

US Preventive Services Task Force and Breast Cancer Screening

[Catherine D. DeAngelis, MD, MPH; Phil B. Fontanarosa, MD, MBA](#)

JAMA. 2010;303(2):172-173.

The US Preventive Services Task Force (USPSTF) was established more than 2 decades ago as an independent panel of experts in primary care and preventive care with the mandate to conduct rigorous, unbiased assessments of the scientific evidence for the effectiveness of clinical preventive services.¹ The task force uses state-of-the-art methods and explicit criteria for assessing the available evidence and issues recommendations for prevention interventions along with the strength of evidence supporting those recommendations, thereby enabling research on prevention to be translated into clinical practice.¹

Using their usual rigorous methods, including a commissioned systematic review of recent studies² and modeling studies of various screening strategies,³ the USPSTF recently updated the 2002 recommendation statement on screening for breast cancer.⁴ Based on thorough evaluation of the available evidence of benefits and harms, the 2009 recommendation statement⁵ was updated as follows: the USPSTF recommended "against routine screening mammography in women aged 40 to 49 years," but emphasized that "the decision to start regular, biennial screening mammography before the age of 50 years should be an individual one and take patient context into account, including the patient's values regarding specific benefits and harms."⁶

The task force also recommended biennial screening mammography for women aged 50 to 74 years,⁵ extending the recommendation beyond the 2002 statement to include women aged 70 to 74 years, but concluded that the current evidence is insufficient to assess additional benefits and harms of screening mammography for women aged 75 years and older.⁵ In addition, the task force concluded that the current evidence is insufficient to assess additional benefits and harms of clinical breast examination beyond screening mammography in women aged 40 years or older⁵ and also recommended against teaching women how to perform breast self-examination.⁵

Despite careful assessment of the science behind the updated guidelines, the USPSTF recommendation statement for breast cancer screening, particularly the recommendation regarding routine mammography screening for women aged 40 to 49 years, immediately generated controversy among physicians, disagreement from professional associations such as the American Cancer Society and the American College of Radiology, and outrage from some breast cancer survivors and advocacy groups. The term "routine" apparently was a key word meant to clarify the recommendation, but the meaning was lost or misinterpreted by many. Among other issues, there were concerns that the guidelines would result in insurers denying coverage for mammography screening for some patients and allegations that the guidelines were politically motivated, held up as an example of the health care rationing that purportedly will occur after health system reform is enacted.

Perhaps the various reactions of the public and concerns about the task force can be better understood by considering that the issue of screening for breast cancer enters "the murky area between mathematics and psychology."² A person's beliefs and behaviors do not necessarily follow scientific evidence, especially if the perception is that life is at stake.

In this issue of *JAMA*, 4 Commentaries provide insights into important aspects of the USPSTF recommendations and the implications for physicians and patients. Woolf,⁸ a former member of the USPSTF and an author of the 2002 recommendations, describes the misperceptions about the task force and clarifies the misinterpretations of the breast cancer screening guidelines yet cautions that "the mammography controversy, now 2 decades old, is not going away." Woloshin and Schwartz⁹ discuss the importance of understanding the benefits and harms of mammography screening for breast cancer, including false-positive screening tests and overdiagnosis, and provide a useful quantitative summary of key data points that could help foster understanding and aid in decision making about mammography screening.

Murphy,¹⁰ a physician-scientist and breast cancer survivor, acknowledges the limitations of mammography as a screening test but emphasizes the strong desire of women to achieve an early diagnosis of breast cancer and highlights the importance of individual risk assessment to guide decision making for each woman. Berg,¹¹ a radiologist who specializes in breast imaging, contends that because the majority of breast cancer cases are diagnosed in women with no obvious risk factors for breast cancer, the USPSTF recommendation against routine screening for women in their 40s in the absence of risk factors is "problematic" and argues that annual mammography screening may be appropriate starting at age 40 years, provided the woman is willing to accept the downsides of false-positive results, including additional imaging and needle biopsies for findings that prove not to be breast cancer.

Breast cancer is a devastating illness for women, representing the second leading cause of death¹² and causing substantial morbidity in survivors. Despite 20 years of screening for breast cancer, as well as increased attention from the medical community and increased awareness by the public, the incidence of regional and more aggressively growing cancers has not decreased at a rate commensurate with the increase in the relative fraction of early stage cancers detected, and therefore has not resulted in the anticipated significant reduction in breast cancer mortality that would be expected from effective screening.¹³ As Esserman et al¹³ suggest, reducing morbidity from breast cancer will require new approaches for screening, early detection, and prevention.

In the meantime, physicians and patients should continue to rely on unbiased, rigorous, objective evaluation of the available evidence for recommendations about screening for breast cancer and other clinical interventions. Perhaps now more than ever—especially with the current debates about health system reform and health care funding, with the media providing instant if not always completely accurate health news, and with the importance of preventing the politicization of biological science¹⁴—independent panels such as the USPSTF and the Institute of Medicine committees are essential to provide objective appraisals, reports, and guidelines without concern about special interests, politics, or ideology or fear of repercussions for seeking the truth in providing evidence-based recommendations. In issuing the 2009 recommendation statement,⁵ the USPSTF has fulfilled its mandate to provide

guidance and evidence that will help physicians and patients make informed, individualized decisions about screening for breast cancer.

AUTHOR INFORMATION

Financial Disclosures: None reported.

Editorials represent the opinions of the authors and *JAMA* and not those of the American Medical Association.

Author Affiliations: Dr DeAngelis (cathy.deangelis@jama-archives.org ) is Editor in Chief and Dr Fontanarosa is Executive Deputy Editor, *JAMA*.

REFERENCES

1. About USPSTF. US Preventive Services Task Force, Agency for Healthcare Research and Quality. <http://www.ahrq.gov/clinic/uspstfab.htm>. Accessed December 18, 2009.
2. Nelson HD, Tyne K, Naik A, Bougatsos C, Chan BK, Humphrey L, US Preventive Services Task Force. Screening for breast cancer: an update for the US Preventive Services Task Force. *Ann Intern Med*. 2009;151(10):727-737. [FREE FULL TEXT](#)
3. Mandelblatt JS, Cronin KA, Bailey S; et al, Breast Cancer Working Group of the Cancer Intervention and Surveillance Modeling Network. Effects of mammography screening under different screening schedules: model estimates of potential benefits and harms. *Ann Intern Med*. 2009;151(10):738-747. [FREE FULL TEXT](#)
4. US Preventive Services Task Force. Screening for breast cancer: recommendations and rationale. *Ann Intern Med*. 2002;137(5 part 1):344-346. [FREE FULL TEXT](#)
5. US Preventive Services Task Force. Screening for breast cancer: US Preventive Services Task Force recommendation statement. *Ann Intern Med*. 2009;151(10):716-726. [FREE FULL TEXT](#)
6. Screening for breast cancer. Agency for Healthcare Research and Quality. <http://www.ahrq.gov/CLINIC/uspstf/uspstfbrca.htm>. Accessed December 18, 2009.
7. Paulos JA. Mammogram math. *New York Times Magazine*. December 13, 2009;MM19.
8. Woolf SH. The 2009 breast cancer screening recommendations of the US Preventive Services Task Force. *JAMA*. 2010;303(2):162-163. [FREE FULL TEXT](#)
9. Woloshin S, Schwartz LM. The benefits and harms of mammography screening: understanding the trade-offs. *JAMA*. 2010;303(2):164-165. [FREE FULL TEXT](#)
10. Murphy AM. Mammography screening for breast cancer: a view from 2 worlds. *JAMA*. 2010;303(2):166-167. [FREE FULL TEXT](#)
11. Berg WA. Benefits of screening mammography. *JAMA*. 2010;303(2):168-169. [FREE FULL TEXT](#)

[12.](#) Jemal A, Siegel R, Ward E, Hao Y, Xu J, Thun MJ. Cancer statistics, 2009. *CA Cancer J Clin.* 2009;59(4):225-249. [FREE FULL TEXT](#)

[13.](#) Esserman L, Shieh Y, Thompson I. Rethinking screening for breast cancer and prostate cancer. *JAMA.* 2009;302(15):1685-1692. [FREE FULL TEXT](#)

[14.](#) Begley S. Red mind, blue mind: the partisan divide over science. *Newsweek.* December 10, 2009.