

Customize starting age, frequency of mammograms

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Mammograms should not be done on a one-size fits all basis, but instead should be personalized based on a woman's age, the density of her breasts, her family history of breast cancer and other factors including her own values. That's the conclusion of a new study in the July 5 issue of the [Annals of Internal Medicine](#).

The study challenges current guidelines from groups such as the American Cancer Society and the U.S. Preventive Services Task Force that make recommendations based on age alone. The American Cancer Society recommends annual screening starting at age 40 with no upper age limit, while the U.S. Preventive Services Task Force recommends biennial screening for women between the ages of 50 and 74.

While mammography screening indisputably decreases deaths from breast cancer, there is disagreement as to when women should begin mammography and how often they should get it: every two years starting at 50 or every year starting at 40?

“Our analysis suggests that women with a first-degree relative with breast cancer or with a history of a breast biopsy should have an initial screening mammography at age 40,” said study co-author Karla Kerlikowske, MD, MS, an expert in mammography at the University of California, San Francisco.

“For women age 40 to 49 with high breast density, and with either a first-degree relative with breast cancer or a prior breast biopsy, the benefits

versus harm for performing mammography every two years is similar to screening an average-risk woman in her 50s. This amounts to about 20 percent of women in their 40s. For women age 40 to 49 without these risk factors, it is reasonable to wait until age 50 to start mammography screening.”

Many studies have shown that the denser a woman’s breast on a mammogram, the greater her risk of breast cancer. Low density or fatty breasts means a low risk of breast cancer while high density or less fatty breasts means a higher risk.

The researchers used population-based data collected on U.S. women from the Breast Cancer Surveillance Consortium (breastscreening.cancer.gov) and Surveillance Epidemiology and End Results (www.seer.cancer.gov/statfacts/html/breast.html) of the National Cancer Institute.

They developed a model to compare the lifetime costs and health benefits for women who underwent [mammograms](#) every year, every two years, every three to four years, or who never got a mammogram. The women all had different risk factors for breast cancer, and the model assumed that they all started out as healthy but could ultimately fall into one of six different categories: remain healthy or develop ductal carcinoma in situ (DCIS), localized invasive breast cancer, regional invasive breast cancer or distant invasive breast cancer, or die from invasive breast cancer or other causes.

The authors used the data to estimate how many extra mammograms would be needed over a decade to prevent one death from breast cancer in those having mammograms once every three to four years compared to no mammograms, and in those having mammography every two years compared to once every three to four years. They also estimated the costs for each frequency of mammography for each year of quality life

gained.

“Most guidelines use age as the determining factor in when, and how often, a woman should get a mammogram,” said Steve Cummings, MD, of the San Francisco Coordinating Center at the California Pacific Medical Center Research Institute, and the senior author of the study.

“What our study shows is that other factors, particularly breast density, are just as important, if not more so, in helping a woman decide what is most appropriate for her. We show that mammography should be personalized. The best interval for you depends on your age, breast density, and other risk factors for breast cancer.”

Lead author John Schousboe, MD, PhD of the Park Nicollet Institute and the University of Minnesota noted that yearly mammograms was not cost-effective and yielded little additional health benefits compared to mammograms once every two years, regardless of age, breast density or other risk factors.

The frequency of mammography, he said, is not just a clinical decision, it also has a strong emotional component.

“Feelings matter too,” Schousboe said. “For example, some mammograms produce a false positive result and these can cause a lot of worry for a woman. The effect of mammograms on a woman’s quality of life should be considered in her decision about when to be screened. If mammograms reassure you, then more often than every two years may be reasonable. If they worry or bother you, then less frequent may be OK.”

The study was supported by grants from Eli Lilly and Co. and the Da Costa Family Foundation for Research in Breast Cancer Prevention at CPMC. The sponsors had no role in the design, data collection, analysis

or interpretation of the study.

“This is exactly the type of analysis that we need if we are going to help women and doctors figure out the best schedule of screening for them,” said Susan Love, MD, MBA, president of the Dr. Susan Love Research Foundation. “Personalized medicine extends beyond treatment to risk definition and appropriate screening schedules.”

Provided by University of California, San Francisco

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