Controversial mammography screening has its benefits and harms. Patients need individualized recommendations to confirm that it’s worth the risk.

With overestimated benefits and underestimated harms, physicians need more guidance on utilizing mammography for breast cancer screening, and should follow an individualized approach rather than universal recommendations, according to a study in the *Journal of the American Medical Association*.

Mammography screening has been a controversial topic among the general public and medical community. In 2009, the U.S. Preventive Services Task Force (USPSTF) stated that the benefit-risk ratio is higher among women older than 50 years and with less frequent screening, and recommended screening every two years starting at age 50. This announcement reversed the USPSTF’s previous recommendation, which said that mammography screening should be conducted every one to two years beginning at age 40. Recent evidence suggests that the use of mammography has not changed to appease the latest recommendation, according to the *JAMA* article.

The comprehensive study gathered more than 50 years of research that assessed the benefits and harms of mammography screening. Harms associated with mammography were defined as false-positive results, unnecessary biopsies and overdiagnosis. The study reports that the 10-year cumulative risk for women to receive a false-positive test when starting screening at ages 40 or 50 is 61.3 percent; and seven to 9.8 percent of women aged 50 will experience unnecessary biopsies from 10 years of annual mammography. Overdiagnosis, which is the term used when tumors are detected that would not have caused harm or become clinically evident in the absence of screening, accounted for 19 percent of all cancers diagnosed during the screening period in one of the studies analyzed, according to the *JAMA* study. The researchers claim that overdiagnosis is the chief harm associated with mammography.

A women’s benefit of annual mammography screening depends largely on the woman’s underlying risk of breast cancer, while the harms associated with mammography are shared by all women who undergo screening, not just the women who will eventually benefit from them, according to a release. The researchers estimated that of 10,000 women in their 40s who undergo annual mammography for 10 years, 190 will be diagnosed with breast cancer. "While we need more research on mammography’s benefits and harms today, existing data suggest that we have been overestimating the benefits of mammography and underestimating the harms over the years," co-author Lydia Pace, research fellow in women’s health at Brigham and Women's, said in a release. "It is really important to have informed discussions with our patients to help them understand the chances that a mammogram will benefit them as well as the possible downsides of..."
getting a mammogram, so that they can incorporate their own values and preferences in making the right decision for themselves."
The purpose of this systematic review of the literature is to encourage physicians to understand the complexity associated with mammography, and encourage them to develop and use tools for customizing information to meet each patient’s individual needs, the researchers said.

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