



# The WISDOM study

Fact Sheet for Healthcare Providers  
[www.thewisdomstudy.org](http://www.thewisdomstudy.org)



## The WISDOM study

(Women Informed to Screen Depending on Measures of risk) is a preference-tolerant, 5-year randomized clinical trial comparing annual breast cancer screening with a personalized, risk-based screening schedule. The WISDOM Study is completed online and there is no requirement to come to a study center to participate. Women can continue to receive their care with their regular physicians.

## Study rationale

The WISDOM Study is designed to test what we hope will be a transformative approach to breast cancer screening – optimizing breast cancer detection for higher-risk women while reducing the unintended consequences of current screening practices for lower-risk women. We intend to show that personalized screening makes better use of available resources, screens women at intervals appropriate to their risk, improves compliance and decreases patient anxiety.

## Athena Breast Health Network

The WISDOM Study is run through the Athena Breast Health Network, a collaboration between the 5 University of California medical centers and Sanford Health in the Dakotas. The study has recently expanded to include recruitment centers at UChicago, Louisiana State University (LSU Health), University of Alabama Birmingham, and TopLine MD. Women nationwide can join online, even if they don't receive care at these recruitment centers.

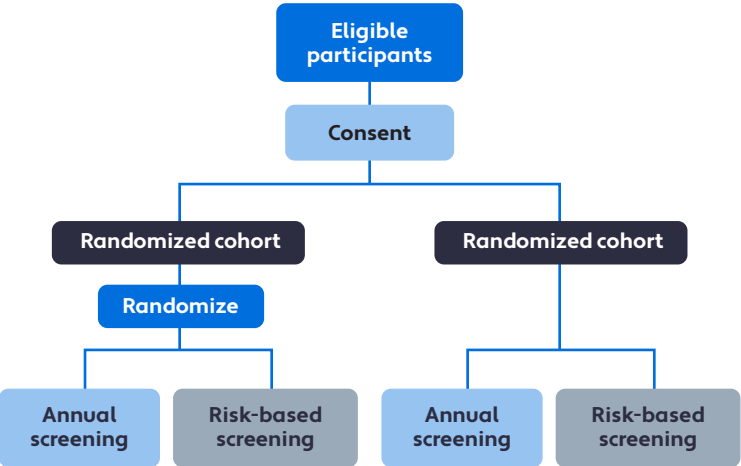
## Recruitment sites



# Study design

Participants are asked to select whether they feel comfortable being randomized to a study arm, or prefer to choose their study arm. If they choose to be randomized, they will be randomly assigned to either the Annual arm (referred to as the "Annual Group"), or the Risk-based Screening arm (referred to as the "Personalized Group").

Participants who feel strongly about which group they prefer can select their study arm and will participate in an observational cohort study. Whichever selection is made, the participant will be in either the Annual Arm or the Risk-based Screening Arm.



## Study arms

### Annual arm

Participants will complete a breast health questionnaire and return for a screening mammogram in one year (unless at elevated risk and recommended for more frequent follow-up).

### Personalized arm

Participants will complete a breast health questionnaire and provide a saliva sample for genetic testing. They will receive a screening recommendation based on the results of the questionnaire and their genetic testing that is tailored to her individual risk level.

### Support for High Risk participants

(Women Informed to Screen Depending on Measures of risk) is a preference-tolerant, 5-year randomized clinical trial comparing annual breast cancer screening with a personalized, risk-based screening schedule. The WISDOM Study is completed online and there is no requirement to come to a study center to participate. Women can continue to receive their care with their regular physicians.

# Frequently asked questions

## Q. How can women join the study?

**A.** Women can join the study on the study's website, <http://www.thewisdomstudy.org>. Participants register and check their eligibility, then complete study steps online. There is no requirement to come in for any study visits or to change their care provider. The study materials and participant experience (consent, questionnaires, communications) are available in Spanish and Spanish-speaking research coordinators are available.

## Q. Who is eligible for the study?

**A.** Inclusion criteria

- Female, age 40-74
- No prior breast cancer or DCIS diagnosis
- No prior double mastectomy

## Q. How will the study determine patient breast cancer risk?

**A.** The study uses the Breast Cancer Surveillance Consortium (BCSC) risk model for all women in the study. The model includes:

- Age
- Race/ethnicity
- Family history of breast cancer
- History of prior breast biopsies
- History of benign breast disease
- Breast density

Those in the personalized arm will have risk determined by their BCSC score modified by a polygenic risk score (PRS) using single nucleotide polymorphisms (SNPs). In addition to the BCSC + PRS score, we are testing for 9 genes that increase breast cancer risk (including BRCA1, BRCA2, TP53, PTEN, STK11, CHD1, ATM, PALB2, CHEK2). The WISDOM

risk thresholds then determine the recommended screening frequency for the personalized arm participants (see Shieh et al, JNCI 2017).

## Q. How will I know if my patients are participating in the WISDOM Study?

**A.** Your patient will be given a letter outlining her WISDOM Screening Plan, including the recommended breast screening schedule. For those in the Personalized Screening Arm, your patient will also be given her genetic test results. If the results are positive, this will first be disclosed during a telephone consult with our trained Breast Health Specialists/genetic counselors. We encourage participants to share their letters and results with their provider for review and discussion. If we discover a woman is at extremely high risk or has a positive genetic mutation, she will receive a Breast Health Specialist (BHS) consultation to discuss her risk. The BHS will request her provider name to deliver results and a consultation note to the participant's study portal to share directly to the woman's provider.

## Q. How can I be involved in WISDOM Study?

**A.** You can discuss the WISDOM Study with your patients who might be interested in participating. You can refer them directly to the WISDOM Study website ([www.thewisdomstudy.org](http://www.thewisdomstudy.org)), where they can join the study or email a study coordinator with questions. We also encourage you to record who indicates interest in joining so the coordinator can follow-up directly. For patients enrolled in the study, you can discuss the study's screening recommendation with them and promote adherence to their recommended screening interval.

# Frequently asked questions

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## **Q. What are the possible screening recommendations for women in the Personalized Arm?**

**A.** The table below outlines the possible screening recommendations for women in the Personalized Arm. Approximately 60% of patients are expected to be in the Personalized arm, and 40% in the annual arm. Please see Shieh et al (JNCI 2017) manuscript detailing our risk stratification approach.

## **Q. Who orders the mammograms and other imaging exams?**

**A.** The participant's existing provider will order breast imaging as part of routine clinical care. We encourage providers and participants to follow the recommended screening frequency and modality recommended by the study. However, we cannot enforce this (and it is not considered a protocol deviation or violation) and will track adherence as one of our study outcomes in this pragmatic trial.

## **Q. What happens if I don't agree with the recommendations given for my patient or have questions about why she was assigned to a particular category?**

**A.** We welcome questions from physicians and our staff can explain the rationale behind the screening assignment given. We do run additional risk models for reference as we understand you may be familiar with a different risk models in your practice. We encourage physicians to reach out to the study team with any questions.

## **Q. Do participants need to be seen at a study facility? Do they need to change doctors?**

**A.** No. All study activities (enrollment, consent, surveys, genetic testing, risk assignments) will be completed in the online study portal. Participants will continue to see their regular doctors and there is no need to switch providers.

## **Q. Who can I contact with questions about the study?**

**A.** Please contact a study coordinator at [info@wisdomstudy.org](mailto:info@wisdomstudy.org) or at 1-855-729-2884

Please also review the FAQ's on the study website for answers to more questions!

[www.thewisdomstudy.org](http://www.thewisdomstudy.org)

## Contact

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1-855-729-2884  
[info@wisdomstudy.org](mailto:info@wisdomstudy.org)  
San Francisco, CA  
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The **Wisdom** Study

# Personalized arm: Risk thresholds

| Breast cancer risk | Screening recommendation<br>Risk is calculated as BCSC 5-years risk plus SNP-PRS | Age 40-49 (i)<br>Risk is calculate as BCSC 5-years risk plus SNP-PRS  | Age 50 and older (i)<br>Risk is calculate as BCSC 5-years risk plus SNP-PRS   |
|--------------------|--|---|---|
| Low risk           | No screening at this time  | <b>5-year risk &lt; 1.3%</b>  | N/A   |
|                    | Stop screening   | N/A   | <b>Stop screening at age over 70:</b><br>5-year risk < 1.3%<br>or<br>5-year risk < 2.2%<br>AND 50% chance of mortality<br>(based on ePrognosis) |
|                    | Every 2 years mammogram  | <b>5-year risk &lt; 1.3%</b><br>AND<br><b>5-year risk &lt; 95% by age</b>   | <b>5-year risk &lt; 95% by age</b>  |
|                    | Every 2 years mammogram & risk reduction consultation                            | N/A   | <b>5-year risk &lt; 95 - 97% by age</b>   |
|                    | Every 2 years mammogram + BHS Review ("BHS Review low risk participants" report) | <b>Age 40 - 60 years</b><br>Meets FH criteria for NCCN breast cancer risk reduction (see△)  |   |
|                    | Annual mammogram   | Extremely dense breasts based on prior mammogram (BIRADS="D")   | N/A   |
| Moderate risk      | Annual mammogram +BHS active outreach & risk reduction consultation              | <b>5-year risk &lt; 1.3% or ATM OR CHEK2 mutation* OR 5-year risk ≥ 6% for women 65 and older (non-carriers)</b>                                      |   |
| High risk          | Annual mammogram + annual MRI +BHS active outreach & risk reduction consultation | <b>5-year risk ≥ 6% for women 40-64 OR BRCA1/2, TP53, PTEN, STK11, CDH1. PALB2 mutation OR History of chest wall radiation received before age 35</b> |   |