

Transitions

Editor, Nancy Fugate Woods, PhD, RN, FAAN

Mammography Screening: Now What?

Andrea Z. LaCroix, PhD
Nancy Fugate Woods, PhD, RN, FAAN

In late 2009 the US Preventive Services Task Force (USPSTF) recommended against routine mammography screening for women ages 40–49.¹ In lieu of automatically queuing up for a mammogram, women younger than 50 were advised to consider the benefits and harms when deciding when to start regular mammography screening for breast cancer in the context of their personal values about early detection. The USPSTF further recommended biennial screening mammography for women between 50 and 74 years of age, and concluded that evidence was insufficient to address additional benefits and harms for women age 75 and older. Shortly after the USPSTF recommendations were published, the chief medical officer of the American Cancer Society registered the Society's disagreement and supported recommendations for screening women 40 and older.

With these two sets of recommendations for clinicians, there has already been commentary by the press about the consequences of the debate in terms of public confusion, clinician uncertainty and the possibility that payers could restrict access to screening mammography for women. After many years of being urged to engage in early detection screening for breast cancer, the idea that mammographic screening could cause harm seemed surprising, if not unbelievable, to many.²

The purpose of this paper is to describe the downside of cancer screening and to elaborate on questions that women should be encouraged to consider as they decide about when to initiate mammography screening for breast cancer de-

tection. Given the worries that women have about developing breast cancer and, specifically, about dying from the disease, this is a serious issue that deserves serious consideration before women initiate screening.

What are the deterrents, aside from the momentary discomfort of having your breast compressed between the paddles of a mammography machine and the necessary exposure of one's breasts to the technician? Few of us think about the downside of screening, with most of us worrying about whether the films will reveal an undetected tumor. It is important to remind ourselves that screening does not prevent breast cancer; under the best of circumstances it can only earlier detect cancer that is already present. Any type of screening test produces both false-positives and false-negatives; mammography doesn't correctly detect all cases of cancer. False-positives refer to



detection of what appears to be a suspicious finding on screening mammography, which turns out to be noncancerous. False-negatives occur when a cancer is missed on screening.³

Simply put, risks of mammography screening relate to the consequences of detecting a cancer that may not have bothered a person in her lifetime had she not been screened. Second, mammographic screening may detect slower-progressing disease versus faster, more aggres-

sive disease that would likely produce symptoms and could lead to death.³ False-positive screening reports cause anxiety about a cancer diagnosis as well as a host of further invasive tests, including surgical biopsies. In addition, treatments may be prescribed that, in rare circumstances, have life-threatening side effects; an example of such treatment is tamoxifen, which occasionally causes blood clots in the legs and lungs.

Breast cancer rates increase with age; thus, screening will identify a greater number of women with the disease by focusing on women older than age 50. In addition, breast tumors that develop before menopause tend to have different characteristics than the tumors that de-

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velop after menopause. The evidence to date does not show a clear benefit in terms of reducing breast cancer death by early detection in young women. For women over age 75, it is also not clear that early detection reduces the risk of breast cancer death. For older women the likelihood that screening mammography will identify a cancer destined to claim their lives may be less likely, especially for those whose life expectancy is limited by other diagnoses.

What do these new guidelines mean to you and your patients? It is one thing to consider the data from the entire population of women versus one particular case. For example, when we consider how many women's lives could be saved by screening, we may find that the absolute risk of death decreases by XX per 100,000 women who have screening mammography between the ages of XX and XX. When we apply these statistics to an entire community, they seem theoretical. When we consider the likelihood of being one of the XX women who dies from breast cancer, they seem very personal.

Women should consider *when* to start screening mammography. If a woman has a family history of breast cancer or she or her healthcare

provider identifies factors that increase her risk (and if she assigns high value to early treatment regardless of the personal and financial costs), then she may want to begin screening before age 50. She *may* benefit, but she also may experience the detection and treatment of disease that would not have progressed to be clinically relevant in her lifetime. This decision may increase her comfort level, knowing that she has done everything she can possibly do to minimize her chances of dying from breast cancer. Conversely, her comfort level may never again be the same due to the uncertainty of the findings, further heavy surveillance and issues regarding what to do about treatment.

If the woman is older than 75, she may also want to continue annual or biennial screening mammography, especially if she is healthy, places high value on aggressive treatment, has access to the financial resources to pay for screening and chooses to use her resources for this purpose.

In the absence of evidence for a clear benefit that screening mammography reduces the risk of dying from breast cancer, it only makes sense for women in their 40s and over age 75 to make informed decisions about when to start and stop. This is a maturation in our thinking about cancer prevention in America based on all the evidence to date...it's just not as simple as we thought before. Early detection is not always a life-saver and can be a life-changing experience in ways we didn't expect. ■

Andrea Z. LaCroix, PhD, is Professor of Epidemiology and Full Member, Fred Hutchinson Cancer Research Center, WHI Clinical Coordinating Center, Seattle, WA.

Nancy Fugate Woods, PhD, RN, FAAN, is Professor, Family and Child Nursing; and Dean Emeritus, University of Washington School of Nursing, Seattle, WA.

Both authors disclose funding from the National Institutes of Health.

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