



Title	Mammography Screening of Women Aged 40 to 49 Years
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Aim

To summarize evidence on the effect of mammography screening in women between the ages of 40 and 49 years at average risk for breast cancer.

Conclusions and results

Women aged between 40 and 50 years probably have a slightly smaller risk of dying from breast cancer than women who do not follow such a program. We have estimated the relative risk reduction for dying, for women in their 40s who are invited to screening, to be 16% (confidence interval 4–27%) after 13 years of followup. In our judgment, this is an optimistic estimate. Studies of the highest methodological quality show a smaller effect, and some of the effect may be due to screening after 50 years of age. The absolute risk reduction is 0.0003, or approximately 1 in 3000 after 13 years. Potential risks that have been discussed in connection with mammography screening of younger women are overtreatment of certain cancer types (DCIS), radiation-induced breast cancer, greater risk of false negatives, or the psychological effect of false positive mammograms.

Recommendations

Whether or not the benefit outweighs the harm in breast cancer screening is debatable, especially for younger women. Policy makers must also consider ethical issues and the need for resources. At the personal level, women's own perceptions of risk and individual preferences, informed by balanced information, should be part of the decision-making process.

Methods

Data were gathered from 3 systematic reviews that summarized existing research on the effects of inviting large groups of women to a screening program. Also included was a randomized controlled trial published in 2006.

Further research/reviews required

The balance between benefit and potential harm of mammography screening in women younger than 50 years is delicate. The balance could be shifted by results from research on how to increase sensitivity and specificity of mammography, particularly in women with dense breast tissue. Also, research on how to distinguish between different types of cancers, eg, DCIS, would be important to counteract overtreatment. Lastly, although the risk of radiation-induced breast cancer is considered to be small, the cumulative risk of another 10 years of mammography is unknown. Further research on the improvement of technology would be appropriate.