IN SUPPORT OF ANNUAL SCREENING MAMMOGRAPHY

Last month in *JAMA*, the American Cancer Society (ACS), a highly influential organization in cancer care policy in the United States, revised its breast cancer screening recommendations to align itself in the direction of the United States Preventative Task Force (USPTF) and the current trend toward considering harms over benefits/stress and anxiety due to false positive results over value of lives saved; while at the same time, acknowledging the undisputed fact that annual screening mammography, starting at age 40, reduces mortality from breast cancer.

by Harriet Borofsky, MD

These new guidelines are intended for average-risk women and raise the age to begin annual screening from 40 to 45, increase the interval between screening from annual to biennial at age 54, but maintain an individual woman’s right to access annual screening mammography starting at age 40. How insurance carriers, which are currently mandated to cover screening mammography annually starting at age 40, will react to these guidelines, and the impact this may have on women’s decision to be screened and ultimately on women’s health, is yet to be determined.

As we clinicians face increasingly complex discussions with our patients about benefits versus harms of mammography, in light of these conflicting, confusing and ambiguous screening guidelines, the following facts should be considered:

1. **It is appropriate to screen for breast cancer.** Breast cancer meets established criteria for population-based screening: it is the most common cancer in women worldwide, it is a leading cause of premature mortality in women, and it is progressive. The majority of breast cancers are sporadic and most women diagnosed have no known risk factors, other than gender and age. Early detection is an opportunity to decrease chance of metastatic spread, decrease morbidity and mortality, and increase surgical and medical treatment options.

2. **Proof of benefit of mammographic screening is well established.** Eight randomized controlled trials (RCTs) have confirmed a 23%-44% mortality reduction in women invited to be screened versus those not invited to be screened. In fact, since mammographic screening programs began in the 1990s, the mortality from breast cancer, which had been unchanged in the preceding 50 years, has declined by 30% across all age groups.

3. **Screening mammography benefits women in their 40s.** Breast cancer incidence increases linearly with age, starting at age 35. Approximately 20% of all breast cancers diagnosed are in women in their 40s, who tend to have more aggressive tumors and greatest potential productive years of life. Observational studies in assessing the benefits of mammography in women in their 40s estimate mortality reduction from screening ranging from 20% to 40%.

4. **Annual screening mammography intervals detect earlier stage tumors.** Recent analysis by the Breast Cancer Surveillance Consortium (BCSC) comparing annual vs. biennial screening found that the proportion of tumors that were stage IIB or higher and larger than 15 mm was greater for biennial screening than annual screening in all women, especially those premenopausal.

5. **Screening has led to a paradigm shift in management of early stage breast cancer.** The majority of breast cancers diagnosed today are mammographically-detected, early stage tumors. This has led to less invasive surgical procedures, such as sentinel lymph node biopsy in lieu of axillary breast dissection, increased radiation therapy breast radiation, and endocrine therapy in lieu of chemotherapy for many women.

Artwork: “Weiblicher Halbaktby” (“Woman Half-Clothed”) by Vlaho Bukovac, 1922, [public domain], via Wikimedia Commons
6. Improvements in screening mammography and core needle biopsy techniques have minimized the “harms” of false positive mammograms. Screening mammography is not a perfect screening test. Sensitivity is inversely related to breast density and, in our medical audit data, ranges from 94% in fatty breast tissue down to 71% in extremely dense tissue. False negative results may lead to a false sense of security and delay in diagnosis. Approximately 10% of women screened will be recalled for additional evaluation; of those, only 2%-5% will be diagnosed with breast cancer. False positive results may lead to biopsies, most of which are benign. Digital breast tomosynthesis, an advanced application of digital mammography, has markedly improved overall accuracy of mammographic screening, decreasing the recall rate by 15-30% and increasing breast cancer detection by 30%-50%. Minimally invasive core needle biopsies have replaced surgical excisional biopsies, providing safe, well tolerated, effective tissue diagnoses with prompt results.

7. Multidisciplinary teams of breast specialists minimize the potential harms of “overtreatment.” Breast cancer is a heterogeneous disease occurring in women of varying ages, values, lifestyles and co-morbidities. Targeted, individualized treatments, based on specific tumor characteristics and recurrence risk assessment, along with patients’ personal preferences, tolerance for risks and goals are now the standard approach to management.

Screening mammography has had an undeniable, overall significant and positive impact on the health and lives of countless women. The Mills-Peninsula Women’s Center remains committed to providing the highest quality of care dedicated to the early detection and diagnosis of breast cancer, while striving to recognize and minimize the stress and anxiety associated with the screening process; including utilizing important new technologies to minimize false positives, scheduling patients promptly for recalls and biopsies, and discussing results with patients directly to answer their questions and concerns and involve them in follow-up decisions. Based on the current evidence and over two decades of clinical experience, the Breast Tumor Board at Mills-Peninsula, a multidisciplinary team of breast specialists, agrees that the benefits of mammographic screening far outweigh the harms. We continue to support and recommend annual screening mammography for all women, ages 40 and above.

About the author
Harriet Borofsky, MD, is medical director of breast imaging at Mills-Peninsula Women’s Center, the first of its kind in the region to provide expert diagnosis, treatment and education for health issues that are specific to women. She attended Brown University and Harvard Medical School.