## 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

<table>
<thead>
<tr>
<th>Average risk</th>
<th>Increased risk</th>
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#### AGE TO BEGIN SCREENING

<table>
<thead>
<tr>
<th>Age</th>
<th>Screening Recommendations</th>
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</table>
| 25 - 39 years | - Consider clinical breast exam every 1-3 years<sup>1</sup>  
- Annual clinical breast exam  
- Annual screening mammogram<sup>5,6</sup>  
- Breast awareness<sup>4</sup> |
| Greater than or equal to 40 years | - Annual clinical breast exam  
- Annual screening mammogram<sup>5,6</sup>  
- Breast awareness<sup>4</sup> |
| Less than or equal to 24 years | - Clinical breast exam every 6-12 months (Begin 8-10 years after radiation therapy)  
- Annual screening mammogram<sup>6</sup>  
- Recommend annual MRI<sup>7,8</sup> (Begin 8-10 years after radiation therapy but not prior to age 25)  
- Breast awareness<sup>4</sup> |
| Greater than or equal to 25 years | - Clinical breast exam every 6-12 months (Begin at age identified as being at increased risk)  
- Annual screening mammogram<sup>5,6</sup>  
- Consider risk reduction strategies (See Breast Risk Reduction Algorithm)  
- Breast awareness<sup>4</sup> |

### SCREENING

- Women who have a lifetime risk greater than or equal to 20% as defined by models that are dependent on family history<sup>9</sup>  
- Genetic predisposition  
- Lobular Carcinoma In Situ (LCIS)  
- Atypical Ductal Hyperplasia (ADH)/Atypical Lobular Hyperplasia (ALH)

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<sup>1</sup> Please see the Breast Cancer Treatment or Survivorship algorithms for the management of women with a personal history of breast cancer.

<sup>2</sup> Women who do not meet one of the increased risk categories.

<sup>3</sup> Effectiveness of clinical breast exams has not been assessed in women 20-39 years of age.

<sup>4</sup> Women should be familiar with their breasts and promptly report changes to their healthcare provider.

<sup>5</sup> Augmented breasts need additional views for complete assessment.

<sup>6</sup> Tomosynthesis is not yet standard of care but may be considered as a supplement to 2D mammography.

<sup>7</sup> 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.

<sup>8</sup> 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.

<sup>9</sup> Risk models that are largely dependent on family history include Tyrer-Cuzick and Claus.
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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**

**Age greater than or equal to 25 years**
- 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 less than or equal to 24 years**
- Increased risk
- Genetic predisposition

**AGE TO BEGIN SCREENING**

**SCREENING**

- Clinical breast exam every 6-12 months
  - (Begin at age identified as being at increased risk. Referral to genetic counselor, if not already done.)
  - Annual screening mammogram
  - (Begin 10 years prior to youngest case in the family but not younger than age 30)
  - Recommend MRI
  - (Begin 10 years prior to youngest family member but not less than age 25)
  - Consider risk reduction strategies (See Breast Risk Reduction Algorithm)
  - Breast awareness

- Clinical breast exam every 6-12 months
  - (Begin at the age identified as being at increased risk)
  - Annual screening mammogram
  - (Begin 10 years prior to youngest case in the family but not younger than age 30)
  - Recommend annual MRI
  - (Begin 10 years prior to youngest case in the family but not less than age 25)
  - Consider risk reduction strategies (See Breast Risk Reduction Algorithm)
  - Breast awareness

- Clinical breast exam every 6-12 months
  - (Begin at diagnosis of LCIS or ADH/ALH)
  - Annual screening mammogram
  - (Begin at diagnosis of LCIS or ADH/ALH but not younger than age 30)
  - Consider annual MRI based on emerging data
  - (Begin at diagnosis of LCIS or ADH/ALH but not younger than age 25)
  - Begin risk reduction strategies (See Breast Risk Reduction Algorithm)
  - Breast awareness

- Clinical breast exam every 6-12 months
  - (Begin at diagnosis of LCIS or ADH/ALH but not younger than age 35)
  - Breast awareness

- Annual clinical breast exam
- 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.

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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.

SUGGESTED READINGS


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.

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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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