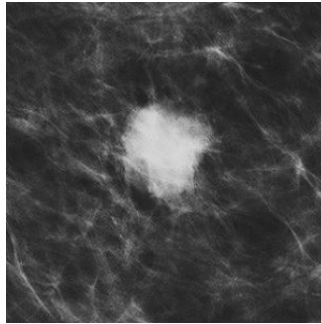

Study: Screening Mammography Intervals, Tumour Characteristics



A new study in *JAMA Oncology* shows that premenopausal women diagnosed with breast cancer after a biennial screening mammogram were more likely to have bigger more advanced tumours than women screened annually. Also, researchers found a similar proportion of tumours with less favourable prognostic characteristics in postmenopausal women not using hormone therapy — no matter whether their screening mammogram was biennial or annual.

“Our findings suggest that menopausal status may be more important than age when considering breast cancer screening intervals, which is biologically plausible,” write Diana L. Miglioretti, PhD, of the University of California-Davis School of Medicine, and co-authors. Screening mammography intervals remain under debate in the U.S.

The researchers compared the proportion of less vs. more favourable tumour prognostic characteristics in women with breast cancer who had annual vs. biennial screening mammograms by age, menopausal status and postmenopausal hormone therapy (HT) use. They update previous analyses by using narrower intervals for defining annual (11–14 months) and biennial (23-26 months) screening. The team defined less favourable prognostic characteristics as tumours that were stage IIB or higher, bigger than 15 mm, positive lymph nodes and any one or more of these characteristics.

Data from Breast Cancer Surveillance Consortium facilities — covering a total of 15,440 women (ages 40 to 85) with breast cancer diagnosed within one year of an annual or within two years of a biennial screening mammogram — were used for this study. Most of the patients were 50 or older (85.4 percent), white (78.1 percent) and postmenopausal (63.6 percent). Women who had biennial screening mammograms were more likely to be in the youngest (40 to 49) or oldest (70 to 85) age groups and less likely than women screened annually to have a family history of breast cancer. Key findings include:

- Premenopausal women (2,027 or 13.1 percent) had higher proportions of ductal carcinoma in situ (DCIS) vs. invasive cancers and invasive tumours with less favourable prognostic characteristics than postmenopausal women.
- Among premenopausal women, women screened biennially vs. annually had a higher proportion of stage IIB or higher tumours (25.7 percent vs. 19.8 percent), tumours greater than 15 mm (65.3 percent vs. 54.6 percent) and node-positive disease (36.6 percent vs. 31.3 percent).
- The proportions of tumours with less favourable prognostic characteristics were not significantly larger for postmenopausal women not taking HT who were screened biennially or annually.

In a related commentary, Wendy Y. Chen, MD, MPH, of Brigham and Women’s Hospital and the Dana Farber Cancer Institute, Harvard Medical School, Boston, writes: “Although the authors do not endorse annual or biennial screening, they imply that biennial screening would be acceptable for postmenopausal women but inferior for premenopausal women owing to their findings of a higher proportion of ‘less favourable’ cancers with biennial screening in that subgroup. ... This study and others have clearly demonstrated that with less frequent mammography, the tumours will be bigger and have a slightly more advanced stage. However, with our better understanding of tumour biology and improvements in targeted therapy, the best way to optimise the risk and/or benefit of screening may not be to maximise the chances of finding a smaller tumour. Instead, efforts should be focused on a better understanding of how screening interacts with tumour biology with a better understanding of the types of interval cancers and sojourn times and how these characteristics differ by age and/or menopausal status.”

Source: [JAMA](#)

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