Breast Cancer Screening Assessment



Name:

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Screening for Genetic Risk Factors Recommended

Your family history of cancer or other genetic risk factors should be evaluated.

- A genetic evaluation of your family history of cancer is recommended.
- Reproductive history and lifestyle factors slightly increase your breast cancer risk. Your doctor can advise you on how to make changes in the factors you can control.
- You reported dense breast tissue on mammogram. This is a common and normal finding, but it can make it harder to find cancer using a mammogram. Ask your doctor about other ways to screen for and prevent the development of breast cancer.

Genetic Risk Factors

Genetic risk factors include the history of cancer in your family, ethnicity and family history of a gene that may cause an increased risk of breast cancer.

See page 2 of this report for more information.

Personal History Risk Factors

Personal history risk factors include previous breast cancer conditions, breast cancer gene mutations, chest radiation therapy, and dense breasts.

See page 3 of this report for more information.

Other Risk Factors

Other risk factors include age, breast cancer gene mutations, hormone exposure, reproductive history, and certain lifestyle factors.

See page 4 of this report for more information.



YOUR GENETIC RISK FACTORS



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Genetic Risk Factors for Breast Cancer

Genetic Risk Factors

Breast cancer is a complex disease. It's due to DNA changes (mutations) in certain genes. These gene changes usually happen by chance and aren't inherited from a parent.

Most women who have a close relative with breast cancer will never develop the disease. But gene changes can run in families and increase breast cancer risk. A history of breast cancer on either her mother's or father's side of the family may increase a woman's breast cancer risk. This is especially true when breast cancer happens before age 40.

Ashkenazi Jews have a higher chance of inheriting a DNA change in two genes known to greatly increase the risk of breast cancer (BRCA1 or BRCA2). In this group, the risk of carrying a mutation is 1 in 40 compared to 1 in 500 in the general US population.

Women with a history of cancer in their family (see table) should talk to a trained health care professional about their genetic risk.

What to Expect in a Genetic Evaluation

Your family history of certain cancers helps determine if you should talk to a trained health care professional about your inherited risk for breast cancer. During a genetic evaluation, you may:

- Review this Results Report with a medical professional
- · Explore more of your family health history

• Talk about options for screening/testing, including what the tests might show

• Ask questions to help you decide if gene testing is right for you and your family

YOUR GENETIC RISK FACTORS

Increased Risk

Your **Genetic Risk Factors** Risk Breast cancer in immediate family Increased Relative with bilateral breast cancer Average Relative with breast cancer before age 50 Average Relative with breast AND ovarian cancer Average Male relative with breast cancer Average Ovarian cancer in immediate family Average 2 relatives with breast cancer and/or Average ovarian cancer 2 relatives with breast cancer and/or bowel Increased cancer Ashkenazi Jewish ancestry Average Positive test for BRCA1/BRCA2 gene Unknown mutation in immediate family



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Personal History Risk Factors for Breast Cancer

Breast Cancer Risk Factors

Inherited genes (DNA) play a role in the risk of breast cancer. But your personal health history factors into your breast cancer risk too.

If you have been diagnosed with atypical hyperplasia, you have an increased risk of developing breast cancer in the future.

Certain breast conditions may also increase breast cancer risk. LCIS and DCIS are confusing terms because, although they are considered "stage 0" breast cancer, they may or may not turn into an invasive cancer.

A previous history of breast cancer, having breast cancer gene mutations, dense breast tissue, or a history of radiation therapy to the chest before age 30, may increase breast cancer risk.

Routine Breast Cancer Screening

Early detection is a key to successfully treating breast cancer. One of the most effective ways to screen for breast cancer is by having regular mammograms.

The age to begin screening may depend on the risk of developing breast cancer. Women at increased risk for breast cancer may need to start screening before the age of 40.

Increase the chance of finding a tumor early by understanding your breast cancer screening options, when you should start screening, and how often you should be screened.

YOUR PERSONAL HISTORY RISK FACTORS

High Risk

Personal History Risk Factors	Your Risk
Lobular carcinoma in situ (LCIS)	Average
Ductal carcinoma in situ (DCIS)	Average
Positive test for breast cancer gene mutation	Average
Breast cancer	Average
Chest radiation therapy	High
Atypical hyperplasia	Average
Dense breast tissue	Average

About This Assessment

The Breast Cancer Screening Assessment provides personalized recommendations for genetic screening and routine screening for breast cancer detection. A genetic screening recommendation is determined based on a woman's family history of certain types of related cancers using the Seven-question Family History Screening (FHS-7). Routine screening recommendations are provided based on guidance from the American Cancer Society and the US Preventative Services Task Force.

References

1. Wolf AMD, Fontham ETH, Church TR, et al. Colorectal Cancer Screening for Average-Risk Adults: 2018 Guideline Update from the American Cancer Society. CA Cancer J Clin 2018;68:250-281. https://doi:10.3322/caac.21457.

2. US Preventive Services Task Force. Screening for Colorectal Cancer US Preventive Services Task Force Recommendation Statement. JAMA. 2021;325(19):1965-1977. https://doi:10.1001/jama.2021.6238.

3. Shaukat A, Kahi CJ, Burke CA, et al. ACG Clinical Guidelines: Colorectal Cancer Screening 2021. Am J Gastroenterol 2021;116:458–479. https://doi.org/10.14309/ajg.000000000001122

4. American Cancer Society. Colorectal Cancer Facts & Figures: 2020-2022. Atlanta, GA: American Cancer Society. 2020.

https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/colorectal-cancer-facts-and-figures/colorectal-cancer-facts-and-figures-2020-2022.pdf





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Other Risk Factors for Breast Cancer

Other Risk Factors

The risk of breast cancer increases with age. Most breast cancers develop slowly over time and are diagnosed after age 50. In fact, breast cancer risk increases across all ages until about age 80.

Reproductive history and breastfeeding history may also contribute to breast cancer risk. This includes factors such as early age of menstruation, never having had a baby or having a first baby after age 30, using hormonal birth control, or hormone therapy after menopause. All of these factors mean the body is exposed to the hormone estrogen for a longer period of time, which increases risk of breast cancer.

About one-third of breast cancers after menopause are linked to factors you can change like obesity, lack of physical activity, and increased alcohol consumption. In fact, physical activity is a protective factor for breast cancer. The good news is that you get more benefit the more you exercise.

You can lower the risk of developing breast cancer by making simple lifestyle changes.

YOUR OTHER RISK FACTORS 1 High Risk 1 Increased Risk 4 Average Risk 2 Decreased Risk

Other Risk Factors	Your Risk
Age	High
Hormonal birth control	Average
Postmenopausal hormone therapy	Average
Breastfeeding history	Decreased
Reproductive history	Increased
Weight after menopause	Average
Weekly exercise	Decreased
Alcoholic beverages	Average

NOTICE: Health assessments are based on averages from studies of large groups of people.

Your situation may be different. It is important to discuss your personal situation with your health care provider. This assessment is not intended to replace medical advice from your health care provider, but rather help you set health goals and make healthy lifestyle decisions.

DISCLAIMER

THE INFORMATION CONTAINED IN THE ASSESSMENT IS FOR YOUR PERSONAL USE ONLY. THIS ASSESSMENT WILL NOT PROVIDE YOU WITH A MEDICAL SERVICE; IT WILL NOT DIAGNOSE, CURE, MITIGATE, TREAT, OR PREVENT DISEASE OR OTHER CONDITIONS: AND IT IS NOT INTENDED TO PROVIDE A DETERMINATION OR ASSESSMENT OF YOUR STATE OF HEALTH. ALWAYS CONSULT A LICENSED HEALTH CARE PROFESSIONAL SUCH AS YOUR FAMILY PHYSICIAN OR A SPECIALIST TO MAKE HEALTH CARE DECISIONS OR BEFORE STARTING ANY DIET OR EXERCISE PROGRAM. WE MAKE NO WARRANTIES, EXPRESSED OR IMPLIED, IN CONNECTION WITH THE ASSESSMENT OR THE PERFORMANCE OF THE ASSESSMENT, AND NEITHER THE ASSESSMENT PROVIDER, NOR MEDICOM HEALTH, WILL BE HELD RESPONSIBLE OR LIABLE FOR ANY COSTS OR DAMAGES RELATED TO USE OF THE ASSESSMENT OR ANY INFORMATION PROVIDED THEREFROM.

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To find a primary care doctor, call 1-800-555-5555 and we'll help find a doctor to fit your needs. For more information about our health services, call 1-877-555-0000 or visit <u>www.mtgeneralmemorial.org/services</u>.

Mt. General Memorial Clinic 5431 Lake Drive, Minneapolis MN 55401 1-877-555-0000

OUR HOSPITALS Mt. General Memorial Hospital 2928 Fifth Ave. SW, Edina, MN 53802 (555) 555-1100

Mt. General Memorial Regional Medical Center 982 West Poplar Drive, St. Paul, MN 50013 (555) 555-2100

Mt. General Memorial Community Hospital 4110 South Virago Parkway, Rush City, MN 59545 (555) 555-3100

Mt. General Memorial North Franklinburg Hospital 890 SE 57th St., Franklinburg, MN 56782 (555) 555-4100

Mt. General Memorial Lakeport Hospital 524 SW Monarch St., Lakeport, MN 57653 (555) 555-5100

YOUR GENETIC RISK FACTORS - Report Pages 1, 2



YOUR PERSONAL HISTORY RISK FACTORS - Report Pages 1, 3



YOUR PERSONAL HISTORY RISK FACTORS - Report Pages 1, 3

otherRiskFactorsCount



Note: if naOtherRiskFactorsCount = '1' - Do NOT show on the PDF report

Result Messaging Please check Draw.io for longest version

Primary Message

See Draw.io--> Breast Cancer Screening Messaging --> Primary Message (Report) https://www.dropbox.com/s/xzrripki3d88e31/Breast%20Cancer%20Screening%20Messaging.drawio?dl=0

Genetic Risk - Bullet 1

See Draw.io--> Breast Cancer Screening Messaging --> bullet 1 https://www.dropbox.com/s/xzrripki3d88e31/Breast%20Cancer%20Screening%20Messaging.drawio?dl=0

Other Risk Factors - Bullet 2 See Draw.io--> Breast Cancer Screening Messaging --> bullet 2 https://www.dropbox.com/s/xzrripki3d88e31/Breast%20Cancer%20Screening%20Messaging.drawio?dl=0

Dense Breast Tissue - Bullet 3

See Draw.io--> Breast Cancer Screening Messaging --> bullet 3 https://www.dropbox.com/s/xzrripki3d88e31/Breast%20Cancer%20Screening%20Messaging.drawio?dl=0

PAGE 2 TABLE

Data Element	Genetic Risk Factors	Your Risk	Outputs
familyHistoryRisk	Breast cancer in immediate family	Increased	Average Increased Unknown
femaleBothBreastsFamilyHistory	Relative with bilateral breast cancer	Average	Average Increased Unknown
femaleEarlyBreastFamilyHistory	Relative with breast cancer before age 50	Average	Average Increased Unknown
femaleEarlyBreastFamilyHistory	Relative with breast AND ovarian cancer	Average	Average Increased Unknown
maleBreastCancerFamilyHistory	Male relative with breast cancer	Average	Average Increased Unknown
emaleOvarianCancerFamilyHistory	Ovarian cancer in immediate family	Average	Average Increased Unknown
bcFamHistory_twoBreast bcFamHistory_twoOvarian	2 relatives with breast cancer and/or ovarian cancer	Average	Average Increased Note: For each of these outputs, show the following: If '1" for either datapoint output = INCREASED:
bcFamHistory_twoBreast bcFamHistory_twoBowel	2 relatives with breast cancer and/or bowel cancer	Increased	Average Increased If '0' for both datapoints, output = AVERAGE
ashkenaziJewishRisk	Ashkenazi Jewish ancestry	Average	Average Increased
brcaFamilyRisk	Positive test for BRCA1/BRCA2 gene mutation in immediate family	Unknown	Average Increased Unknown

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Data Element	Personal History Risk Factors	Your Risk	Outputs
personalHistory_lcis	Lobular carcinoma in situ (LCIS)	Average	Average High
personalHistory_dcis	Ductal carcinoma in situ (DCIS)	Average	Average Increased
geneMutationPositive	Positive test for breast cancer gene mutation	Average	Average High
personalHistory_breastCancer	Breast cancer	Average	Average Increased
personalHistory_chestRadiation	Chest radiation therapy	Average	Average Increased
breastBiopsiesHyperplasia	Atypical hyperplasia	High	Average High
personalHistory_denseBreast	Dense breast tissue	Average	Average Increased

See DRAW.IO --> Calculations -> personaHistoryRisk tab

Note: the personalHistory_* outputs are based on if a user checked the box for that variable.

personalHistory_lcis can result in HIGH if checked; all others will be INCREASED if checked

geneMutationPositive & breastBiopsiesHyperplasia will also result in HIGH if true; else AVERAGE

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Data Element	Other Risk Factors	Your Risk	Outputs	
ageRisk	Age	High	Average High	
hormonalContraceptiveRisk	Hormonal birth control	Average	Average Increased	
hormoneTherapyRisk	Postmenopausal hormone therapy	Average	Average Increased	
breastFeedingRisk	Breastfeeding history	Decreased	Average Decreased	See DRAW.IO> Calculations
reproductiveHistoryRisk	Reproductive history	Increased	Average Increased	
postMenopausalBmiRisk	Weight after menopause	Average	Average Increased Not Applicable	
exerciseRisk	Weekly exercise	Decreased	Average Decreased	
alcoholRisk	Alcoholic beverages	Average	Average Increased	
	-			1