

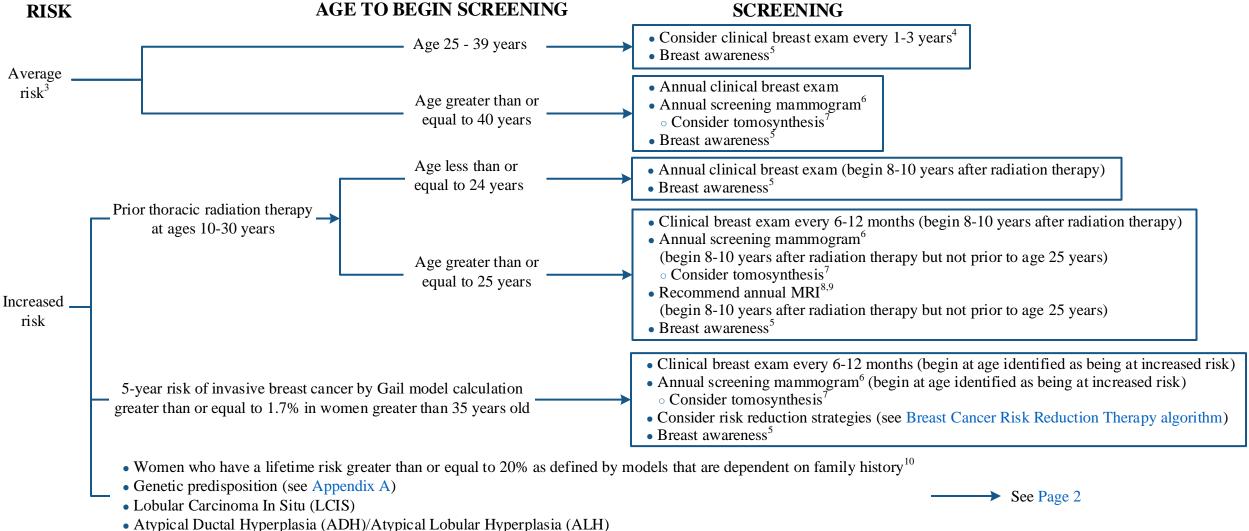
# **Breast Cancer Screening**<sup>1</sup>

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Making Cancer History and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient's care. This algorithm should not be used to treat pregnant women.

Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson's specific patient population, services and structure,

**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.



<sup>&</sup>lt;sup>1</sup> For transgender patients, recommend performing a breast cancer risk assessment and making individualized screening recommendations

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<sup>&</sup>lt;sup>2</sup> See the Breast Cancer Treatment or Survivorship algorithms for the management of women with a personal history of breast cancer

Women who do not meet one of the increased risk categories

<sup>&</sup>lt;sup>4</sup>Effectiveness of clinical breast exams has not been assessed in women 20-39 years of age

<sup>&</sup>lt;sup>5</sup> Women should be familiar with their breasts and promptly report changes to their healthcare provider

<sup>&</sup>lt;sup>6</sup> Augmented breasts need additional views for complete assessment Copyright 2019 The University of Texas MD Anderson Cancer Center

<sup>&</sup>lt;sup>7</sup>Tomosynthesis improves cancer detection and decreases recall rates

<sup>&</sup>lt;sup>8</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.

Ourrent 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 performed at the time of the annual mammogram, are also acceptable. Risk models that are largely dependent on family history include Tyrer-Cuzick and Claus

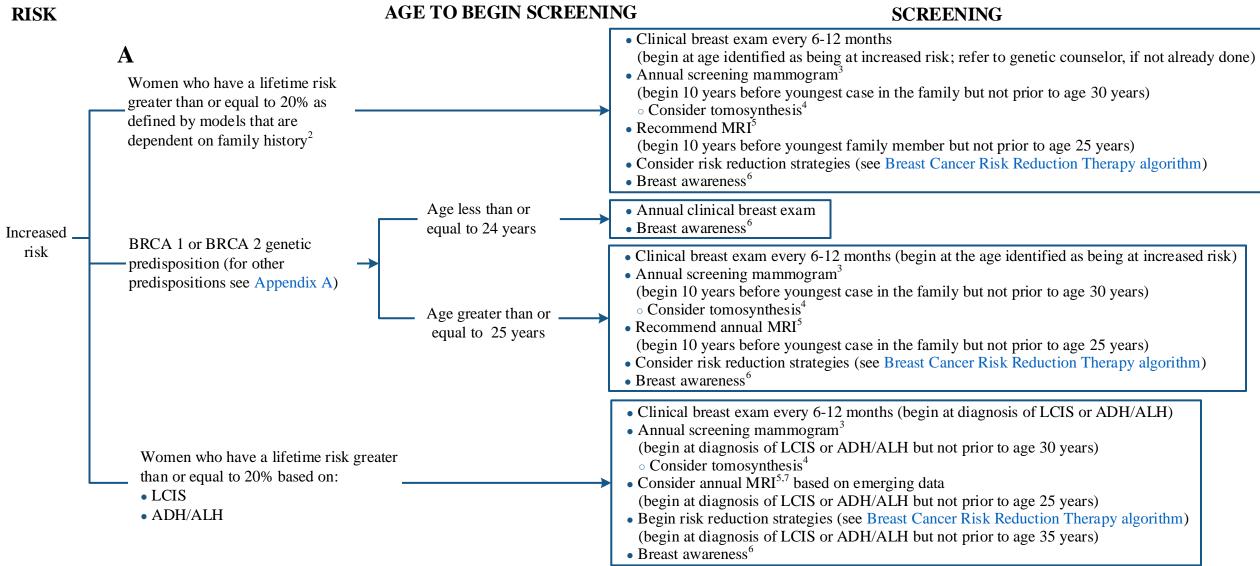


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Making Cancer History®

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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.



See the Breast Cancer Treatment or Survivorship algorithms for the management of women with a personal history of breast cancer

<sup>&</sup>lt;sup>2</sup>Risk models that are largely dependent on family history include Tyrer-Cuzick and Claus

<sup>&</sup>lt;sup>3</sup> Augmented breasts need additional views for complete assessment

<sup>&</sup>lt;sup>4</sup>Tomosynthesis improves cancer detection and decreases recall rates

<sup>&</sup>lt;sup>5</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 performed at the time of the annual mammogram, are also acceptable.

Women should be familiar with their breasts and promptly report changes to their healthcare provider Patient should be educated that insurance may not cover the MRI



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### **APPENDIX A: Breast Management based on Genetic Test Results**<sup>1,2</sup>

ATM	Increased risk of breast cancer  • Screening: annual mammogram with consideration of tomosynthesis and consider breast MRI with contrast starting at age 40 years <sup>3,4</sup> • RRM: evidence insufficient, manage based on family history
BARD1	Potential increase in breast cancer risk, with insufficient evidence for management recommendations
BRIP1	Unknown or insufficient evidence
CDH1	Increased risk of lobular breast cancer  • Screening: annual mammogram with consideration of tomosynthesis and consider breast MRI with contrast starting at age 30 years <sup>3,4</sup> • RRM: evidence insufficient, manage based on family history
СНЕК2	Increased risk of breast cancer  • Screening: annual mammogram with consideration of tomosynthesis and consider breast MRI with contrast starting at age 40 years <sup>3,4</sup> • RRM: evidence insufficient, manage based on family history
MSH2, MLH1, MSH6, PMS2, EPCAM	Unknown or insufficient evidence for breast cancer risk <sup>4</sup> • Manage based on family history, as per Box A on Page 2
NBN	Increased risk of breast cancer • Screening: annual mammogram with consideration of tomosynthesis and consider breast MRI with contrast starting at age 40 years <sup>3,4</sup> • RRM: evidence insufficient, manage based on family history
NF1	Increased risk of breast cancer  • Screening: annual mammogram with consideration of tomosynthesis starting at age 30 years and consider breast MRI with contrast from ages 30-50 years <sup>3,4</sup> • RRM: evidence insufficient, manage based on family history

RRM = risk-reducing mastectomy

Continued on next page

<sup>&</sup>lt;sup>1</sup> The following genes and others are found on some of the panels, but there is insufficient evidence to make any recommendations for breast MRI, or RRM: BARD1, FANCC, MRE11A, MUTYH heterozygotes, RECQL4, RAD50, RINT1, SLX4, SMARCA4, or XRCC2

<sup>&</sup>lt;sup>2</sup> See Genetic Counseling algorithm

<sup>&</sup>lt;sup>3</sup> May be modified based on family history (typically beginning screening 5-10 years earlier than the youngest diagnosis in the family but not later than stated in the table) or specific gene pathogenic/likely pathogenic variant

<sup>&</sup>lt;sup>4</sup> For women with pathogenic/likely pathogenic variants who are treated for breast cancer and have not had bilateral mastectomy, screening should continue as described



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### APPENDIX A: Breast Management based on Genetic Test Results - continued

PALB2	Increased risk of breast cancer • Screening: annual mammogram with consideration of tomosynthesis and breast MRI with contrast at age 30 years <sup>1,2</sup> • RRM: evidence insufficient, manage based on family history
PTEN	Increased risk of breast cancer • See NCCN Guidelines for Genetic/Familial High-Risk Assessment: Cowden Syndrome Management
RAD51C	Unknown or insufficient evidence for breast cancer risk
RAD51D	Unknown or insufficient evidence for breast cancer risk
STK11	Increased risk of breast cancer  • Screening: see NCCN Guidelines for Genetic/Familial High-Risk Assessment: Colorectal  • RRM: evidence insufficient, manage based on family history
TP53	Increased risk of breast cancer • See Li-Fraumeni Syndrome Screening algorithm

RRM = risk-reducing mastectomy

<sup>&</sup>lt;sup>1</sup> May be modified based on family history (typically beginning screening 5-10 years earlier than the youngest diagnosis in the family but not later than stated in the table) or specific gene pathogenic/likely pathogenic variant

<sup>&</sup>lt;sup>2</sup> For women with pathogenic/likely pathogenic variants who are treated for breast cancer and have not had bilateral mastectomy, screening should continue as described

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