VIEWPOINT

LESS IS MORE

Lessons From the Swiss Medical Board Recommendation Against Mammography Screening Programs

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When the US Preventive Services Task Force (USPSTF) in 2009 recommended against universal breast cancer screening with mammography in women aged 40 to 49 years, some scientists, radiologists, politicians, and patients strongly objected.[1] The controversy has been called the "mammography wars."[2]

The latest chapter in these wars comes from the Swiss Medical Board, which is mandated by the Conference of Health Ministers of the Swiss Cantons, the Swiss Medical Association, and the Swiss Academy of Medical Sciences to conduct health technology assessments. In a February 2014 report, the Swiss Medical Board stated that new systematic mammography screening programs should not be introduced, irrespective of the age of the women, and that existing programs should be discontinued.[3,4] The board's main argument was that the absolute reduction in breast cancer mortality was low and that the adverse consequences of the screening were substantial. The absolute risk reduction in breast cancer mortality has been estimated by the board at 0.16% for women screened during 6.2 years and followed-up over 13 years, based on the results of a recent Cochrane Review.[5] The adverse consequences include false-positive test results, overdiagnosis and overtreatment of patients, and high costs, including the expense of follow-up testing and procedures.

The USPSTF recommends routine screening for breast cancer with mammography every 2 years for women aged 50 to 74 years.[1] In Switzerland, cancer organizations recommend screening every 2 years for women aged from 50 years to 69 to 74 years. As is the case in many European countries, several cantons in Switzerland are organizing systematic screening programs with continuous quality control. Physicians can also recommend screening directly to their patients—an approach that is known as "opportunistic" screening.

The leading cancer association in Switzerland, La Ligue Suisse Contre le Cancer, rejected the Swiss Medical Board report. The Swiss Federal Public Health Office stated there was no reason to change the policy about screening for breast cancer with mammography, other than to make every effort to improve the quality of screening programs.

What lessons can be learned from the board's recommendations? In these mammography wars, rational thinking can be easily lost. It is, for example, troubling to note that "experts" reach different opinions based on the same evidence. Women, physicians, and policy makers are puzzled by these contradictions. What is the true benefit of screening? What is the true state of evidence? Who should be trusted? Although the interpretation of evidence is a scientific endeavor, the interpretation of evidence should not be confused with the formulation of recommendations. Indeed, recommendations about what to do should take into account economic, social, historical, and contextual realities.[2]

The Swiss Medical Board report, based on the results of previous reviews,[5,6] emphasized that the evidence in favor of screening mammography is not so strong as commonly thought but included no new evidence in favor or against screening. Unfortunately, the report did not clearly separate 2 questions: whether the trade-offs between benefits and harms favor screening mammography and whether organized screening programs are better (that is, greater effectiveness, lower cost, or less harms) than opportunistic screening. Several randomized clinical trials and systematic reviews help to answer the first question, but there is less evidence to answer the second question.[7] Although the board seems to oppose organized screening programs, it fundamentally questions the benefits of screening—whether through organized programs or opportunistic screening.[4] Furthermore, the report insufficiently emphasizes that assessing the balance between benefits and harms involves a value judgment that each woman should make after she is fully informed about the strengths and weaknesses of screening mammography.[2] On the basis of the same information, some women will choose screening, and others will not.[8]

In short, the Swiss Medical Board notes the potential harms of mammography screening. The board also points out that the evidence supporting the benefits of mammography is old and may no longer apply because of advances in treatment. Nonetheless, in our view, current evidence is insufficient to "abolish" mammography screening programs, as some have argued.[4] Instead, we should (1) improve the information given to women about the benefits, harms, and uncertainties of screening; (2) perform new studies on the current impact of mammography screening; and (3) if women are to be screened, favor organized over opportunistic screening.

First, to make informed decisions, women have to receive clear, objective, and comprehensive informa-

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tion about the benefits and harms of screening. The value of mammography screening has been oversold, and potential harms insufficiently acknowledged. We agree with the Swiss Medical Board that it is necessary to tell women the absolute reduction in the risk of dying expected from screening and the specific risks of false-positive test results, overdiagnosis, and overtreatment. The probabilities of benefits and harms should be provided with uncertainties, that is, the upper and lower likelihoods of these outcomes.[8] Women should understand that these probabilities are calculated at the population level, although the decision to be screened is an individual one.[2] To help gauge the benefits, screening mammography can be compared with colon cancer screening, for which a relatively low absolute risk reduction and a long time lag to benefit are also expected. The fact of the matter is that some women benefit from screening mammography but others do not; some women are harmed but others are not. Health professionals and organizations providing mammography screening should provide women with information that is complete but easy to understand. They should avoid paternalistic persuasion to maximize the uptake of screening.

Second, updated evidence about screening mammography is needed. As Welch and Passow[8] recently suggested, new randomized clinical trials may be required. Most trials showing the efficacy of organized screening to reduce breast cancer deaths were conducted more than 30 years ago.[5] Since then, radiological techniques have markedly changed, treatments have improved, and breast cancer mortality has decreased in many countries. It is debatable whether screening mammography still leads to a reduction in breast cancer deaths. Mortality, however, is not the only important outcome. If new trials are conducted, the rate of mastectomy, disease-free survival, and the quality of life, as well as costs and the quality of care, all should be assessed. Some might argue that conducting such trials would be unethical, and it could be difficult to convince women to be randomized to the group of participants who are not screened. Without new and high-quality evidence, however, the mammography wars are likely to continue, and there will continue to be insufficient contemporary evidence on which to base decisions and to make recommendations.

Third, countries with organized screening mammography screening programs should continue these programs until new evidence is available. If these programs were dismantled now, organized screening would merely be replaced by opportunistic screening. Such a shift would not increase the benefits of screening mammography. It may, however, increase the harms. Opportunistic screening is often performed more frequently (annually) than organized screening (every 2 to 3 years), and is associated with a greater number of false-positive test results. To reduce the probability of false alarms and overdiagnosis, the USPSTF recommended lengthening the interval between mammographies from every year to every other year.[1,8] Systematic programs are also an ideal setting in which to provide women with standardized and balanced information. In a clinical setting, physicians are busy and lack time. Finally, organized programs can promote equity in access to screening.

Regardless of whether the controversy over screening mammography diminishes or continues, women will continue to undergo breast cancer screening. They should be offered this screening in the best possible conditions.

ARTICLE INFORMATION

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