ACOG
The American College of Obstetricians and Gynecologists

CLINICAL PRACTICE UPDATE

JANUARY 2025

Age to Initiate Routine Breast Cancer Screening

This Clinical Practice Update was developed by the American College of Obstetricians and Gynecologists in collaboration with Melissa Chen, MD, MPH; Cherie C. Hill, MD; and Eve Zaritsky, MD.

This Clinical Practice Update provides revised guidance on the age to start routine breast cancer screening with mammography. This document is a focused update of related content in Practice Bulletin No. 179, *Breast Cancer Risk Assessment and Screening in Average-Risk Women* (Obstet Gynecol 2017;130:e1–16).

BACKGROUND

Breast cancer is the second leading cause of cancer death in American women* overall and the primary cause of cancer death among Black and Hispanic women (1–3). (*Please see the first paragraph on the last page of this article for ACOG's statement on the use of gendered and gender-inclusive terminology in ACOG documents.) Although it is known that routine mammography reduces breast cancer mortality, the ideal age to begin screening has been more difficult to determine because many factors that can vary with age—including risk of breast cancer, risk of death from breast cancer, and likelihood of screening mammography to diagnose cancer—need to be weighed against the risk of false-positive test results and other harms. However, recent evidence supports that earlier initiation of breast cancer screening is associated with greater net benefit than previously thought.

UPDATED CLINICAL RECOMMENDATION

Individuals at average risk of breast cancer should initiate screening mammography at age 40 years.

Population

This recommendation applies to individuals assigned female sex at birth (including cisgender women, transgender men, and nonbinary individuals) who are aged 40 years or older, including those with dense breasts and individuals with a family history of breast cancer. The recommendation does not apply to people who have an increased risk of breast cancer, such as individuals with any of the following: a personal history of breast cancer, genetic mutations associated with a high risk of breast cancer, a history of high-dose radiation therapy to their chest at a young age, or a history of a high-risk lesion on a breast biopsy. The evaluation of individuals who present with breast-related symptoms (eg, palpable mass, pain, nipple discharge) and screening guidelines for individuals at increased genetic risk of breast cancer are addressed in other publications of the American College of Obstetricians and Gynecologists (ACOG) (4, 5).

Screening Modality

Screening mammography refers to digital mammography ("two-dimensional") and digital breast tomosynthesis ("three-dimensional mammography").

Screening Interval

ACOG continues to recommend screening mammography every 1 or 2 years based on an informed, shared decision-making process that includes a discussion of the benefits and harms of annual and biennial screening and incorporates patient values and preferences (6).

RATIONALE

ACOG previously recommended that individuals at average risk of breast cancer should be counseled about and offered screening mammography starting at age 40 years and that those who have not initiated screening in their 40s should begin screening mammography by no later than age 50 years (6). However, several factors contributed to the decision to update this guidance to recommend initiation of screening mammography starting at age 40 years.

Increasing Incidence in Younger Women

Although most cases of breast cancer occur among women aged 50 years or older (1), with the highest

Table 1. Benefits and Harms of Initiating Mammography Screening at Age 40 Years Compared With 50 Years*

	All Women			
	Age 40–74 y		Age 50–74 y	
Benefits and Harms	Annual	Biennial	Annual	Biennial
Breast cancer mortality reduction (%)	37.0 (33.6–38.9)	30.0 (24.0–33.7)	30.6 (24.7–32.8)	25.4 (18.8–29.4)
Breast cancer deaths averted	10.3 (8.5–13.1)	8.2 (6.1–10.6)	8.6 (7.0–10.1)	6.7 (5.1–9.2)
Life years gained	216.6 (190.1–274.9)	165.2 (152.4–221.9)	155.6 (137.1–191.7)	120.8 (115.1–175.8)
False-positive screening recalls	2,096 (2,055–2,110)	1,376 (1,354–1,384)	1,277 (1,246–1,285)	873 (855–878)
Benign biopsies	288 (283–290)	201 (198–203)	186 (182–187)	136 (133–137)
Overdiagnosed cases†	21 (5–48)	14 (4–37)	18 (5–42)	12 (4–33)
	Black Women			
	Age 40–74 y		Age 50–74 y	
Benefits and Harms	Annual	Biennial	Annual	Biennial
Breast cancer mortality reduction (%)	34.4 (32.2–39.6)	29.9 (22.4–31.9)	29.3 (25.5–32.4)	24.1 (19.8–27.1)
Breast cancer deaths averted	13.3 (10.7–19.1)	10.7 (8.7–15.4)	11.5 (8.2–15.6)	9.2 (7.1–12.6)
Life years gained	286.2 (243.7–377.7)	228.9 (189–305.7)	224.7 (154.2–271.3)	176.7 (127.8–219.8)
False-positive screening recalls	1,929 (1,908–1,936)	1,253 (1,243–1,257)	1,209 (1,195–1,211)	814 (807–816)
Benign biopsies	302 (299–303)	233 (231–233)	200 (198–200)	158 (157–159)
Overdiagnosed cases†	21 (6–41)	18 (6–32)	19 (6–36)	16 (5–28)

Data from Trentham-Dietz A, Chapman CH, Jayasekera J, Lowry KP, Heckman-Stoddard B, Hampton JM, et al. Breast cancer screening with mammography: an updated decision analysis for the U.S. Preventive Services Task Force. Technical Report No. 231s. 2024. Accessed August 7, 2024. https://www.ncbi.nlm.nih.gov/books/NBK603560/

*Data shown are lifetime median estimates (and ranges) per 1,000 women screened based on modeling studies that compared digital breast tomosynthesis mammography with no screening.

†Lesions that would not have progressed to symptomatic cancer if left undetected.

incidence rates reported for women aged 65–74 years (7, 8), recently there has been a notable rise in the incidence of breast cancer among women aged 40–49 years. The number of new cases of invasive breast cancer in the 40–49-year age group increased by an average of 2% per year from 2015 (162/100,000) to 2019 (172/100,000), compared with a more gradual 0.5% average annual rise in incidence across all age groups (8, 9).

Greater Net Benefit

The results of modeling studies commissioned by the U.S. Preventive Services Task Force for its 2024 breast cancer screening recommendations consistently show that starting screening mammography at age 40 years compared with 50 years is associated with a greater net benefit in breast cancer mortality reduction, breast cancer deaths averted, and life years gained when weighed against the potential harms of screening, such as false-positive recalls, benign biopsies, and overdiagnosis and overtreatment (ie, treatment of lesions that would not have progressed to symptomatic cancer if left undetected) (Table 1) (10, 11). Compared with biennial screening, annual screening mammography beginning at age 40 years further reduces breast cancer mortality, averts more breast cancer deaths, and results in more life years gained, but it is associated with more false-positive recalls, benign biopsies, and overdiagnosed cases (Table 1) (10). Digital mammography confers similar benefits as digital breast tomosynthesis

but is associated with a higher number of false-positive recalls (10).

Health Inequities

Earlier initiation of breast cancer screening will have the greatest net benefit for Black women (Table 1), who have the highest rate of breast cancer mortality among all women even when adjusting for age and stage at the time of diagnosis (12), despite having the highest rate of self-reported mammography screening (13). Compared with White women, Black women have a lower overall incidence of breast cancer (135.6 vs 146.6/100,000 women) (14) but a 40% higher 5-year age-adjusted breast cancer mortality rate (1) and a 45% increased incidence of invasive breast cancer before age 50 years (15). In addition, Black women have nearly double the incidence of triple-negative breast cancer (ie, estrogen receptor–negative, progesterone receptor–negative, and human epidermal growth factor receptor 2–negative) (24.8 vs 12.6/100,000 women) (16), which is an aggressive form of breast cancer that occurs at a younger age, is more difficult to detect on screening, presents at a more advanced stage, and is associated with worse outcomes compared with other breast cancer subtypes (17, 18).

The racial disparities in breast cancer outcomes are attributed largely to a complex interplay of inequities in social determinants of health (including housing, environmental conditions, and access to quality health care and health-related resources) that stem from past and present structural racism (19, 20). For example, racial residential and economic segregation is associated with an increased risk of triple-negative breast cancer and a lower rate of breast cancer–specific survival for Black women (21–23). The incidence of triple-negative breast cancer also varies within racial groups by geographic region, suggesting that there is risk modification through environmental factors and social determinants of health (24, 25).

Racial inequities also have been reported in the diagnosis and treatment of breast cancer. For example, Black women with triple-negative breast cancer are less likely to receive chemotherapy and surgery and have a higher mortality rate compared with White women with triple-negative breast cancer, even after adjusting for health insurance status and neighborhood, demographic, and clinicopathologic factors (26), which supports that there are other barriers to care, such as structural racism, that influence breast cancer treatment and overall outcomes. Hispanic, Asian, and American Indian and Alaskan Native women also experience inequities in the breast cancer care pathway, such as delays in screening follow-up, diagnosis, and treatment (8, 27). Although earlier initiation of breast cancer screening for all women is expected to mitigate some of the racial disparities in breast cancer outcomes, additional multifaceted interventions are needed to address racial and socioeconomic barriers and inequities along the entire continuum of breast cancer care.

Other Guidelines

ACOG's updated recommendation to start routine breast cancer screening at age 40 years is consistent with guidelines from the U.S. Preventive Services Task Force (11), the National Comprehensive Cancer Network (28), the American College of Radiology, and the Society of Breast Imaging (29). It is hoped that the growing expert consensus on the age to initiate breast cancer screening will decrease clinician and patient confusion and increase routine screening mammography rates among average-risk individuals aged 40–49 years.

REFERENCES

1. Giaquinto AN, Sung H, Miller KD, Kramer JL, Newman LA, Minihan A, et al. Breast cancer statistics, 2022. CA Cancer J Clin 2022;72:524–41. doi: 10.3322/caac.21754
2. Giaquinto AN, Miller KD, Tossas KY, Winn RA, Jemal A, Siegel RL. Cancer statistics for African American/Black people 2022. CA Cancer J Clin 2022;72:202–29. doi: 10.3322/caac.21718
3. Miller KD, Ortiz AP, Pinheiro PS, Bandi P, Minihan A, Fuchs HE, et al. Cancer statistics for the US Hispanic/Latino population, 2021. CA Cancer J Clin 2021;71:466–87. doi: 10.3322/caac.21695
4. Diagnosis and management of benign breast disorders. Practice Bulletin No. 164. American College of Obstetricians and Gynecologists [published erratum appears in Obstet Gynecol 2021;137:382]. Obstet Gynecol 2016;127:e141–56. doi: 10.1097/AOG.0000000000001482
5. Hereditary breast and ovarian cancer syndrome. Practice Bulletin No. 182. American College of Obstetricians and Gynecologists. Obstet Gynecol 2017;130:e110–26. doi: 10.1097/AOG.0000000000002296
6. Breast cancer risk assessment and screening in average-risk women. Practice Bulletin No. 179. American College of Obstetricians and Gynecologists. Obstet Gynecol 2017;130:e1–16. doi: 10.1097/AOG.0000000000002158
7. National Cancer Institute. Breast: recent trends in SEER age-adjusted incidence rates, 2000-2021. By age, delay-adjusted SEER incidence rate, female, all races / ethnicities, all stages. Accessed August 7, 2024. https://seer.cancer.gov/statistics-network/explorer/application.html?site=55&data_type=1&graph_type=2&compareBy=age_range&chk_age_range_1=1&chk_age_range_9=9&chk_age_range_141=141&chk_age_range_157=157&chk_age_range_16=16&chk_age_range_62=62&chk_age_range_122=122&chk_age_range_160=160&chk_age_range_166=166&chk_age_range_15=15&rate_type=2&sex=3&race=1&stage=101&advopt_precision=1&advopt_show_ci=on&hdn_view=0&advopt_show_apc=on&advopt_display=1#resultsRegion0
8. Henderson JT, Webber EM, Weyrich M, Miller M, Melnikow J. Screening for breast cancer: a comparative effectiveness review for the U.S. Preventive Services Task Force. Evidence Synthesis No. 231. Accessed August 9, 2024. https://www.ncbi.nlm.nih.gov/books/NBK603789/

9. Surveillance Epidemiology and End Results Program. SEER*-Stat Database: incidence—SEER research limited-field data with delay-adjustment, 22 registries, malignant only, November 2021 submission (2000-2019)—linked to county attributes—time dependent (1990-2019)income/rurality, 1969-2020 counties. Accessed March 26, 2024. https://seer.cancer.gov/data-software/documentation/seerstat/nov2021/

10. Trentham-Dietz A, Chapman CH, Jayasekera J, Lowry KP, Heckman-Stoddard B, Hampton JM, et al. Breast cancer screening with mammography: an updated decision analysis for the U.S. Preventive Services Task Force. Technical Report No. 231s. Accessed August 7, 2024. https://www.ncbi.nlm.nih.gov/books/NBK603560/

11. Nicholson WK, Silverstein M, Wong JB, Barry MJ, Chelmow D, Coker TR, et al. Screening for breast cancer: US Preventive Services Task Force recommendation statement. JAMA 2024; 331:1918–30. doi: 10.1001/jama.2024.5534

12. National Cancer Institute. Breast: U.S. 5-year age-adjusted mortality rates, 2018-2022. By race/ethnicity, female, all ages. Accessed August 7, 2024. https://seer.cancer.gov/statistics-network/explorer/application.html?site=55&data_type=2&graph_type=10&compareBy=race&chk_race_6=6&chk_race_5=5&chk_race_4=4&chk_race_9=9&chk_race_8=8&series=9&sex=3&age_range=1&advopt_precision=1&advopt_show_ci=on&hdn_view=0&advopt_show_apc=on&advopt_display=2#resultsRegion0

13. Sabatino SA, Thompson TD, White MC, Villarroel MA, Shapiro JA, Croswell JM, et al. Up-to-date breast, cervical, and colorectal cancer screening test use in the United States, 2021. Prev Chronic Dis 2023;20:E94. doi: 10.5888/pcd20.230071

14. National Cancer Institute. Breast: recent trends in SEER age-adjusted incidence rates, 2000-2021. By race/ethnicity, delay-adjusted SEER incidence rate, female, all ages, all stages. Accessed August 7, 2024. https://seer.cancer.gov/statistics-network/explorer/application.html?site=55&data_type=1&graph_type=2&compareBy=race&chk_race_9=9&chk_race_8=8&rate_type=2&sex=3&age_range=1&stage=101&advopt_precision=1&advopt_show_ci=on&hdn_view=0&advopt_show_apc=on&advopt_display=2#resultsRegion0

15. Hendrick RE, Monticciolo DL, Biggs KW, Malak SF. Age distributions of breast cancer diagnosis and mortality by race and ethnicity in US women. Cancer 2021;127:4384–92. doi: 10.1002/cncr.33846

16. National Cancer Institute. Breast: SEER 5-year age-adjusted incidence rates, 2017-2021. By subtype, female, all races / ethnicities, all ages, all stages. Accessed August 7, 2024. https://seer.cancer.gov/statistics-network/explorer/application.html?site=55&data_type=1&graph_type=10&compareBy=subtype&chk_subtype_55=55&chk_subtype_622=622&chk_subtype_623=623&chk_subtype_620=620&chk_subtype_621=621&series=9&sex=3&race=1&age_range=1&stage=101&advopt_precision=1&advopt_show_ci=on&hdn_view=0&advopt_show_apc=on&advopt_display=2#resultsRegion0

17. Lin NU, Vanderplas A, Hughes ME, Theriault RL, Edge SB, Wong Y, et al. Clinicopathologic features, patterns of recurrence, and survival among women with triple-negative breast cancer in the National Comprehensive Cancer Network. Cancer 2012;118:5463–72. doi: 10.1002/cncr.27581

18. Dent R, Trudeau M, Pritchard KI, Hanna WM, Kahn HK, Sawka CA, et al. Triple-negative breast cancer: clinical features and patterns of recurrence. Clin Cancer Res 2007;13:4429–34. doi: 10.1158/1078-0432.CCR-06-3045

19. Bailey ZD, Krieger N, Ag nor M, Graves J, Linos N, Bassett MT. Structural racism and health inequities in the USA: evidence and interventions. Lancet 2017;389:1453–63. doi: 10.1016/S0140-6736(17)30569-X

20. Siegel SD, Brooks MM, Berman JD, Lynch SM, Sims-Mourtada J, Schug ZT, et al. Neighborhood factors and triple negative breast cancer: the role of cumulative exposure to area-level risk factors. Cancer Med 2023;12:11760–72. doi: 10.1002/cam4.5808

21. Siegel SD, Brooks MM, Lynch SM, Sims-Mourtada J, Schug ZT, Curriero FC. Racial disparities in triple negative breast cancer: toward a causal architecture approach. Breast Cancer Res 2022;24:37. doi: 10.1186/s13058-022-01533-z

22. Goel N, Westrick AC, Bailey ZD, Hernandez A, Balise RR, Goldfinger E, et al. Structural racism and breast cancer-specific survival: impact of economic and racial residential segregation. Ann Surg 2022;275:776–83. doi: 10.1097/SLA.0000000000005375

23. Bemanian A, Beyer KM. Measures matter: the local exposure/isolation (LEx/Is) metrics and relationships between local-level segregation and breast cancer survival. Cancer Epidemiol Biomarkers Prev 2017;26:516–24. doi: 10.1158/1055-9965.EPI-16-0926

24. Davis Lynn BC, Chernyavskiy P, Gierach GL, Rosenberg PS. Decreasing incidence of estrogen receptor-negative breast cancer in the United States: trends by race and region. J Natl Cancer Inst 2022;114:263–70. doi: 10.1093/jnci/djab186

25. Jatoi I, Sung H, Jemal A. The emergence of the racial disparity in U.S. breast-cancer mortality. N Engl J Med 2022;386:2349–52. doi: 10.1056/NEJMp2200244

26. Cho B, Han Y, Lian M, Colditz GA, Weber JD, Ma C, et al. Evaluation of racial/ethnic differences in treatment and mortality among women with triple-negative breast cancer. JAMA Oncol 2021;7:1016–23. doi: 10.1001/jamaoncol.2021.1254

27. Chen JC, Stover DG, Ballinger TJ, Bazan JG, Schneider BP, Andersen BL, et al. Racial disparities in breast cancer: from detection to treatment. Curr Oncol Rep 2024;26:10–20. doi: 10.1007/s11912-023-01472-8

28. National Comprehensive Cancer Network. Breast cancer screening and diagnosis. Version 2.2024. NCCN Clinical Practice Guidelines in Oncology [after login]. Accessed August 6, 2024. https://www.nccn.org/professionals/physician_gls/pdf/breast-screening.pdf

29. Monticciolo DL, Malak SF, Friedewald SM, Eby PR, Newell MS, Moy L, et al. Breast cancer screening recommendations inclusive of all women at average risk: update from the ACR and Society of Breast Imaging. J Am Coll Radiol 2021;18:1280–8. doi: 10.1016/j.jacr.2021.04.021

CONFLICT OF INTEREST STATEMENT

All ACOG committee members and authors have submitted a conflict of interest disclosure statement related to this published product. Any potential conflicts have been considered and managed in accordance with ACOG's Conflict of Interest Disclosure Policy. The ACOG policies can be found on acog.org. For products jointly developed with other organizations, conflict of interest disclosures by representatives of the other

organizations are addressed by those organizations. The American College of Obstetricians and Gynecologists has neither solicited nor accepted any commercial involvement in the development of the content of this published product.

Published online on October 10, 2024.

American College of Obstetricians and Gynecologists
409 12th Street SW, Washington, DC 20024-2188

Age to initiate routine breast cancer screening. Clinical Practice Update. American College of Obstetricians and Gynecologists. Obstet Gynecol 2025;145:xxx–xxx.

The American College of Obstetricians and Gynecologists recognizes and supports the gender diversity of all patients who seek obstetric and gynecologic care. In original portions of this document, authors seek to use gender-inclusive language or gender-neutral language. When describing research findings, this document uses gender terminology reported by investigators. To review ACOG's policy on inclusive language, see https://www.acog.org/clinical-information/policy-and-position-statements/statements-of-policy/2022/inclusive-language.

A Clinical Practice Update is a brief statement that communicates a focused change in published ACOG guidance on a clinical topic or issue. The American College of Obstetricians and Gynecologists (ACOG) reviews its publications regularly; however, its publications may not reflect the most recent evidence. A reaffirmation date is included in the online version of a document to indicate when it was last reviewed. The current status and any updates of this document can be found on ACOG Clinical at acog.org/lot.

This information is designed as an educational resource to aid clinicians in providing obstetric and gynecologic care, and use of this information is voluntary. This information should not be considered as inclusive of all proper treatments or methods of care or as a statement of the standard of care. It is not intended to substitute for the independent professional judgment of the treating clinician. Variations in practice may be warranted when, in the reasonable judgment of the treating clinician, such course of action is indicated by the condition of the patient, limitations of available resources, or advances in knowledge or technology.

While ACOG makes every effort to present accurate and reliable information, this publication is provided "as is" without any warranty of accuracy, reliability, or otherwise, either express or implied. ACOG does not guarantee, warrant, or endorse the products or services of any firm, organization, or person. Neither ACOG nor its officers, directors, members, employees, or agents will be liable for any loss, damage, or claim with respect to any liabilities, including direct, special, indirect, or consequential damages, incurred in connection with this publication or reliance on the information presented.