

BreastCancerAware 3.0 Client Review Document

Overview

BreastCancerAware 3.0 provides personalized screening recommendations either for genetic counseling (if there is a family history) or for screening for breast cancer detection. The genetic counseling recommendation is provided depending on a woman's family history of certain types of related cancers.

The results from the simple questionnaire also document three different areas related to breast cancer risk:

- Genetic risk factors
- Personal history risk factors
- Other risk factors

Note: genetic testing recommendations may be optionally disabled by clients who prefer users to see only screening recommendations related to mammography, if applicable. Questions related to family history and any genetic risk factors will still display for all users, however.

Genetic Testing Screening/Genetic Risk Factors

BreastCancerAware 3.0 uses the FHS-7¹ to analyze the woman's family history of certain types of related cancers to provide a recommendation for genetic evaluation.² These questions include:

- Breast cancer in immediate family/Ovarian cancer in immediate family
- Relative with bilateral breast cancer
- Relative with breast cancer before age 50
- Relative with breast AND ovarian cancer
- Male relative with breast cancer
- 2 relatives with breast cancer and/or ovarian cancer
- 2 relatives with breast cancer and/or bowel cancer

An Ashkenazi Jewish ancestry and a positive test for BRCA1/BRCA2 gene mutation in immediate family also triggers a recommendation for genetic evaluation.

About the FHS-7

The Family History Survey¹ (FHS-7) is a simple family history questionnaire that has been clinically validated to identify women who should be referred for genetic evaluation by a

specialist. This questionnaire includes a series of questions about the woman's family history of breast, ovarian, and colorectal cancer to make the recommendation.

Genetic Testing Screening Recommendation

The USPSTF² recommends that primary care clinicians assess women with a personal or family history of breast, ovarian, tubal, or peritoneal cancer or who have an ancestry associated with breast cancer susceptibility, BRCA1/2 gene mutations, with an appropriate brief familial risk assessment tool. Women with a positive result on the risk assessment tool should receive genetic counseling and, if indicated after counseling, genetic testing.

Personal History Risk Factors

This category includes questions regarding a personal history of:

- Lobular carcinoma in situ (LCIS)
- Ductal carcinoma in situ (DCIS)
- Positive test for breast cancer gene mutation
- Breast cancer
- Chest radiation therapy
- Atypical hyperplasia
- Dense breast tissue

A positive answer to any of these questions affects the breast cancer screening recommendation.³

Other Risk Factors

Additionally, several other potential risk factors⁴ for breast cancer are identified, including:

- Age
- Hormonal birth control
- Postmenopausal hormone therapy
- Breastfeeding history
- Reproductive history
- Weight after menopause
- Weekly exercise
- Alcoholic beverages

Mammograms and Shared Decision-Making

Routine mammography is noted as the most effective way to screen for breast cancer. Women of all ages are urged to talk to their doctor about screening for breast cancer. Women with an increased risk for breast cancer may need to start screening before the age of 40 or use alternate types of breast cancer screening.^{3,5}

References

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2. U.S. Preventive Task force Services. BRCA-Related Cancer: Risk Assessment, Genetic Counseling, and Genetic Testing. *JAMA*. 2019;322(7):652-665. doi:10.1001/jama.2019.10987.
3. American Cancer Society. Breast cancer and early detection. <https://www.cancer.org/content/dam/CRC/PDF/Public/8579.00.pdf>. Accessed Nov. 1, 2021.
4. Breast Cancer Facts & Figures 2019-2020. Publication No. 861017. American Cancer Society Website. <https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/breast-cancer-facts-and-figures/breast-cancer-facts-and-figures-2019-2020.pdf>. Accessed Nov. 1, 2021.
5. Monticciolo DL, Newell MS, Moy L, Niell B, Monsees B, Sickles EA: Breast Cancer Screening in Women at Higher-Than-Average Risk: Recommendations From the ACR. *J Am Coll Radiol*. 15:408-414, 2018.