
| US | Ultrasound |

UAB BREAST IMAGING SCREENING GUIDELINES: NO PERSONAL HISTORY OF BREAST CANCER

| Patient Population | Breast Density | Recommended Screening Method | Age to Start & Interval | Imaging Reference & Additional Information |
|---|--|---|---|--|
| Average Risk: <15%LTR (TC-7,8) | Fatty/Scattered | DBT | 40yo, annual | ACR Appropriateness Criteria for Breast Screening (2017)-Variant 1 |
| Average Risk: <15%LTR (TC-7,8) | Heterogeneously/ Extremely Dense | DBT (ABUS can be considered as adjunct screening) | 40yo, annual | For women with dense breast tissue but no additional risk factors, US may be useful as an adjunct to mammography for incremental cancer detection, but the balance between increased cancer detection and the increased risk of a false-positive examination should be considered in the decision. There are no data to support the use of US for average-risk women with non-dense breasts. |
| Intermediate Risk: 15-20% LTR (TC-7,8) | Fatty/Scattered | DBT | 40yo, annual | ACR Appropriateness Criteria for Breast Cancer Screening (2017) - Variant 2 |
| Intermediate Risk: 15-20% LTR (TC-7,8) | Heterogeneously/ Extremely Dense | DBT (ABUS can be considered as adjunct screening) | 40yo, annual | In intermediate-risk women with dense breasts, supplemental US screening is an option. |
| High Risk: LTR ≥ 20% OR known genetic mutation *No Surgery | Any Density | DBT plus MRI (or CEDM) Prior to 1st MRI schedule visit with NP in High Risk Clinic or Diagnostic Breast Clinic | DBT annually beginning 10 years earlier than the affected relative at the time of diagnosis but not before age 30 MRI, age 25-30 | ACR Appropriateness Criteria for Breast Cancer Screening (2017) - Variant 3 If patient cannot tolerate MRI or CEDM, ABUS can be considered. |
| High Risk: Thoracic radiation between ages 10-30 *No Surgery | Any Density | DBT plus MRI (or CEDM*) Prior to 1st MRI schedule visit with NP in Breast Health Clinic or Diagnostic Breast Clinic | DBT annually starting at age 25 or 8 years after radiation treatment (whichever is later) MRI, age 25-30 | ACR and NCCN recommendations Histories of chest radiation; cumulative dose of ≥10 Gy before age 30 If patient cannot tolerate MRI or CEDM, ABUS can be considered. |

UAB BREAST IMAGING SCREENING GUIDELINES: NO PERSONAL HISTORY OF BREAST CANCER (CONT.)

| Patient Population | Breast Density | Recommended Screening Method | Age to Start & Interval | Imaging Reference & Additional Information |
|---|----------------|------------------------------|-------------------------|--|
| High Risk: Prophylactic Bilateral Mastectomy *No Reconstruction | | NONE | | ACR Appropriateness Criteria - Imaging After Mastectomy and Breast Reconstruction (2020) - Variant 4 |
| High Risk: Prophylactic Bilateral Mastectomy with Autologous Reconstruction | | NONE | | ACR Appropriateness Criteria - Imaging After Mastectomy and Breast Reconstruction (2020) - Variant 5 |
| High Risk: Prophylactic Bilateral Mastectomy with Silicone or Saline Implants | | NONE | | ACR Appropriateness Criteria - Imaging After Mastectomy and Breast Reconstruction (2020) - Variant 6 |

UAB BREAST IMAGING SCREENING GUIDELINES: PERSONAL HISTORY OF BREAST CANCER

| Patient Population | Breast Density | Recommended Screening Method | Age to Start & Interval | Imaging Reference & Additional Information |
|--|-------------------------------------|------------------------------|--|---|
| Post- Lumpectomy ≤50 years of age | Any Density | DBT plus MRI (or CEDM) | Annual screening following diagnosis (any age) | <p>Breast Cancer Screening in Women at Higher-Than-Average Risk: Recommendations from the ACR (JACR, March 2018)</p> <p>First diagnostic mammogram 6-12 months post-radiation.</p> <p>Yearly mammogram will be diagnostic for 5 years annually post treatment.</p> <p>If patient cannot tolerate MRI or CEDM, ABUS can be considered.</p> |
| Post- Lumpectomy > 50 years of age | Fatty/Scattered | DBT | Annual screening | <p>Breast Cancer Screening in Women at Higher-Than-Average Risk: Recommendations from the ACR (JACR, March 2018)</p> <p>First diagnostic mammogram 6-12 months post-radiation</p> <p>Annual mammogram will be diagnostic for 5 years post-treatment.</p> |
| Post- Lumpectomy > 50 years of age | Heterogeneously/ Extremely Dense | DBT plus MRI (or CEDM) | Annual screening | <p>Breast Cancer Screening in Women at Higher-Than-Average Risk: Recommendations from the ACR (JACR, March 2018)</p> <p>First diagnostic mammogram 6-12 months post-radiation</p> <p>Annual mammogram will be diagnostic for 5 years post-treatment.</p> <p>If patient cannot tolerate MRI or CEDM, ABUS can be considered.</p> |

UAB BREAST IMAGING SCREENING GUIDELINES: PERSONAL HISTORY OF BREAST CANCER (CONT.)

| Patient Population | Breast Density | Recommended Screening Method | Age to Start & Interval | Imaging Reference & Additional Information |
|--|----------------|------------------------------|-------------------------|---|
| Mastectomy with No Reconstruction | N/A | NONE | N/A | <p>ACR Appropriateness Criteria- Imaging After Mastectomy and Breast Reconstruction (2020) - Variant 1</p> <p>The contralateral breast in unilateral mastectomy patients follows guidelines for Intermediate-Risk Patients with Personal History of Breast Cancer.</p> <p>In any case, DBT or MRI can be considered, if there is a substantial amount of residual tissue.</p> |
| Mastectomy with Autologous Reconstruction | N/A | NONE | N/A | <p>ACR Appropriateness Criteria - Imaging After Mastectomy and Breast Reconstruction (2020) - Variant 2</p> <p>MG (DBT) may be considered. However, there is insufficient evidence to support screening with mammography of the post-mastectomy side. Currently, UAB does not recommend MG (DBT) on the reconstructed breast.</p> |
| Mastectomy with Silicone or Saline Implants | N/A | NONE | N/A | <p>ACR Appropriateness Criteria - Imaging After Mastectomy and Breast Reconstruction (2020) - Variant 3</p> <p>MG (DBT) may be considered. However, there is insufficient evidence to support screening with mammography of the post mastectomy side. Currently UAB does not recommend MG (DBT) on the reconstructed breast.</p> |

UAB BREAST IMAGING SCREENING GUIDELINES: SPECIAL CASES

| Patient Population | Breast Density | Recommended Screening Method | Age to Start & Interval | Imaging Reference & Additional Information |
|--|----------------|------------------------------|-----------------------------|---|
| Transgender Woman (male birth): Average risk w/ hormone use ≥5 years | Any Density | DBT may be appropriate | >40 years of age | ACR Appropriateness Criteria for Transgender Breast Screening (2021)-Variant 1 |
| Transgender Woman (male birth): Higher-than-average risk w/ hormone use ≥5 years | Any Density | DBT | 25-30 years of age or older | ACR Appropriateness Criteria for Transgender Breast Screening (2021)-Variant 2 Higher-than-average risk: personal history of breast cancer or chest irradiation at 10-30 years of age, patient with genetic predisposition to breast cancer, patient with family history of breast or ovarian cancer, and untested patient with first-degree relative with genetic predisposition to breast cancer |
| Transgender Woman (male birth): Average risk w/ hormone use <5 years OR no hormone use | Any Density | None | Any age | ACR Appropriateness Criteria for Transgender Breast Screening (2021)-Variant 3 |
| Transgender Woman (male birth): Higher-than-average risk w/ hormone use <5 years OR no hormone use | Any Density | DBT may be appropriate | 25-30 years of age or older | ACR Appropriateness Criteria for Transgender Breast Screening (2021)-Variant 4 Higher-than-average risk: personal history of breast cancer or chest irradiation at 10-30 years of age, patient with genetic predisposition to breast cancer, patient with family history of breast or ovarian cancer, and untested patient with first-degree relative with genetic predisposition to breast cancer |

UAB BREAST IMAGING SCREENING GUIDELINES: SPECIAL CASES (CONT.)

| Patient Population | Breast Density | Recommended Screening Method | Age to Start & Interval | Imaging Reference & Additional Information |
|---|----------------|---|--|--|
| Transgender Man (female birth): History of bilateral mastectomy | | | None | ACR Appropriateness Criteria for Transgender Breast Screening (2021)-Variant 5 |
| Transgender Man (female birth): Average Risk w/ history of reduction mammoplasty or no chest surgery | Any Density | DBT | 40 years old, annually | ACR Appropriateness Criteria for Transgender Breast Screening (2021)-Variant 6 |
| Transgender Man (female birth): Intermediate risk | Any Density | DBT (ABUS, MRI may be appropriate) | 30 years of age or older | ACR Appropriateness Criteria for Transgender Breast Screening (2021)-Variant 7 Intermediate risk: personal history of breast cancer, lobular neoplasia, atypical ductal hyperplasia, or 15-20% lifetime risk of breast cancer |
| Transgender Man (female birth): High risk | Any Density | DBT plus MRI (CEDM or ABUS may be appropriate if MRI is not tolerated) | 25-30 years of age or older | ACR Appropriateness Criteria for Transgender Breast Screening (2021)-Variant 8 High risk: genetic predisposition to breast cancer or untested patient with a first-degree relative with genetic predisposition to breast cancer, patient with a history of chest irradiation and 10-30 years of age, patient with 20% or greater lifetime risk of breast cancer |
| Male with History of Breast Cancer or High Risk | | DBT | Annual >35 years old, not before age 25 Prior to 1st DBT: Schedule visit with NP in Breast Health Clinic or in Diagnostic Breast Clinic. | NCCN Guidelines Male Breast Cancer in the Age of Genetic Testing: An Opportunity for Early Detection, Tailored Therapy, and Surveillance. Gao Y, Heller SL, Moy L. Radiographics, 2018.Sep-Oct; 38(5):1289-1311. Mammographic Screening in Male Patients at High Risk for Breast Cancer: Is it Worth It? Marino MA, Gucalp A, Leithner D, et al. Breast Cancer Res Treat.2019 Oct; 177(3):705-711. |

UAB BREAST IMAGING SCREENING GUIDELINES: SPECIAL CASES (CONT.)

| Patient Population | Breast Density | Recommended Screening Method | Age to Start & Interval | Imaging Reference & Additional Information |
|--|----------------|---|-------------------------|---|
| During Pregnancy: Any Risk | Any Density | Follow guidelines for non-pregnant counterpart (see above) with the exception of MRI. MRI is not indicated for screening in pregnant women. | | <p>ACR Appropriateness Criteria - Breast Imaging of Pregnant and Lactating Women (2018)</p> <p>ABUS; evidence not available. May be considered. However, false positives should be considered</p> |
| During Lactation: Any Risk | Any Density | Follow guidelines for non-lactating counterpart (see above). | | <p>ACR Appropriateness Criteria - Breast Imaging of Pregnant and Lactating Women (2018)</p> <p>Tissue will be dense; expressing breast milk just prior to examination by breast feeding or pumping improves accuracy.</p> |
| Implant Integrity: Any Risk | Any Density | Follow guidelines for patients without implants (see above). | | <p>ACR Appropriateness Criteria - Breast Implant Evaluation (2018)</p> <p>Implant evaluation by imaging is done only when there is symptom for rupture or BIA-ALCL, and that is a diagnostic study, not a screening.</p> |