

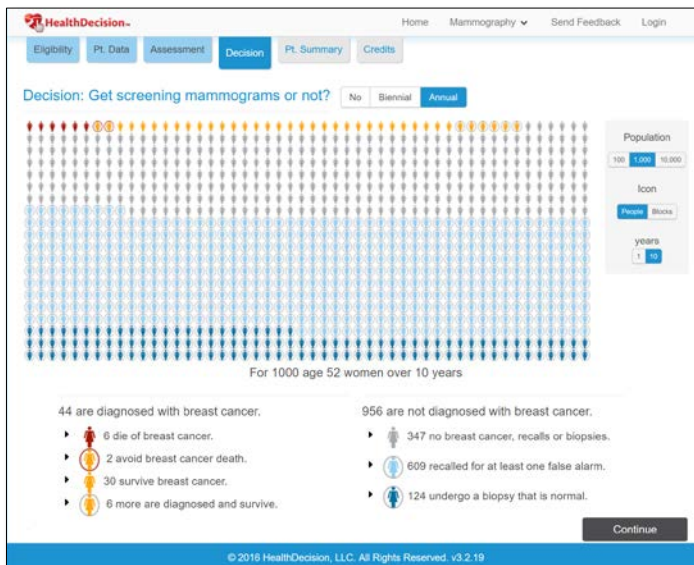
HealthDecision’s Breast Cancer Screening tool demonstrates the benefits and harms of mammography screening. Using the Breast Cancer Surveillance Consortium^{1,2} (BCSC) Risk Calculator, the tool determines the patient’s risk of developing breast cancer in the next 10 years as well as the mortality reduction from annual and biennial screening. Clinicians and patients engage in shared decision making (SDM) as graphical displays simplify explanations of overdiagnosis, false alarms, and mortality reduction.

Breast Cancer Screening Workflow

The Breast Cancer Screening tool is designed to be intuitive, fit smoothly within the clinician’s workflow, and help organize the clinician-patient conversation:

- **Eligibility:** Prompts the user to confirm that no high-risk conditions are present. Currently, choosing “Yes” for any item stops the tool. [Coming Soon: A new feature will allow users to complete the tool and give localized information regarding appropriate next steps.]
- **Pt. Data:** Gathers available data from the EHR and allows the clinician to include additional data if available. The only required data point is age; if any other data points are missing (race/ ethnicity, previous biopsy result, family history, and breast density), the tool reverts to the U.S. population average risk for that value.

- **Assessment:** Displays the patient’s 10-year incidence of breast cancer and the average incidence for U.S. women of the same age. These same data are displayed with a range of risks for each breast density when breast density is unknown. Also on this page are guideline recommendations from the U.S. Preventive Services Task Force (USPSTF), the American Cancer Society (ACS), and the American College of Radiology (ACR).
- **Decision:** Displays the risk of breast cancer incidence and mortality in an icon array depicting a population of 100, 1,000, or 10,000 women. When either biennial or annual screening is selected, the icon array shows the mortality benefit, over-diagnosis, false alarms, and benign biopsies. The choice can be toggled to compare different choices.
- **Library:** [Coming Soon] This tab will offer additional educational resources to share with patients. Topics will include information about the mammogram process, breast density, and biopsies, among other information.
- **Pt. Summary:** Offers a summary of information that was reviewed through the use of the tool. This information can be printed and also copied and pasted into the patient’s after-visit summary.
- **Clinician Summary:** [Coming Soon] This tab will provide a text summary of the conversation and decision that can be added to the clinician’s note.



Background: Risk Calculator Selection

While the BCSC Risk Calculator provides estimates of breast cancer incidence, HealthDecision's Breast Cancer Screening tool also makes extensive use of the 2015 USPSTF modeling report³ that accompanied the 2016 guideline.⁴ This report gives reasonable estimates for rates of mortality, mammogram-related mortality reduction, over-diagnosis, false alarms and benign biopsies.

While there have been disagreements about the best choices of these numbers, the USPSTF is a well-respected body within primary care. In addition, their data set has the advantage of providing estimates of both benefits and harms that share many of the same underlying assumptions. Indeed, while there has been some strong opposition⁵ to the recommendations made within that guideline, the arguments have been directed at the conclusions made by the guideline committee and less about the numbers on which the conclusions were based.

Customization

The design of the HealthDecision platform supports some customization. For example, institution-specific recommendations can be presented on the Assessment tab and clinicians can be given specific guidance about how to manage specific cases within a given institution.

Release Date

HealthDecision released the Breast Cancer Screening tool for clinical use in September 2016.

Credits

The creation of this SDM tool for breast cancer screening was made possible through a \$500,000 grant funded by the Collaborative Health Science Program from the UW School of Medicine and Public Health. A breast cancer research team within UW Health collaborated with HealthDecision to build it.

References

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3. Mandelblatt JS, Cronin K, de Koning H, Miglioretti DL. *Collaborative Modeling of US Breast Cancer Screening Strategies.* Rockville; 2015. <https://www.uspreventiveservicestaskforce.org/Page/Document/modeling-report-collaborative-modeling-of-us-breast-cancer-1/breast-cancer-screening1>.
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5. 2015 USPSTF SBI ACR Statement. April 2015:1–2. <http://www.acr.org/About-Us/Media-Center/Press-Releases/2015-Press-Releases/20150420-Draft-USPSTF-Breast-Cancer-Screening-Recommendations-Would-Cost-Thousands-of-Lives>.

For More Information

The Breast Cancer Screening tool is one of several healthcare SDM aids within the HealthDecision suite. Other decision aid tools include Atrial Fibrillation, Cardiovascular Risk, and Lung Cancer Screening. Contact us for more information:

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