Screening mammograms in younger women have low accuracy and detect few cancers

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Screening mammograms in women under age 40 result in high rates of callbacks and additional imaging tests but low rates of cancer detection, according to a study published online May 3 in the*Journal of the National Cancer Institute.*

Many studies have assessed mammography in women over age 40 years, but little is known about its usefulness in younger women. Although screening mammograms are not generally recommended under age 40, about 29% of women between 30 and 40 report having had one.

To determine the accuracy and outcomes of mammograms in younger women, Bonnie C. Yankaskas, Ph..D., from the University of North Carolina at Chapel Hill, and colleagues, pooled data from six mammography registries around the country. Their study included 117,738 women who had their first mammogram between the ages of 18 and 39. The researchers followed the women for a year to determine the accuracy of the tests and their cancer detection rates. They analyzed data for both screening mammograms and diagnostic mammograms, which were performed because a woman had a warning sign or symptom, such as a lump.

No cancers were detected in women 25. Among the 73,335 women aged 35-39, the researchers found that screening mammograms had poor accuracy (sensitivity, specificity, and positive predictive value) and high rates of recall for additional tests. The cancer detection rate in this group was 1.6 cancers per 1,000 women.

For diagnostic mammograms, accuracy was better and the detection rate was 14.3 cancers per 1,000 women aged 35-39.

The authors conclude that in a theoretical population of 10,000 women having a screening mammogram between ages 35 and 39, 1,266 would be called back for further testing, 16 cancers would be detected, and therefore 1,250 women would have false positives.

In this population, they write, "our findings support a need for serious discussion about the appropriateness of mammography in women without the presence of symptoms."

In an editorial, Ned Calonge, M.D., of the Colorado Department of Public Health and Environment, notes that this "landmark descriptive study should inform women and physicians and guide research efforts" on early detection in younger women. He emphasizes that even women in the study with a family history of breast cancer had the same detection and false positive rates as women without a known family history. This calls into question he says, the recommendation of some health groups that women with a family history start screening early.

He concludes that "the study by Yankaskas et al. is a powerful reminder that we must continue to strive for better tests and better treatments…..Furthermore, we should not be satisfied with better detection rates alone. We need evidence that early detection of these cancers translates to improvements in important health outcomes."

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