

CANCER TOPICS FOR GENERAL INTERNISTS

Breast Cancer Screening

Larissa Nekhlyudov, MD, MPH

Dr. Nekhlyudov is associate professor of population medicine at the Harvard Medical School.

I am pleased to introduce a new column in *SGIM Forum* that will address topics in oncology that are specifically relevant to the general internist. Topics will span the cancer continuum, ranging from prevention to survivorship and end-of-life care. I am open to hearing from you about ideas; e-mail me at larissa_nekhlyudov@vmed.org.

For the first column, I was asked to write about the ever-controversial area of breast cancer screening. This topic has been the subject of recurrent debates in medical journals and the lay press leaving practicing clinicians and their patients frustrated and confused. In this column, I will not reinterpret the evidence but instead will provide a practical overview that may be helpful in guiding your discussions with patients. Specifically, I will address when to start screening and how often, when to stop, and which screening tests to use.

When to start and how often?

The controversy around the age at which to start breast cancer screening has spanned decades. Remember the recommendation for a “baseline mammogram starting at age 35” made by the American Cancer Society? This recommendation was disseminated widely despite limited supporting evidence. In fact, some women continue to have routine mammograms before age 40, and numerous state laws require insurance coverage of a baseline mammogram for women age 35 to 39. For women at average risk of breast cancer, data do not support screening before age 40. The controversy around starting at age 40 or waiting until age 50 is based on the fact that breast cancer in younger women is less common and screening results

in more frequent false-positive readings leading to unnecessary biopsies and anxiety. Overdiagnosis of non-invasive cancers, such as ductal carcinoma in situ, is another area of concern with screening. At this time, national organizations recommend initiating routine screening at age 40 or initiating screening based on patient risk factors for breast cancer and/or personal preferences. Risk calculators are available and should be used to guide screening decisions. (In addition to the calculators listed below, other calculators are available for those women with a high likelihood of being a mutation carrier.) Specifically, the calculators consider factors such as age, family history, prior lobular carcinoma in situ or atypical ductal hyperplasia, and dense breasts. Once screening is initiated for women age 40 to 49 or older, routine screening may occur every one to two years. Biennial screening has a lower risk of false positives than annual screening without much effect on breast cancer prognosis.

When to stop? There are no randomized controlled trials for screening women age 70 and older. The US Preventive Services Task Force recommends stopping screening at age 74 while others advise continuing screening based on the needs of women and their family members. Clinicians guiding the discussion must take into account the woman’s comorbid medical conditions, estimated life expectancy, and preferences.

Which screening tests? At this time, mammography remains the recommended screening tool for breast cancer. Most facilities offer digital screening, which is beneficial for women with dense breasts. Tomosynthesis or 3D mammography is now

FDA approved and is being tested (and simultaneously disseminated). Ultrasound is not a routinely recommended screening strategy but may be used as a supplemental screening tool for women with dense breasts. With the rise of breast density notifications due to individual state regulations, the use of this test will likely increase. Routine use of breast magnetic resonance imaging (MRI) is not recommended for women at average risk (although studies show a high use of this technology for routine screening). For women with a calculated lifetime risk of 20% or higher, screening MRI in addition to mammography is recommended. Breast self-examination is not recommended for screening but is sometimes advised for breast awareness. Clinical breast examination remains in question, with varying recommendations regarding its use in practice.

How about high-risk women?

The controversy in the news typically does not address high-risk women. Screening mammography for high-risk women (i.e. those with known BRCA mutation genes, those with first-degree relatives with known BRCA mutation, those with Li-Fraumeni or Cowden syndromes, and those with prior chest radiation) is generally recommended beginning at age 20 to 25 and may be supplemented with MRI.

Resources

1. Breast Cancer Risk Assessment Tool, which may be used to estimate a woman’s risk of developing invasive breast cancer (<http://www.cancer.gov/bcrisktool/>)
2. Breast Cancer Surveillance Consortium Risk Calculator,

continued on page 2

CANCER TOPICS FOR GENERAL INTERNISTS

continued from page 1

- which takes into account mammographic breast density (<https://tools.bccsc-acc.org/BC5yearRisk/>)
3. Pace LE, Keating NL. A systematic assessment of benefits and risks to guide breast cancer screening decisions. *JAMA* 2014; 311(13):1327-35. doi:10.1001/jama.2014.1398. This review article also includes a tool for discussing breast cancer screening with women.
 4. Nekhlyudov L, Braddock CH. An approach to enhance communication about screening mammography in primary care. *J Womens Health* 2009; 18(9):1403-12. doi: 10.1089/jwh.2008.1184. This article includes a script for engaging women in informed decision making about screening.
 5. Walter LC, Schonberg MA. Screening mammography in older women: a review. *JAMA* 2014; 311(13):1336-47. doi:10.1001/jama.2014.2834.
 6. American Cancer Society Guidelines for the Early Detection of Cancer (<http://www.cancer.org/cancer/breastcancer/moreinformation/breastcancerearlydetection/breast-cancer-early-detection-toc>)
 7. The US Preventive Services Task Force Recommendations for Breast Cancer Screening (Average Risk) (<http://www.uspreventiveservicestaskforce.org/uspstf09/breastcancer/brcanrs.htm>)
 8. Website with description and update on the dense breast legislature (<http://www.areyoudenseadvocacy.org>)

SGIM