



# BREAST CANCER RISK ASSESSMENT

HIGH RISK  
(5-YEAR RISK USING GAIL MODEL)

## GOAL: SCHEDULE APPOINTMENT FOR SCREENING WITH PRIMARY CARE



### RISK EXPLAINED

Women in this category have a 3% or higher risk of developing invasive breast cancer in the next 5 years. This risk estimate is based on the Gail model.

The Gail model uses the following information to calculate risk:

- Age (must be 35 to 85 years old)
- Ethnicity
- Medical history
- Reproductive history
- History of breast cancer in mother, sisters, & daughters

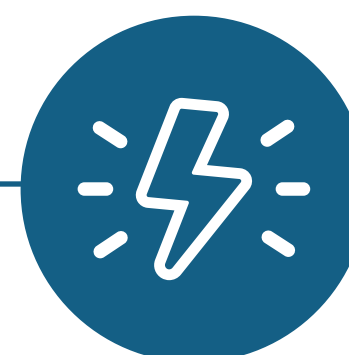


### EXAMPLE PERSONA

Laurel is a 57-year-old Caucasian woman who had a breast biopsy several years ago. The results showed atypical hyperplasia, but all tests and screening results since then have been normal.

Laurel is post-menopause and experiencing bothersome symptoms. While exploring options for treating her symptoms, she started wondering about her breast cancer risk. Laurel knows that risk goes up with age, but no one in her family has cancer, so she thinks she's at a pretty low risk.

The Gail model estimates Laurel's 5-year risk of invasive breast cancer is higher than 3.0%. She's not sure how to interpret that number. Is it truly high?



### CUSTOMIZED CALL TO ACTION MESSAGES

Focus Call to Action (CTA) messaging on:

- Scheduling an appointment with primary care for screening.



### PHONE CALL FOLLOW UP

Follow up with users by phone call to:

- Review the results report with them and explain what their high risk result means.
- Schedule an appointment with primary care for breast cancer screening.



### FOLLOW-UP EMAILS

Customize your follow-up email content to explain:

- The importance of following a recommended screening schedule.
- How family history may impact their breast cancer risk.
- That medicines or lifestyle changes may lower their breast cancer risk.



### SCREENING VIA PRIMARY CARE

- These women should visit primary care for screening.
- Women in this category may benefit from a referral to oncology, genetic evaluation, or other behavior-specific programs (e.g., smoking cessation or weight control).

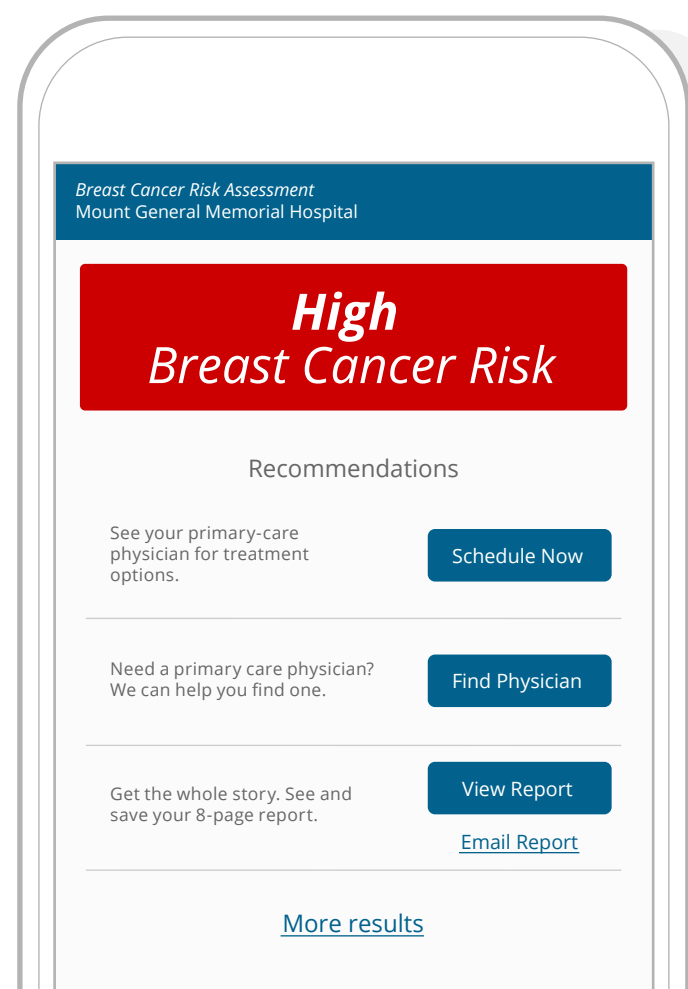
### OTHER CONSIDERATIONS

Because of their risk level, these women may be candidates for certain medications that have been shown to lower the risk of developing breast cancer.

These women may also have a significant family history of breast, ovarian, or bowel cancer that warrants a genetic evaluation.

They may report a history of:

- Hormone replacement therapy or hormonal birth control
- Dense breast tissue on mammogram
- Heavy alcohol use
- Current smoking
- Overweight or obesity





# BREAST CANCER RISK ASSESSMENT

INCREASED RISK  
(5-YEAR RISK USING GAIL MODEL)

## GOAL: REVIEW RISK FACTORS AND SCREENING SCHEDULE WITH PRIMARY CARE



### RISK EXPLAINED

Women in this category have a 1.66% to 2.99% risk of developing invasive breast cancer in the next 5 years. This risk estimate is based on the Gail model.

The Gail model uses the following information to calculate risk:

- Age (must be 35 to 85 years old)
- Ethnicity
- Medical history
- Reproductive history
- History of breast cancer in mother, sisters, & daughters



### EXAMPLE PERSONA

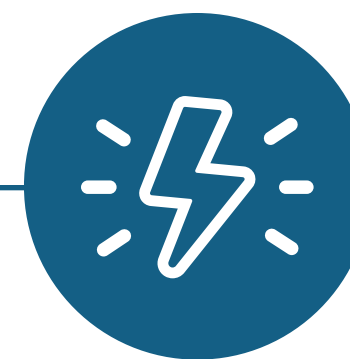
Megan is a 47-year-old Caucasian woman of Ashkenazi Jewish ancestry. Her mother is 69 and was just diagnosed with breast cancer. She has no other history of breast, ovarian, or bowel cancer in her immediate or extended family, and she has never had a breast biopsy.

Megan has heard that her Ashkenazi Jewish heritage may increase her breast cancer risk. Although the Gail model does not take her Jewish heritage into account, her Results Report highlights that her ancestry does independently increase her breast cancer risk. A genetic evaluation is recommended.



### DOES THE USER HAVE A PRIMARY CARE PHYSICIAN?

YES



### CUSTOMIZED CALL TO ACTION MESSAGES

Focus Call to Action (CTA) messaging on:

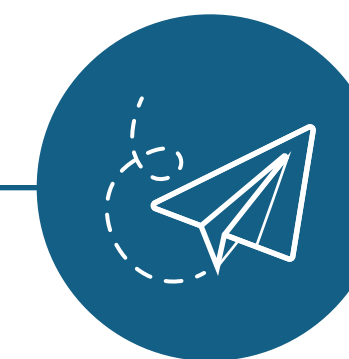
- Scheduling an appointment.
- Health fairs and other events sponsored by your organization.
- Relevant health content.



### PHONE CALL FOLLOW UP

Follow up with users by phone call to:

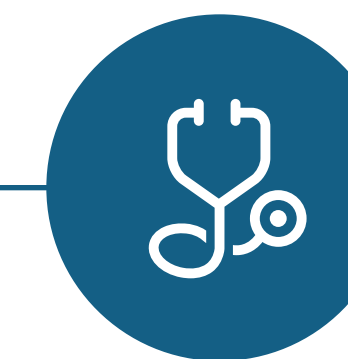
- Review the results report with them and explain what their increased risk result means.
- Encourage an appointment with their primary care physician to review their family history and other breast cancer risk factors.



### FOLLOW-UP EMAILS

Customize your follow-up email content to explain:

- The importance of following a recommended screening schedule.
- How a family history of certain cancers may increase their breast cancer risk.
- How certain medicines or lifestyle changes may lower their breast cancer risk.

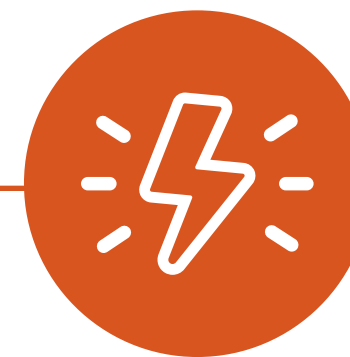


### PRIMARY CARE FOLLOW UP

- These women should visit primary care for screening.
- Women in this category may benefit from a referral to oncology, genetic evaluation, or other behavior-specific programs (e.g., smoking cessation or weight control).

NO

## GOAL: CREATE A RELATIONSHIP WITH A PRIMARY CARE PHYSICIAN



### CUSTOMIZED CALL TO ACTION MESSAGES

Focus Call to Action (CTA) messaging on:

- Finding a doctor.
- Health fairs and other events sponsored by your organization.
- Relevant health content.



### PHONE CALL FOLLOW UP

Follow up with users by phone call to:

- Find a primary care physician and set up an appointment
- Explain the benefits of discussing their family history and other breast cancer risk factors with a health care professional
- Review the results report with them and explain what their increased risk result means



### FOLLOW-UP EMAILS

Customize your follow-up email content to explain:

- The importance of following a recommended screening schedule.
- How a family history of certain cancers may increase their breast cancer risk.
- How certain medicines or lifestyle changes may lower their breast cancer risk.



### PRIMARY CARE FOLLOW UP

- These women should visit primary care for screening.
- Women in this category may benefit from a referral to oncology, a genetic evaluation, or other behavior-specific programs (e.g., smoking cessation or weight control).

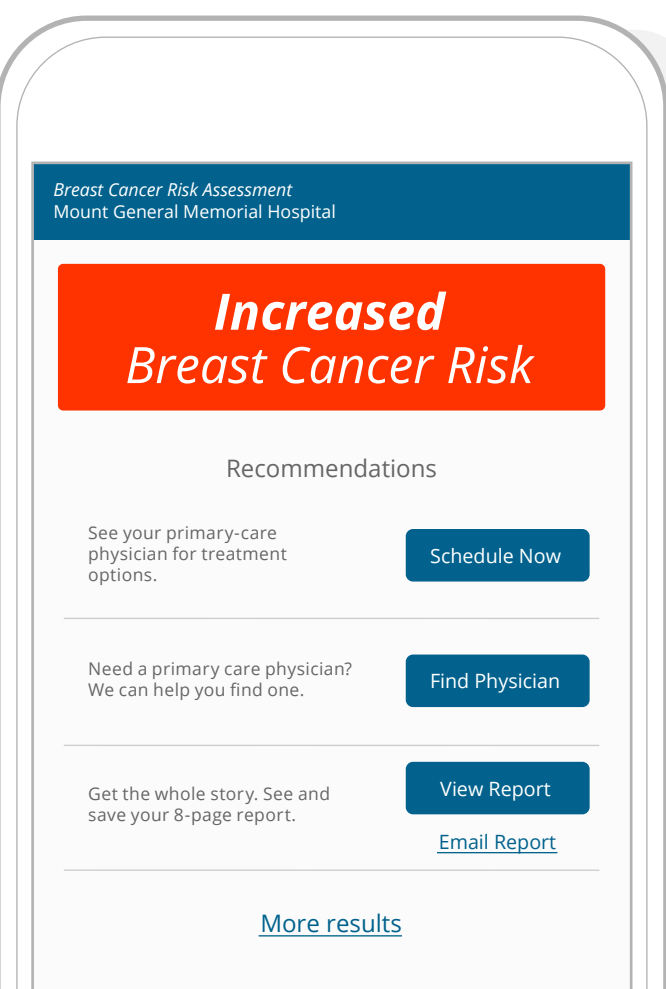
### OTHER CONSIDERATIONS

Because of their risk level, these women may be candidates for certain medications that have been shown to lower the risk of developing breast cancer.

These women may also have a significant family history of breast, ovarian, or bowel cancer that warrants a genetic evaluation.

They may report a history of:

- Hormone replacement therapy or hormonal birth control
- Dense breast tissue on mammogram
- Heavy alcohol use
- Current smoking
- Overweight or obesity





# BREAST CANCER RISK ASSESSMENT

LOW RISK  
(5-YEAR RISK USING GAIL MODEL)

## GOAL: DISCUSS BREAST CANCER RISK DURING A REGULAR PRIMARY CARE VISIT



### RISK EXPLAINED

Women in this category have a 5-year risk for developing invasive breast cancer that is less than 1.66%. This risk estimate is based on the Gail model.

The Gail model uses the following information to calculate risk:

- Age (must be 35 to 85 years old)
- Ethnicity
- Medical history
- Reproductive history
- History of breast cancer in mother, sisters, & daughters (women must know this information to get a result)

**IMPORTANT NOTE:** Women in this category may have an increased risk for developing breast cancer using other measures. See Other Considerations



### EXAMPLE PERSONA

Linda is a 61-year-old Hispanic female with obesity (5'5" and 180 lbs). She's a non-smoker who gets 150 minutes of moderate exercise each week, and she drinks only occasionally. She's never had a breast biopsy.

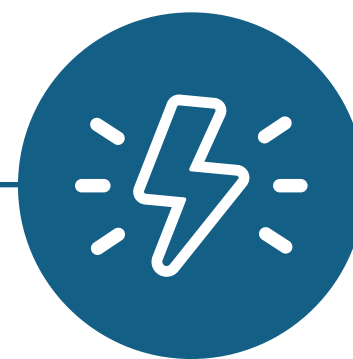
She took this assessment during Breast Cancer Awareness Month when she saw it on her hospital's Facebook page.

Linda is surprised to learn that her 5-year breast cancer risk is low, but her weight (obesity after menopause) and history of dense breast tissue on mammogram may affect that risk.



### DOES THE USER HAVE A PRIMARY CARE PHYSICIAN?

YES



### CUSTOMIZED CALL TO ACTION MESSAGES

Focus Call to Action (CTA) messaging on:

- Appointment scheduling.
- Health fairs and other events sponsored by your organization.
- Relevant health content.



### PHONE CALL FOLLOW UP

Follow up with users by phone call to:

- Review the results report with them and explain that the 5-year risk doesn't take into account all family history of cancer.
- Encourage them to review their breast cancer risk factors at their next primary care appointment.



### FOLLOW-UP EMAILS

Customize your follow-up email content to explain:

- The importance of creating a relationship with primary care.
- That family history of certain cancers may increase their breast cancer risk, and that risk increases with age.

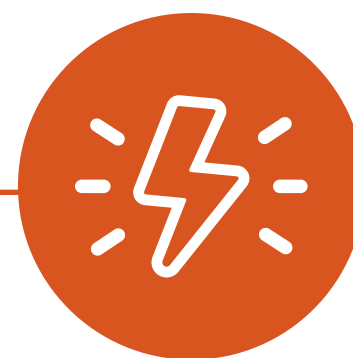


### PRIMARY CARE FOLLOW UP

- These women should discuss their risks at their next primary care visit.
- Women in this category may benefit from a referral to behavior-specific programs that reduce their risk of developing breast cancer (e.g., smoking cessation or weight control).

NO

## GOAL: CREATE A RELATIONSHIP WITH A PRIMARY CARE PHYSICIAN



### CUSTOMIZED CALL TO ACTION MESSAGES

Focus Call to Action (CTA) messaging on:

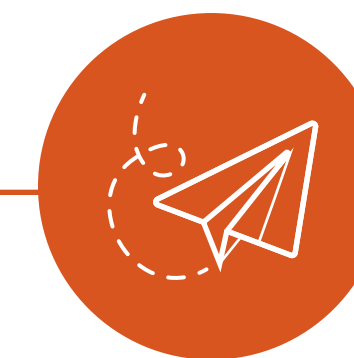
- Finding a doctor.
- Health fairs and other events sponsored by your organization.
- Relevant health content.



### PHONE CALL FOLLOW UP

Follow up with users by phone call to:

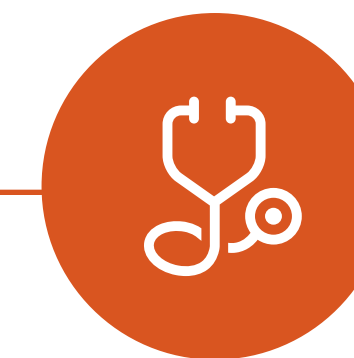
- Establish a primary care physician.
- Review the results report with them and explain that the 5-year risk doesn't take into account all family history of cancer.
- Encourage them to review their breast cancer risk factors at their next primary care appointment.



### FOLLOW-UP EMAILS

Customize your follow-up email content to explain:

- The importance of creating a relationship with primary care.
- That family history of certain cancers may increase their breast cancer risk, and that risk increases with age.



### PRIMARY CARE FOLLOW UP

- These women should discuss their risks at their next primary care visit.
- Women in this category may benefit from a referral to behavior-specific programs that reduce their risk of developing breast cancer (e.g., smoking cessation or weight control).

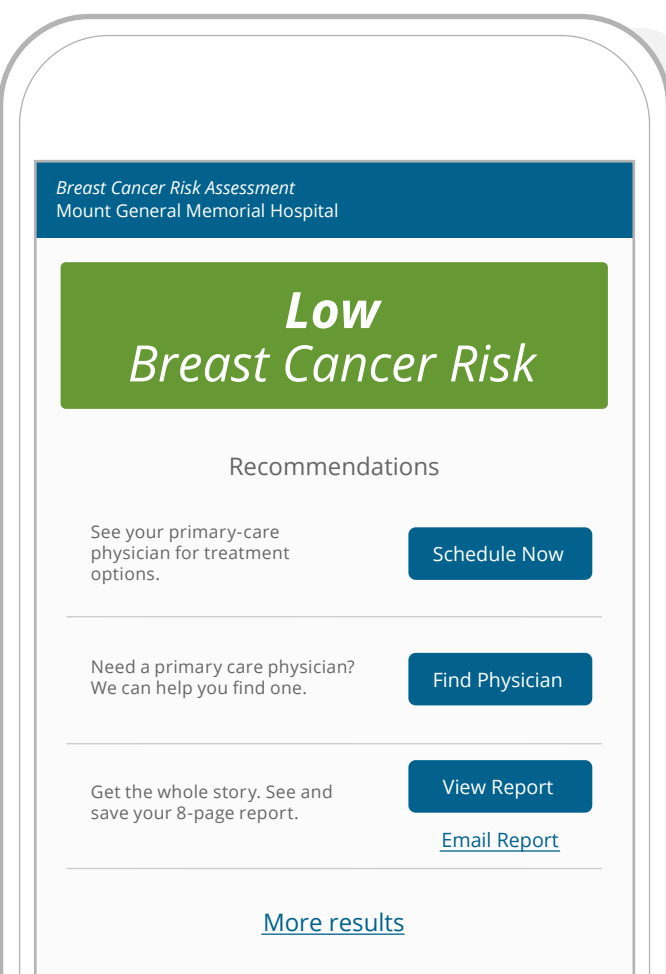
### OTHER CONSIDERATIONS

In addition to the 5-year risk using the Gail model, this HRA assesses breast cancer risk using the following measures:

- Lifetime risk using the Gail model
- Genetic risk factors (i.e. family history of breast/ovarian/bowel cancer or Ashkenazi Jewish ancestry)
- Lifestyle risk factors (i.e. recent smoking, post-menopause obesity, limited physical activity, and moderate alcohol use)

When women are at increased risk using these other measures, they are told their 5-year risk is low but their breast cancer risk is increased due to other factors.

Women who report a history of dense breast tissue on mammogram are told to discuss this finding with a health care professional.





# BREAST CANCER RISK ASSESSMENT

UNKNOWN RISK—AGE  
(UNABLE TO CALCULATE USING GAIL MODEL)

## GOAL: DISCUSS BREAST CANCER RISKS DURING A REGULAR PRIMARY CARE VISIT



### RISK EXPLAINED

Women in this category are under age 35 or over age 85.

For the 5-year risk calculation using the Gail model, users must be 35 to 85 years old. Any women whose age is outside of this range, regardless of their health history or family history of cancer, will see this as their primary result.

The women in this group may be at high risk for breast cancer, but their risk should be estimated by a health care professional using other methods than the Gail model.



### EXAMPLE PERSONA

Julie is a 33-year-old African American woman whose best friend, Tammy, was recently diagnosed with breast cancer.

Julie found this assessment while searching for information about how common breast cancer is in younger women.

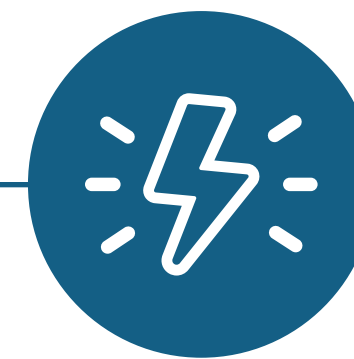
Julie is in great health, exercises regularly, has no history of cancer in her family, and has none of the other related risk factors listed in the online application.

Julie always saw Tammy as the picture of health, so she wants to know what she can do to reduce her risk for breast cancer.



### DOES THE USER HAVE A PRIMARY CARE PHYSICIAN?

YES



### CUSTOMIZED CALL TO ACTION MESSAGES

Focus Call to Action (CTA) messaging on:

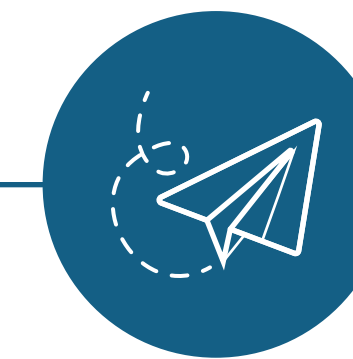
- Scheduling an appointment for further evaluation.
- Health fairs and other events sponsored by your organization.
- Relevant health content.



### PHONE CALL FOLLOW UP

Follow up with users by phone call to:

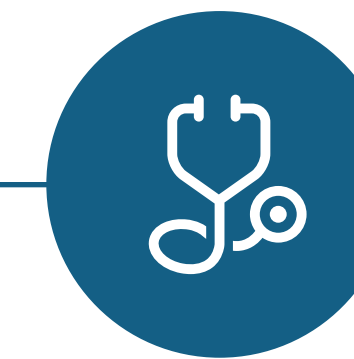
- Encourage them to review their breast cancer risk factors at their next appointment.
- Explain that breast cancer risk can be estimated using other tools.



### FOLLOW-UP EMAILS

Customize your follow-up email content to explain:

- The importance of following a recommended screening schedule.
- How a family history of certain cancers may increase their breast cancer risk.
- That breast cancer risk increases with age.

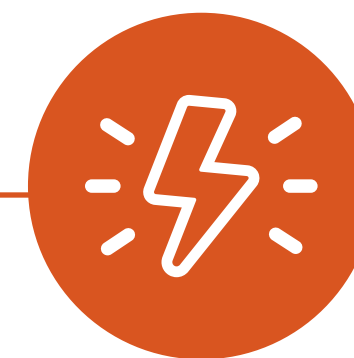


### PRIMARY CARE FOLLOW UP

- Women in this category should have their risk estimated by a health care professional using other methods.
- These users may benefit from a referral to programs that target lifestyle-related risks (e.g., smoking cessation or weight control).

NO

## GOAL: CREATE A RELATIONSHIP WITH A PRIMARY CARE PHYSICIAN



### CUSTOMIZED CALL TO ACTION MESSAGES

Focus Call to Action (CTA) messaging on:

- Finding a doctor.
- Scheduling an appointment for further evaluation.
- Health fairs and other events sponsored by your organization.



### PHONE CALL FOLLOW UP

Follow up with users by phone call to:

- Find a primary care physician and set up an appointment.
- Encourage them to review their breast cancer risk factors at their next appointment.
- Explain that breast cancer risk can be estimated using other tools.



### FOLLOW-UP EMAILS

Customize your follow-up email content to explain:

- The importance of following a recommended screening schedule.
- How a family history of certain cancers may increase their breast cancer risk.
- That breast cancer risk increases with age.



### PRIMARY CARE FOLLOW UP

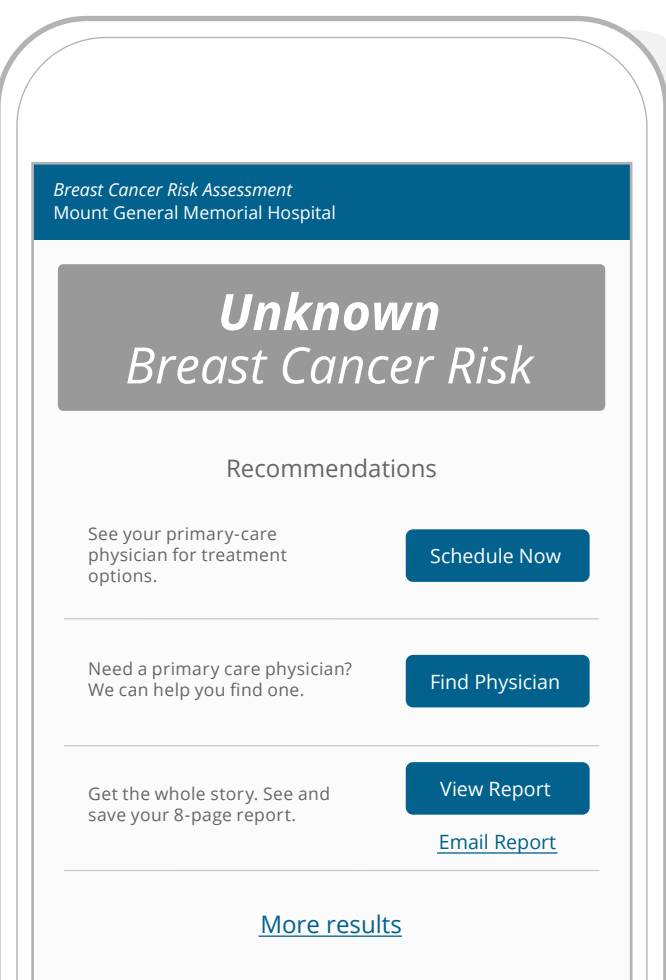
- Women in this category should have their risk estimated by a health care professional using other methods.
- These users may benefit from a referral to programs that target lifestyle-related risks (e.g., smoking cessation or weight control).

### OTHER CONSIDERATIONS

In addition to the 5-year risk using the Gail model, this HRA independently assesses various genetic risk factors and lifestyle risk factors (see Low Risk—Other Considerations for more information). Women at increased risk for breast cancer due to these other risk factors are told their 5-year risk using the Gail model cannot be calculated but their risk factors put them at an increased risk for breast cancer. Also, women who report a history of dense breast tissue on mammogram are told to discuss this finding with a health care professional.

Women in this category may also report a history of:

- Hormone replacement therapy or hormonal birth control
- Heavy alcohol use
- Current smoking
- Overweight or obesity

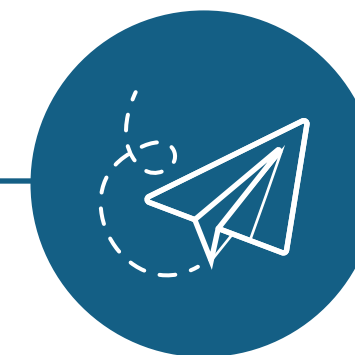
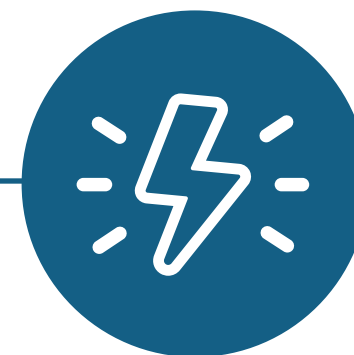




# BREAST CANCER RISK ASSESSMENT

UNKNOWN RISK—HISTORY  
(UNABLE TO CALCULATE USING GAIL MODEL)

## GOAL: SCHEDULE APPOINTMENT WITH PRIMARY CARE TO ASSESS RISK



### RISK EXPLAINED

Women in this category are 35 to 85 years old and chose “I don’t know” for this question:

How many first-degree relatives (mothers, sisters, daughters) have had breast cancer?

For the 5-year risk calculation using the Gail model, users must know the history of breast cancer in their immediate family. Any women unable to answer this question, regardless of their health history or other family history of cancer, will see this as their primary result.

In order to learn their risk, these women should be encouraged to gather the history of breast cancer in their immediate family if possible and retake the assessment.

### EXAMPLE PERSONA

Karen is a 56-year-old Chinese American who doesn’t know the history of breast cancer in her mother or sister(s). Karen was adopted, so she only knows the health history of her children, which is negative for breast, ovarian, and bowel cancer.

Karen was looking for more information on the impact of dense breast tissue on cancer risk. Her most recent mammogram results noted this finding. During her search, she found this breast cancer risk assessment.

Karen wants to know her breast cancer risk and is disappointed that family history is required in order to get a risk estimate using the Gail model. However, the Results Report does touch on the impact dense breast tissue can have on finding breast cancer. The report also lists several other risk factors for breast cancer.

### CUSTOMIZED CALL TO ACTION MESSAGES

Focus Call to Action (CTA) messaging on:

- Appointment scheduling.
- Relevant health content.

### PHONE CALL FOLLOW UP

Follow up with users as soon as possible by phone call to:

- Set up an appointment with primary care.
- Review the results report with them.
- Explain that when family history of breast cancer is unavailable, other tools can estimate breast cancer risk.

### FOLLOW-UP EMAILS

Customize your follow-up email content to explain:

- The importance of following a recommended screening schedule.
- How learning the history of breast cancer in their mother, sisters, and daughters can help determine their 5-year risk.
- That breast cancer risk increases with age, so they should continue to monitor their risk factors.

### PRIMARY CARE FOLLOW UP

- These women should be encouraged to re-take the HRA when they learn their family history.
- If family history cannot be obtained, these women should see a primary care physician to assess their risk using alternate methods of evaluation.

### OTHER CONSIDERATIONS

In addition to the 5-year risk using the Gail model, this HRA independently assesses various genetic risk factors and lifestyle risk factors (see *Low Risk—Other Considerations* for more information). Women at increased risk for breast cancer due to these other risk factors are told their 5-year risk using the Gail model cannot be calculated but their risk factors put them at an increased risk for breast cancer. Also, women who report a history of dense breast tissue on mammogram are told to discuss this finding with a health care professional.

Women in this category may be at high risk for breast cancer. They may also report a history of:

- Hormone replacement therapy or hormonal birth control
- Heavy alcohol use
- Current smoking
- Overweight or obesity

