Breast Cancer Screening, 2015

These recommendations are based on the GDG's consensus judgment about when the benefits of mammography screening clearly or likely outweigh the harms in a population of women at average risk. Recognizing that individual values and preferences can lead to different decisions about the age to start and stop screening and screening intervals, some recommendations were graded as qualified to allow for informed decision making about options.

American Cancer Society Guideline for Breast Cancer Screening, 2015

These recommendations represent guidance from the American Cancer Society (ACS) for women at average risk of breast cancer: women without a personal history of breast cancer, a suspected or confirmed genetic mutation known to increase risk of breast cancer (eg, *BRCA*), or a history of previous radiotherapy to the chest at a young age.

The ACS recommends that all women should become familiar with the potential benefits, limitations, and harms associated with breast cancer screening.

Recommendations

1. Women with an average risk of breast cancer should undergo regular screening mammography starting at age 45 years. (*Strong Recommendation*)
    - 1a. Women aged 45 to 54 years should be screened annually. *(Qualified Recommendation)*
    - 1b. Women 55 years and older should transition to biennial screening or have the opportunity to continue screening annually. *(Qualified Recommendation)*
    - 1c. Women should have the opportunity to begin annual screening between the ages of 40 and 44 years. *(Qualified Recommendation)*
2. Women should continue screening mammography as long as their overall health is good and they have a life expectancy of 10 years or longer. *(Qualified Recommendation)*
3. The ACS does not recommend clinical breast examination for breast cancer screening among average-risk women at any age. *(Qualified Recommendation)*

[a]A strong recommendation conveys the consensus that the benefits of adherence to that intervention outweigh the undesirable effects that may result from screening. Qualified recommendations indicate there is clear evidence of benefit of screening but less certainty about the balance of benefits and harms, or about patients' values and preferences, which could lead to different decisions about screening.

Recommendation 1

- Women with an average risk of breast cancer should undergo regular screening mammography starting at age 45 years. (*Strong Recommendation)*
- Recommendation 1a: Women aged 45 to 54 years should be screened annually. *(Qualified Recommendation)*
- Recommendation 1b: Women 55 years and older should transition to biennial screening or have the opportunity to continue screening annually. *(Qualified Recommendation)*
- Recommendation 1c: Women should have the opportunity to begin annual screening between the ages of 40 and 44 years. *(Qualified Recommendation)*
- Various key topics were considered by the GDG in making this these recommendations, beginning with the results of the evidence review regarding the benefits and harms associated with regular screening mammography. To determine the age to begin screening, the GDG reviewed the burden of disease across age groups while considering the harm-benefit trade-off for each age group. In addition, when developing the recommendations for interval of screening, the GDG evaluated the findings of the BCSC analysis in addition to the results of the evidence review.

Outcomes of Screening Mammography

The evidence review considered 5 critical outcomes of screening mammography: breast cancer mortality, life expectancy, false-positive findings, overdiagnosis, and quality-adjusted life expectancy.

Breast Cancer Mortality

Mammography screening has been shown to be associated with a reduction in breast cancer mortality across a range of study designs, including RCTs and observational studies (trend analyses, cohort studies, and case-control studies), with most studies demonstrating a significant benefit. The strength of the evidence that invitation or exposure to mammography screening compared with usual care or no screening was associated with reduced breast cancer mortality was judged to be high in the evidence review, although effect sizes differed depending on a range of factors, including the study design, protocol, population undergoing screening, and duration of follow-up.

Population	Recommendation	Grade
Women ages 50 to 74 years	The USPSTF recommends biennial screening mammography for women ages 50 to 74 years.	B
Women ages 40 to 49 years	The decision to start screening mammography in women prior to age 50 years should be an individual one. Women who place a higher value on the potential benefit than the potential harms may choose to begin biennial screening between the ages of 40 and 49 years. • For women at average risk for breast cancer, most of the benefit of mammography will result from biennial screening during ages 50 to 74 years. Of all age groups, women ages 60 to 69 years are most likely to avoid a breast cancer death through mammography screening. Screening mammography in women ages 40 to 49 years may reduce the risk of dying of breast cancer, but the number of deaths averted is much smaller than in older women and the number of false-positive tests and unnecessary biopsies are larger. • All women undergoing regular screening mammography are at risk for the diagnosis and treatment of noninvasive and invasive breast cancer that would otherwise not have become a threat to her health, or even apparent, during her lifetime (known as “overdiagnosis”). This risk is predicted to be increased when beginning regular mammography before age 50 years. • Women with a parent, sibling, or child with breast cancer may benefit more than average-risk women from beginning screening between the ages of 40 and 49 years. Go to the Clinical Considerations section for information on implementation of the C recommendation.	C

Population	Recommendation	Grade
Women age 75 years and older	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening mammography in women age 75 years and older.	I
All women	The USPSTF concludes that the current evidence is insufficient to assess the benefits and harms of tomosynthesis (3-D mammography) as a screening modality for breast cancer.	I
Women with dense breasts	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of adjunctive screening for breast cancer using breast ultrasound, magnetic resonance imaging (MRI), tomosynthesis, or other modalities in women identified to have dense breasts on an otherwise negative screening mammogram.	I

This recommendation applies to asymptomatic women age 40 years and older who do not have pre-existing breast cancer or a previously diagnosed high-risk breast lesion and who are not at high risk for breast cancer because of a known underlying genetic mutation (such as a BRCA mutation or other familial breast cancer syndrome) or a history of chest radiation at a young age.