

# 2023 USPSTF mammography age to start screening in average-risk patients: What's new is old again

On May 9, the US Preventive Services Task Force recommended that patients at average risk for breast cancer should get screened every other year beginning at age 40 (versus age 50)

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The US Preventive Services Task Force (USPSTF)<sup>1</sup> is comprised of an independent panel of preventive services clinician experts who make evidence-based recommendations, with the letter grade assigned based on the strength of the evidence, from A through D (TABLE 1), on preventive services such as health screenings, shared decision making patient counseling, and preventive medications. Both A and B recommendations are generally accepted by both government and most private health insurance companies as a covered preventive benefit with no or minimal co-pays.

In 2002, the USPSTF released a Grade B recommendation that screening mammography for average-risk patients (with patients referring to persons assigned female at birth who have not undergone bilateral mastectomy) should take place starting at age 40 and be repeated every 1 to 2 years.<sup>2</sup> This was consistent with or endorsed by most other national breast cancer screening guidelines,



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## Key data points

- With an estimated more than 300,000 new cases in 2023, breast cancer has the highest incidence rate of any cancer in the United States
- The median age of patients with breast cancer in the United States is 58.0 years
- 1 in 5 new breast cancer diagnoses occur in patients between the ages of 40 and 49
- Despite lower incidence rates among Black vs White patients, Black patients have higher death rates from breast cancer

including the American College of Obstetricians and Gynecologists (ACOG), National Comprehensive Cancer Network (NCCN), the American Cancer Society (ACS), and the American College of Radiology.

In 2009, the USPSTF changed this Grade B recommendation, instead recommending biennial screening mammography for women aged 50 to 74.<sup>3</sup> The most significant change in the revised guideline was for patients aged 40 to 49, where the recommendation was “against routine screening mammography.” They went on to say that the decision to start “biennial screening mammography before the age of 50 years should be an individual one and take patient context into account, including the patient’s values regarding specific benefits and harms.” Other prominent national guideline groups (ACOG, NCCN, ACS) did not agree

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**TABLE 1 US Preventive Services Task Force Grade definitions and implications**

Grade	Definition	Suggestion for practice
A <sup>a</sup>	The USPSTF recommends the service. There is high certainty that the net benefit is substantial.	Offer or provide this service
B <sup>a</sup>	The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer or provide this service
C	The USPSTF recommends selectively offering or providing this service to individual patients based on professional judgment and patient preferences. There is at least moderate certainty that the net benefit is small.	Offer or provide this service for selected patients depending on individual circumstances
D	The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.	Discourage the use of this service
I	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.	Read the clinical considerations section of USPSTF Recommendation Statement. If the service is offered, patients should understand the uncertainty about the balance of benefits and harms.

Abbreviation: USPSTF, US Preventive Services Task Force.

<sup>a</sup>The Affordable Care Act (PHS Act section 2713) requires that public and private insurance plans recommend preventive services without any patient cost sharing. These include USPSTF Grade A and B recommendations.

Source: US Preventive Services Task Force website. Accessed October 25, 2023. <https://www.uspreventiveservicestaskforce.org/uspstf/about-uspstf/methods-and-processes/grade-definitions>

with this recommendation and maintained that patients aged 40 to 49 should continue to be offered routine screening mammography either annually (NCCN, ACS) or at 1-to-2-year intervals (ACOG).<sup>4-6</sup> The American College of Physicians and the American Academy of Family Practice endorsed the 2016 USPSTF guidelines, creating a disparity in breast cancer mammography counseling for average-risk patients in their 40s.<sup>7</sup>

**In 2016**, the USPSTF revisited their breast cancer screening recommendation and renewed their 2009 recommendation against routine screening in patients aged 40 to 49, with the American College of Physicians and the American Academy of Family Practice again endorsing these guidelines.<sup>8</sup> ACOG, ACS, NCCN, and ACR continued to recommend age 40 as a starting age for routine mammography screening (TABLE 2). As a result, over the past 14 years, patients aged 40 to 49 were placed in an awkward position of potentially hearing different recommendations from their health care providers, those differences often depending on the specialty of the provider they were seeing.

**In 2023**. On May 9, the USPSTF released a

*draft* of their latest recommendation statement stating that all patients at average risk for breast cancer should get screened every other year beginning at age 40, bringing most of the national guideline groups into alignment with regard to age to start mammographic screening.<sup>9</sup>

### Why the change?

To answer this question, we need to examine the relevant epidemiology of breast cancer.

#### Incidence

It is estimated that, in the United States in 2023, there will be 300,590 new cases of breast cancer, resulting in 43,700 deaths.<sup>10</sup> From 2015–2019, there were 128.1 new breast cancer cases/100,000 population, which is the highest rate of cancer in the United States, regardless of sex.<sup>11</sup> Diagnoses among patients aged 40 to 49 are rising at a faster rate than previously, about 2% per year between 2015 and 2019.

#### Racial and ethnic differences

In addition to the racial and ethnic epidemiologic differences in breast cancer, there are also

**TABLE 2 Comparison of national guideline groups for screening mammography in the United States**

National guideline group	Age to start screening	Frequency of screening
American Cancer Society	40 (qualified recommendation)/ 45 (strong recommendation)	Annual, consider biennial at age 55
American College of Obstetricians and Gynecologists	40	Annual or biennial
National Comprehensive Cancer Network	40	Annual
US Preventive Services Task Force, 2016 (current)	50	Biennial
US Preventive Services Task Force, 2023 (draft)	40 (Expected to be adopted in Fall, 2023)	Biennial
American College of Radiology	40	Annual

disparities in breast cancer care and outcomes that need to be considered when making national guidelines/policy recommendations. **Black women have high mortality rates from breast cancer.** While non-Hispanic White patients have the highest rates of breast cancer (TABLE 3), non-Hispanic Black patients have the highest rates of death due to breast cancer.<sup>10</sup> There appear to be several reasons for the estimated 40%-higher rate of mortality among Black women, including:

- systemic racism in primary research, guidelines, and policy
- inequities in diagnostic follow-up and access to evidence-based cancer treatments
- biologic differences in breast cancer (ie, the incidence of triple-negative breast cancer (TNBC) is 2-fold higher in Black women compared with the other racial and ethnic groups in the United States).<sup>12-14</sup>

While prior studies have suggested that screening mammography might be less effective for patients with TNBC, a recent study demonstrated that patients who had mam-

mography-screened-detected TNBC tumors were smaller and more likely to be node-negative compared with non-screened patients with TNBC.<sup>(14)</sup> Patients with screened-detected TNBCs were also more likely to undergo a lumpectomy instead of a mastectomy compared with non-screened detected TNBC (68.3% vs 46.1%;  $P=.002$ ) (TABLE 4). These data strongly suggest that screening mammography is indeed effective in detecting TNBC at earlier stages, one of the best proxies for breast cancer mortality.

**Non-White patients have higher incidence rates of breast cancer in their 40s.** A second factor to consider in racial differences is the relatively higher incidence of breast cancer in Hispanic, Black, and Asian patients in their 40s compared with non-Hispanic White patients. In a recent analysis of data from 1973 to 2010 from the Surveillance, Epidemiology, and End Results (SEER) Program, the median age of patients with breast cancer in the United States was 58.0 years (interquartile range [IQR], 50.0–67.0 years).<sup>16</sup> Across all US demographic

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**TABLE 3 Female breast cancer incidence and death rates (per 100,000) in the United States, 2022**

	Incidence rate	Death rate
Non-Hispanic White	133.7	19.7
Non-Hispanic Black	127.8	27.6
American Indian and Alaska Native	111.3	20.5
Asian and Pacific Islander	101.3	11.7
Hispanic	99.2	13.7

Sources: North American Association of Central Cancer Registries (NAACCR), 2022 (incidence rate) and National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention, 2022 (death rates)

**TABLE 4 Comparison of tumor size and node negativity based on screened vs unscreened patients, TNBC<sup>a</sup>**

	T1 (tumor < 2 cm)	Node negative	Lumpectomy instead of mastectomy
Screen detected	79.2%	91.1%	68.3%
Non-screen detected	37.1%	59.6%	46.1%
P value	<.001	<.001	.002

<sup>a</sup>TNBC = triple-negative breast cancer.

Source: Chen Y, Susick L, Davis M, et al. Evaluation of triple-negative breast cancer early detection via mammography screening and outcomes in African American and White American Patients. *JAMA Surg.* 2020;155:440-442. doi:10.1001/jamasurg.2019.6032

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*I encourage all patients to undergo screening mammography between the ages of 40 and 49, and advise all Black, Hispanic, and Asian patients that they may derive additional benefit from beginning screening at age 40*

populations by age at diagnosis, more than 20% of patients will have their initial diagnosis of breast cancer under the age of 50, and 1.55% (1 in 65) patients between ages 40 and 49 years will be diagnosed with breast cancer.<sup>4</sup> However, among patients aged 50 and younger diagnosed with breast cancer, a significantly higher proportion are Black (31%), Hispanic (34.9%), or Asian (32.8%) versus White (23.1%) ( $P < .001$  for all).<sup>16</sup> So, for there to be similar racial and ethnic mammography capture rates with White patients, starting mammography screening ages would need to be lower for Black (age 47 years), Hispanic (and 46 years), and Asian (age 47 years) patients. Data from this study of the SEER database<sup>16</sup> also demonstrated that more Black and Hispanic patients at age of diagnosis were diagnosed with advanced (regional or distant) breast cancer (46.6% and 42.9%, respectively) versus White or Asian patients (37.1% and 35.6%, respectively;  $P < .001$  for all).

These findings led the authors of the study to conclude that the “Current [2016] USPSTF breast cancer screening recommendations do not reflect age-specific patterns based on race.” The USPSTF stated that this is one of the reasons why they reconsidered their stance on screening, and now recommend screening for all patients starting at age 40.

**My current counseling approach**

I encourage all racial and ethnic patients between the ages of 40 and 49 to undergo screening mammography because of the associated relative risk mortality reduction rates, which range from 15% to 50%. I also share that with my patients that, because of the younger average age of onset of breast

cancer in Black, Hispanic, and Asian patients, they may derive additional benefit from screening starting at age 40.<sup>4</sup>

**Impact of draft guidelines on breast cancer screening and mortality in younger patients**

There is clear, unequivocal, and repeatable Level 1 evidence that screening mammography in the general population of patients aged 40 to 49 reduces breast cancer mortality. Breast cancer is the leading cause of cancer in the United States, the second leading cause of cancer mortality in patients, and *1 in 5 new breast cancer diagnoses occur in patients between the ages of 40 and 49*. While recent efforts have been made to come to consensus on a screening starting age of 40 for patients at average risk for breast cancer, the USPSTF appeared to be an outlier with their 2016 recommendation to routinely start mammography screening at age 50 instead of 40.<sup>17</sup>

The USPSTF is a very important national voice in cancer prevention, and their 2023 (draft) revised guidelines to age 40 as the recommended starting screening age now agrees with the leading US guideline groups listed in Table 2. These guideline groups have gone through varying processes, and now have finally arrived at the same conclusion for age to start screening mammography in women of average risk. This agreement should come as a significant comfort to health care providers and patients alike. Changing the starting age to 40 years will result in thousands of lives and hundreds of thousands of life-years saved for patients aged 40 to 49. ●

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