

Mammography Screening: Are Women Really Giving Informed Consent? (Counterpoint)

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In overviews of mammography trials and debates about mammography, at least one finding has been consistent: the mortality benefits of screening take longer to become apparent and the absolute benefits are smaller in women younger than age 50 years than in those age 50 years or older. The commentary by Dr. Baines proposes a novel partial explanation for this finding, arguing that screening and early surgery may actually increase breast cancer deaths in the short term for women with distant metastases while decreasing deaths in the long term for women whose disease is localized at time of detection. Although intriguing, this hypothesis is not well supported by the data presented. I write here on behalf of the United States Preventive Services Task Force (USPSTF), and my message is that, although we are skeptical of Dr. Baines's claim, we agree with some of her conclusions about the clinical implications for younger women.

Is Dr. Baines correct in her argument that there is an early mortality increase in the screened group? Overviews support a lack of mortality benefit of mammography for younger women within 5–7 years of screening, but the increase in early mortality among screened women that Dr. Baines claims is not statistically significant in the overviews and is not consistently observed in

the individual screening trials. Only a single reanalysis of the Swedish trials shows a statistically significant difference in the relative risk, which, given the *post hoc* nature of the hypothesis, might well be a chance finding.

Although Dr. Baines's hypothesis is provocative, it may not matter materially whether it is true in relation to the issues about mammography in younger women. Using our rigorous process, the USPSTF found that there is a small benefit in reducing breast cancer mortality in the long term (13–20 years after randomization), but it is balanced by important harms, including frequent false-positive results, a moderate chance of unnecessary biopsy, and possible overdiagnosis and overtreatment of cases that might not have been clinically important (for example, ductal carcinoma *in situ*). Thus, whether screening actually reduces

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survival for a very small number of younger women may or may not outweigh the value women place on the benefit of the modest reduction in long-term risk and the much higher likelihood of less serious, but nonetheless important, harms. As our review and meta-analyses (1) showed, the number needed to screen to prevent one death due to breast cancer after 13–14 years of follow-up ranges from 838 in older women to 1792 in younger women, with confidence intervals extending above 10 000 in the younger group—statistics that should certainly cause women to carefully consider (at any age) whether screening is the right choice for them.

The USPSTF agrees with many of Dr. Baines's key points about the benefits and harms of mammograms for younger women. Dr. Baines cites the evidence review that the USPSTF used but not our conclusions (2). In the end, we judged the quality of evidence supporting mammography only "fair." Our rationale is worth quoting in its entirety:

"The USPSTF found fair evidence that mammography screening every 12–33 months significantly reduces mortality from breast cancer. Evidence is strongest for women aged 50–69, the age group generally included in screening trials. For women aged 40–49, the evidence that screening mammography reduces mortality from breast cancer is weaker, and the absolute benefit of mammography is smaller, than it is for older women. Most, but not all, studies indicate a mortality benefit for women undergoing mammography at ages 40–49, but the delay in observed benefit in women younger than 50 makes it difficult to determine the incremental benefit of beginning screening at age 40 rather than at age 50.

"The absolute benefit is smaller because the incidence of breast cancer is lower among women in their 40s than it is among older women. The USPSTF concluded that the evidence is also generalizable to women aged 70 and older (who face a higher absolute risk for breast cancer) if their life expectancy is not compromised by comorbid disease. The absolute probability of benefits of regular mammography increase along a continuum

with age, whereas the likelihood of harms from screening (false-positive results and unnecessary anxiety, biopsies, and cost) diminish from ages 40–70. The balance of benefits and potential harms, therefore, grows more favorable as women age. The precise age at which the potential benefits of mammography justify the possible harms is a subjective choice. The USPSTF did not find sufficient evidence to specify the optimal screening interval for women aged 40–49."

In our discussion we highlight the critical importance of fully informed consent based on personal assessment of potential benefits and harms, taking into account patient preferences. Thus, the USPSTF and I are in agreement with Dr. Baines that women should be well informed of potential benefits and harms of screening and that we need better quality evidence for both.

I conclude that Dr. Baines raises an issue that might be included in the already long list of benefits and harms that a woman should consider in making her decision about screening for breast cancer, but the evidence at present is weak (the USPSTF would have judged it "poor" by our criteria) and its real importance is unknown. We agree with Dr. Baines that women need to be informed of the potential benefits and harms of screening, but we would include in the lists of outcomes only those for which we have at least fair quality evidence. An early increase in mortality does not, in our judgment, make the list.

REFERENCES

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NOTE

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