

# The Medical Letter®

## On Drugs and Therapeutics

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### Happy New Year

*The Medical Letter* publishes 26 issues per year. This is the last issue of 2009. The first issue of 2010 will be dated January 11th.

### Screening Mammography for Women 40-49 Years Old

Conflicting recommendations on when to screen for breast cancer are problematic for healthcare providers. The recent recommendation by the US Preventive Services Task Force (USPSTF) against routine screening mammography for women 40-49 years old<sup>1</sup> conflicts with recommendations made by other organizations such as the American Cancer Society and earlier recommendations made by the USPSTF in 2002.

**THE EVIDENCE** — All of these recommendations are based on meta-analyses of pooled data from clinical studies that vary in quality. Since 2002, one new study has been published and additional data from one old study has been reported.

The new study (the Age trial) was a randomized trial in the UK in which 53,884 women 39-41 years old were invited to annual screening mammography until age 48, and 106,956 women who were not invited served as the control group; both groups were followed for a mean of 10.7 years. Adherence to the assignments was not well documented; no more than 70% of women randomized to screening were actually screened each year. The women assigned to screening had a nonsignificant 17% lower incidence of breast cancer mortality. Women who accepted their first invitation to screening had a nonsignificant decrease of 24% in breast cancer mortality.<sup>2</sup> The Age study mainly used single-view mammography, which is widely considered less reliable than 2-view or digital mammography.

The new data from the old trial indicated that women 39-49 years old randomly assigned to screening with mammography every 18 months and followed for 13 years

had a nonsignificant 31% lower incidence of breast cancer mortality.<sup>3</sup>

Based on these studies and earlier ones like them, the USPSTF calculated that an invitation to screening mammography significantly reduced breast cancer mortality by 15% in women 39-49 years old. A total of 1904 women 39-49 years old would need to be invited to be screened to prevent one woman from dying of breast cancer. This number would be 1339 in women 50-59, and 377 in women 60-69 years old.<sup>4</sup>

**PROBLEMS IN SCREENING** — Younger women have a lower overall incidence of disease and have denser breasts that make tumors more difficult to detect. False-positive results occur in 9.8% of women 40-49 per screening round and in 8.7% of those 50-59 years old. Mammograms are followed by biopsies in 0.93% of women 40-49 and in 1.08% of those 50-59 years old.<sup>4</sup> Other harms of screening younger women include more radiation exposure, unnecessary surgery, pain, anxiety and expense.

**SCREENING INTERVALS** — Studies that have shown a mortality benefit from screening mammography have used screening intervals of 12-33 months. Statistical models indicate that screening biennially provides 81% of the benefit (range 67-99%) of annual screening, with half the number of false-positive results and unnecessary biopsies.<sup>5</sup> Based on their calculations of benefits and harms, the USPSTF has recommended biennial screening for women 50-74 years old.

**CONCLUSION** — Not offering routine mammography to women 40-49 years old would save many women from radiation exposure, unnecessary surgery, pain, anxiety and expense, at the cost of some lives. □

1. USPSTF. Screening for breast cancer: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med* 2009; 151:716.
2. SM Moss et al. Effect of mammographic screening from age 40 years on breast cancer mortality at 10 years' follow-up: a randomised controlled trial. *Lancet* 2006; 368:2053.
3. N Bjurstam et al. The Gothenburg breast screening trial. *Cancer* 2003; 97:2387.

4. HD Nelson et al. Screening for breast cancer: An update for the U.S. Preventive Services Task Force. *Ann Intern Med* 2009; 151:727.
5. JS Mandelblatt et al. Effects of mammography screening under different screening schedules: model estimates of potential benefits and harms. *Ann Intern Med* 2009; 151:738.

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