



## American Medical Women's Association

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### Position Paper on Principals of Breast Cancer Screening

Breast cancer affects one woman in eight in the United States and is the most common cancer diagnosed in women worldwide. It is estimated that in the United States in 2013 alone, more than 230,000 women will be diagnosed and nearly 40,000 women will die of breast cancer. Early detection is key to improving long-term survival and screening mammography has been shown to improve survival due to overall earlier stage at diagnosis.

Several prospective randomized trials worldwide have been performed to evaluate breast cancer mortality in screened vs. non-screened women. Each study has strengths as well as limitations in terms of techniques of randomization, screening intervals, mammographic techniques, and numbers of participants, especially in the 40-49 and over 70 age groups. This has led to differing data interpretation and changes in breast cancer screening recommendations by leading professional organizations, resulting in controversy and debate in the professional community and confusion on the part of patients and medical practitioners alike. Since late 2009, the debate has centered on the risk-benefit ratio associated with mammography screening in various age groups and the frequency with which mammograms are recommended. The value that each professional organization assigns to these factors is reflected in the screening recommendations of each. Further confounding the screening discussion is the difference in opinion among health professionals regarding the value of clinical breast examination, as well as self-breast examination, in the detection of breast cancer.

Decisions regarding breast cancer screening, including when to initiate and how frequently to screen, should be undertaken through shared decision-making between a woman and her physician or other health care provider. The benefits and potential harms of screening should be considered and discussed. Other factors, including breast density and a woman's personal risk of developing breast cancer, should be part of the decision-making process.

#### **Breast Density:**

The importance of breast density has been known in the breast health field for years, but has only recently begun to come to the attention of the public and non-breast health care

practitioners. It is important that medical practitioners and patients become aware of the significance of breast density. Breast density affects the sensitivity of screening mammography and is an independent risk factor for breast cancer, for biological reasons that remain incompletely defined.

The relative proportions of fatty and non-fatty, or dense, breast tissue on the mammogram determine density and the breast is considered dense when > 50% of the tissue is non-fatty. Degree of density is denoted on the mammogram report using the BiRADS system in which D3 and D4 indicate high density. High breast density reduces the sensitivity of screening mammography, sometimes to as low as 30%. High breast density is common in premenopausal women, and may persist beyond menopause in some women. Systemic postmenopausal hormone therapy use may lead to persistent or increased breast density. Medical practitioners should make women with high breast density aware of this limitation in their screening. Currently, there are no special screening recommendations for women with high breast density. However, it is advised that women with dense breasts have digital, rather than film screen, mammography to increase sensitivity.

#### **Average Risk Women:**

The American Medical Women's Association, dedicated to the health and wellness of all women as one of its most important missions, recommends the following breast cancer screening guidelines for average-risk women 40 years of age and older:

- Annual screening mammogram (digital mammogram recommended for pre- and peri-menopausal women age 50 and under)
- Annual Clinical Breast Examination
- Monthly self-breast health awareness, including self-examination in women who wish to do so, with any changes or abnormalities being promptly evaluated in the medical setting.
- Consideration of adjunctive methods of screening using newer imaging technologies (e.g. tomosynthesis, automated whole breast ultrasound) *in the context of discussion of the potential benefits and limitations of these methods and shared decision-making with a woman's physician or other care provider.*

Women are considered to be at average risk of breast cancer if they do not have a significant first or second-degree family history of breast cancer, history of a high-risk breast lesion (atypical ductal hyperplasia-ADH or lobular neoplasia-ALH or LCIS), or history of thoracic radiation (e.g. mantle radiation) particularly at age <30 years. Our recommendations are consistent with those of the American Cancer Society, the National Comprehensive Cancer Network, and the American College of Radiology (our collaborating partner on this document) and vary modestly with the breast cancer-screening interval recommended by the National Cancer Institute of every 1 or 2 years. Other organizations debate the cost-effectiveness and potential for harm (anxiety, false-positive mammograms leading to additional imaging and biopsies) of breast cancer screening in women 40-49, and in women 70 and over due to more advanced age. For younger women, AMWA endorses the position that because breast cancer typically behaves more aggressively in younger women than in older ones, annual screening beginning at age 40 is more likely to be effective at detection and mortality reduction than waiting until age 50 to begin screening and performing mammography every other year. This position is justified by recent reports in the literature. In addition, many women aged

70 and over are healthy, vital, functioning members of society and all women in this age group are at increased risk for the disease. Breast cancer mortality reduction is likely to occur in this population through consistent screening efforts, because mammography is generally more sensitive in older women due to lower breast density. In addition, the incidence of breast cancer in women of average risk is known to increase per decade of life. For these reasons, AMWA endorses the position that any woman, age 70 and over, should be offered breast cancer screening at annual intervals, unless the woman suffers from competing co-morbidities with poor short-term prognoses. We further recommend that the benefits and limitations of mammography be discussed with all patients in a shared decision-making model of care with her physician or other medical care provider.

### **High Risk Women:**

Women considered to be at increased or higher lifetime risk of developing breast cancer include:

- BRCA-1/-2 deleterious mutation carriers and their untested first-degree relatives, and women with other gene mutations that confer increased breast cancer risk (e.g. CDH1, TP53, PTEN)
- Women who underwent thoracic radiation (e.g. mantle radiation) at a young age, particularly under age 30
- Women who have a significant family history of breast cancer (without a defined gene mutation) such that their lifetime risk is  $\geq 20\text{-}25\%$  using accepted risk estimation models (Tyrer-Cusik, Claus, BRCAPro)
- Women with a history of atypical ductal hyperplasia (ADH) or lobular neoplastic lesions (atypical lobular hyperplasia-ALH, and lobular carcinoma in situ-LCIS)

Screening guidelines for high risk women vary depending on the underlying cause of increased risk. AMWA recommends the following guidelines:

1. Screening mammogram annually
  - a. Women with a family history of breast cancer should initiate mammograms by age 40 or 10 years younger than the earliest age of onset in the family. Women with deleterious BRCA mutations should initiate screening mammograms by age 30 (for *some* women even younger) and this should be individualized depending on family history.
2. Screening MRI annually (based upon American Cancer Society guidelines)
  - a. For BRCA mutation carriers and their untested first-degree relatives, other high-risk gene mutation carriers, lifetime risk of  $\geq 20\text{-}25\%$  based on the above noted accepted risk estimation models, and women with a history of thoracic radiation at a young age, particularly under age 30.
  - b. For women with ADH, lobular neoplasia, or a history of DCIS or invasive breast cancer, there is insufficient evidence to recommend for or against screening MRI and recommendations should be individualized to the patient's particular situation.
3. Clinical breast exam at least once annually, preferably twice annual for the highest risk patients (BRCA mutation, significant family history, history of thoracic radiation)
4. Monthly self-breast health awareness, including self-exam if desired by the patient, with prompt medical attention to any changes or abnormalities.

The American Medical Women's Association commits itself, through legislative and other proactive efforts with medical and volunteer organizations, to ensure that all eligible women, regardless of economic status, are able to receive breast cancer screening at appropriate intervals, as well as high-quality treatment and appropriate follow-up care in the event that an abnormality (malignancy or high risk finding) is identified through screening efforts.

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American College of Radiology  
<http://www.acr.org/~media/3484ca30845348359bad4684779d492d.pdf>

National Cancer Institute  
<http://www.cancer.gov/cancertopics/pdq/screening/breast/healthprofessional>

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<http://www.uspreventiveservicestaskforce.org/uspstf/uspsbrca.htm>

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