Breast Cancer Screening

This practice algorithm has been specifically developed for MD Anderson using a multidisciplinary approach and taking into consideration circumstances particular to MD Anderson, including the following: MD Anderson’s specific patient population; MD Anderson’s services and structure; and MD Anderson’s clinical information. Moreover, this algorithm is not intended to replace the independent medical or professional judgment of physicians or other health care providers. This algorithm should not be used to treat pregnant women.

**Note:** This algorithm is not intended for women with a personal history of breast cancer. Breast cancer screening may continue as long as a woman has a 10-year life expectancy and no co-morbidities that would limit the diagnostic evaluation or treatment of any identified problem. Women should be counseled about the benefits, risks and limitations of screening mammography.

### RISK

- **Average risk**
  - Consider clinical breast exam every 1-3 years²
  - Breast awareness³
- **Increased risk**
  - Annual clinical breast exam
  - Annual screening mammogram⁴,⁵
  - Breast awareness⁴

### AGE TO BEGIN SCREENING

- **Age 25 - 39 years**
  - Annual clinical breast exam
  - Annual screening mammogram⁵,⁶
  - Breast awareness⁴

- **Age greater than or equal to 40 years**
  - Clinical breast exam every 6-12 months
  - Annual screening mammogram⁶
  - Breast awareness⁴

- **Age less than or equal to 24 years**
  - Clinical breast exam every 6-12 months
  - Annual screening mammogram⁶
  - Breast awareness⁴

- **Age greater than or equal to 25 years**
  - Clinical breast exam every 6-12 months
  - Annual screening mammogram⁶
  - Breast awareness⁴

### SCREENING

- **Prior thoracic radiation therapy ages 10-30**
  - Annual clinical breast exam
  - Annual screening mammogram⁵,⁶
  - Breast awareness⁴

- **5-year risk of invasive breast cancer by Gail model calculation greater than or equal to 1.7% in women greater than 35 years**
  - Women who have a lifetime risk greater than or equal to 20% as defined by models that are dependent on family history⁹
  - Genetic predisposition
  - Lobular Carcinoma In Situ (LCIS)
  - Atypical Ductal Hyperplasia (ADH)/Atypical Lobular Hyperplasia (ALH)

### Notes:

1. Please see the Breast Cancer Treatment or Survivorship algorithms for the management of women with a personal history of breast cancer.
2. Women who do not meet one of the increased risk categories.
3. Effectiveness of clinical breast exams has not been assessed in women 20-39 years of age.
4. Women should be familiar with their breasts and promptly report changes to their healthcare provider.
5. Augmented breasts need additional views for complete assessment.
6. Tomosynthesis is not yet standard of care but may be considered as a supplement to 2D mammography.
7. Risk of breast cancer begins to increase 8-10 years after thoracic exposure. The optimal age to begin MRI screening in this high risk population is not currently known.
8. Current practice at MD Anderson is to alternate the mammogram and breast MRI every 6 months. While there is no data to suggest that this is the optimal approach, it is done with the expectation that interval cancers may be identified earlier. Other screening regimens, such as breast MRI done at the time of the annual mammogram, are also acceptable.
9. Risk models that are largely dependent on family history include Tyrer-Cuzick and Claus.
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**RISK**

Note: This algorithm is not intended for women with a personal history of breast cancer. Breast cancer screening may continue as long as a woman has a 10-year life expectancy and no co-morbidities that would limit the diagnostic evaluation or treatment of any identified problem. Women should be counseled about the benefits, risks and limitations of screening mammography.

**AGE TO BEGIN SCREENING**

1. **Women who have a lifetime risk greater than or equal to 20% as defined by models that are dependent on family history**
   - Age greater than or equal to 24 years
   - Clinical breast exam every 6-12 months
   - Annual screening mammogram
   - Recommend MRI
   - Consider risk reduction strategies (See Breast Risk Reduction Algorithm)
   - Breast awareness

2. **Genetic predisposition**
   - Age less than or equal to 24 years
   - Clinical breast exam every 6-12 months
   - Annual screening mammogram
   - Recommend MRI
   - Consider risk reduction strategies (See Breast Risk Reduction Algorithm)
   - Breast awareness

3. **Women who have a lifetime risk greater than or equal to 20% based on:**
   - Lobular Carcinoma In Situ (LCIS)
   - Atypical Ductal Hyperplasia (ADH)/Atypical Lobular Hyperplasia (ALH)
   - Age greater than or equal to 25 years
   - Clinical breast exam every 6-12 months
   - Annual screening mammogram
   - Consider risk reduction strategies (See Breast Risk Reduction Algorithm)
   - Breast awareness

1. Please see the Breast Cancer Treatment or Survivorship algorithms for the management of women with a personal history of breast cancer.
2. Risk models that are largely dependent on family history include Tyrer-Cuzick and Claus.
3. Augmented breasts need additional views for complete assessment.
4. Tomosynthesis is not yet standard of care but may be considered as a supplement to 2D mammography.
5. Current practice at MD Anderson is to alternate the mammogram and breast MRI every 6 months. While there is no data to suggest that this is the optimal approach, it is done with the expectation that interval cancers may be identified earlier. Other screening regimens, such as breast MRI done at the time of the annual mammogram, are also acceptable.
6. Women should be familiar with their breasts and promptly report changes to their healthcare provider.

Approved by The Executive Committee of Medical Staff on 01/31/2017
SUGGESTED READINGS


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DEVELOPMENT CREDITS

This practice consensus algorithm is based on majority expert opinion of Cancer Prevention at the University of Texas MD Anderson Cancer Center. It was developed using a multidisciplinary approach that included input from the following faculty that comprised the Breast Screening Core Development Team.

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Note: This algorithm is intended for women who have not undergone prophylactic mastectomy. Breast cancer screening may continue as long as a woman has a 10-year life expectancy and no co-morbidities that would limit the diagnostic evaluation or treatment of any identified problem. Women should be counseled about the benefits, risks and limitations of mammography.