

Hispanic Women Are Diagnosed with Breast Cancer More Than Seven Years Younger Than White Women, on Average

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Key Findings:

- The average age at breast cancer diagnosis in 2023 is 63.2 years old, and the average age at diagnosis has remained fairly steady since 2018.
- Hispanic or Latino patients have the youngest average age at breast cancer diagnosis at 57.2 years old in 2023, while White patients are diagnosed at the oldest average age at 64.5 years old.
- Despite being diagnosed at the youngest age on average, Hispanic or Latino patients are the least likely to have had a recent breast cancer screening prior to their breast cancer diagnosis, with 38.3% having a recent screening.

In May 2023, the United States Preventive Services Task Force (USPSTF) released draft recommendations that women ages 40 to 74 years old be screened for breast cancer every other year.¹ As screening recommendations propose to include younger women, we sought to understand how the typical age at breast cancer diagnosis has changed over time.

We evaluated 484,177 breast cancer diagnoses between 2018 and 2023 to determine the average age at diagnosis. The average age at breast cancer diagnosis, which shows a slight seasonal trend, remained steady across the five years assessed, as shown in Figure 1.

Average Age at Breast Cancer Diagnosis

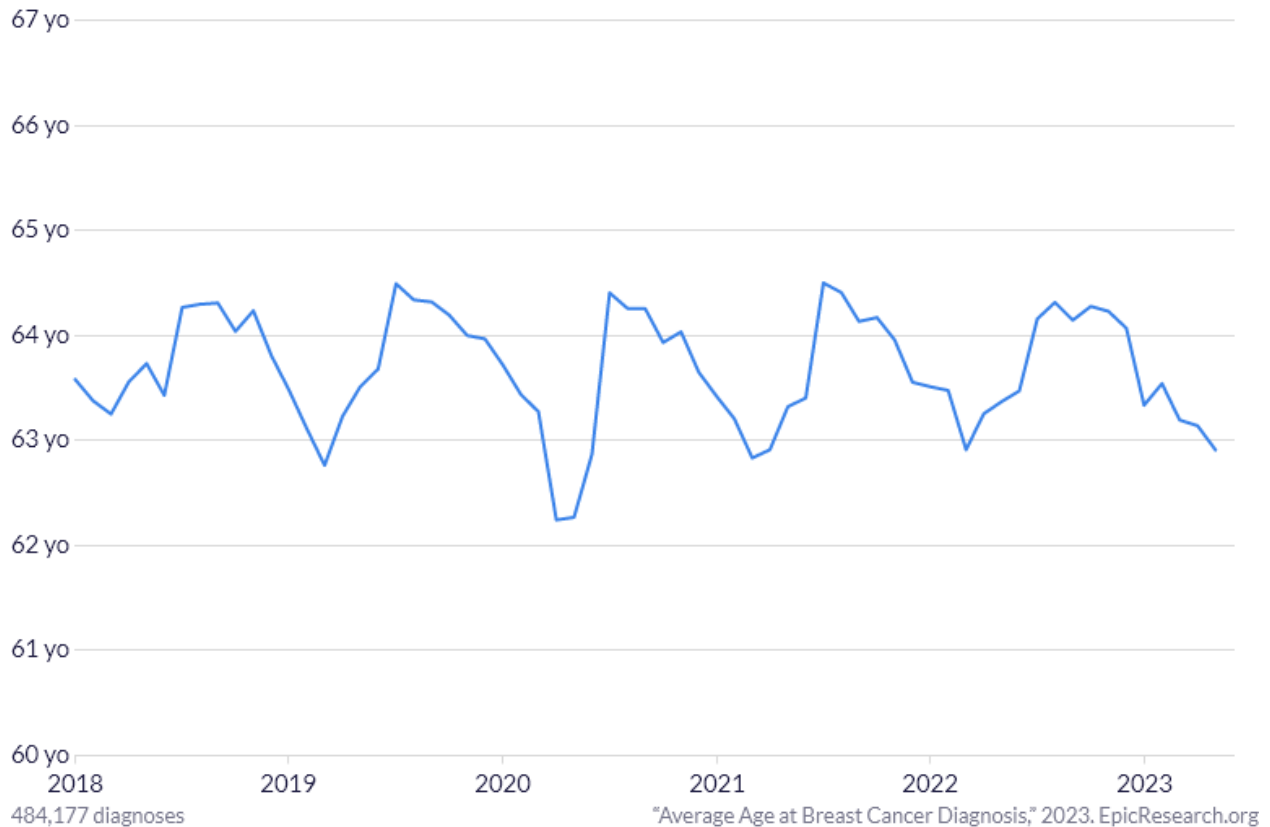
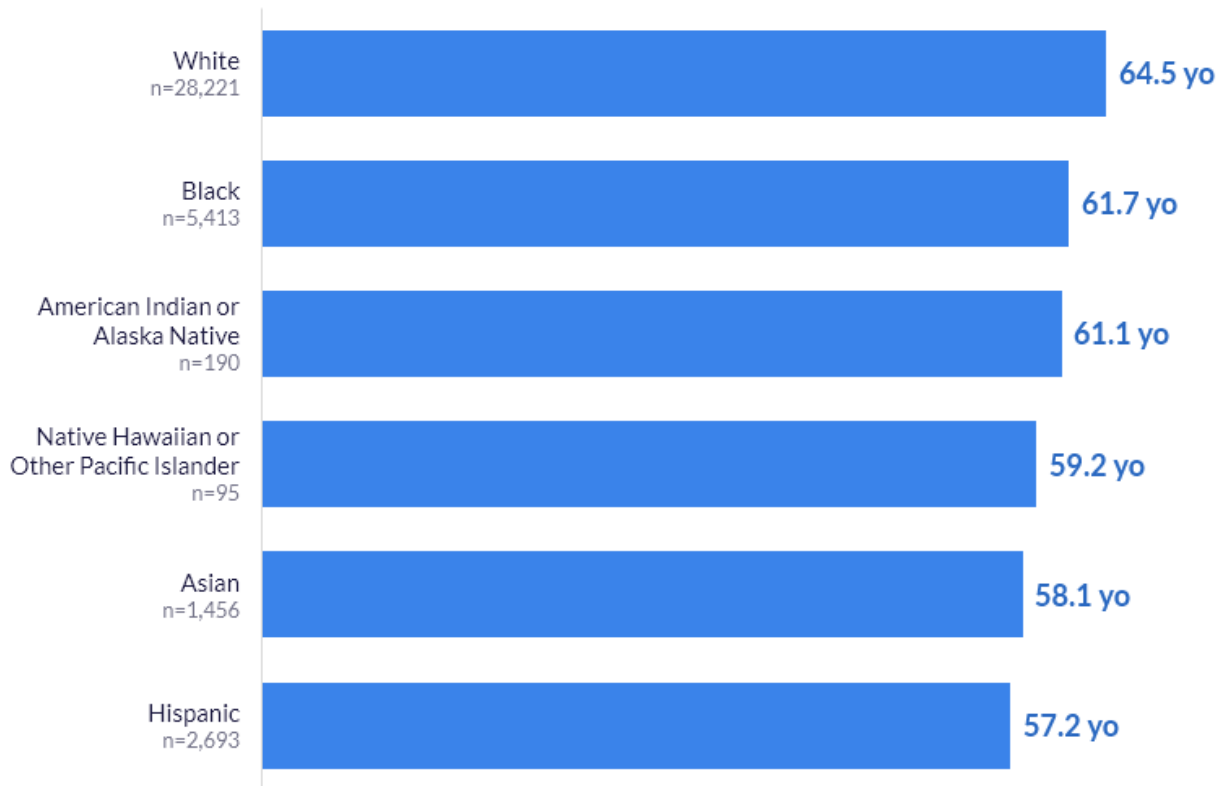


Figure 1. Average age at breast cancer diagnosis by month from January 2018 to May 2023.

However, the average age at diagnosis varies greatly by race and ethnicity. Hispanic or Latino women are diagnosed at an average age of 57.2 years, which is more than seven years younger than White women, who have an average diagnosis age of 64.5 years. We found that Asian and Native Hawaiian and Other Pacific Islander women are diagnosed at a younger average age than both White and Black women. Similar to previous studies, we also found that Black women are diagnosed at a younger average age than White women.² These differences in age remained across race and ethnicity even when controlling for social vulnerability.

Average Age at Breast Cancer Diagnosis by Race and Ethnicity

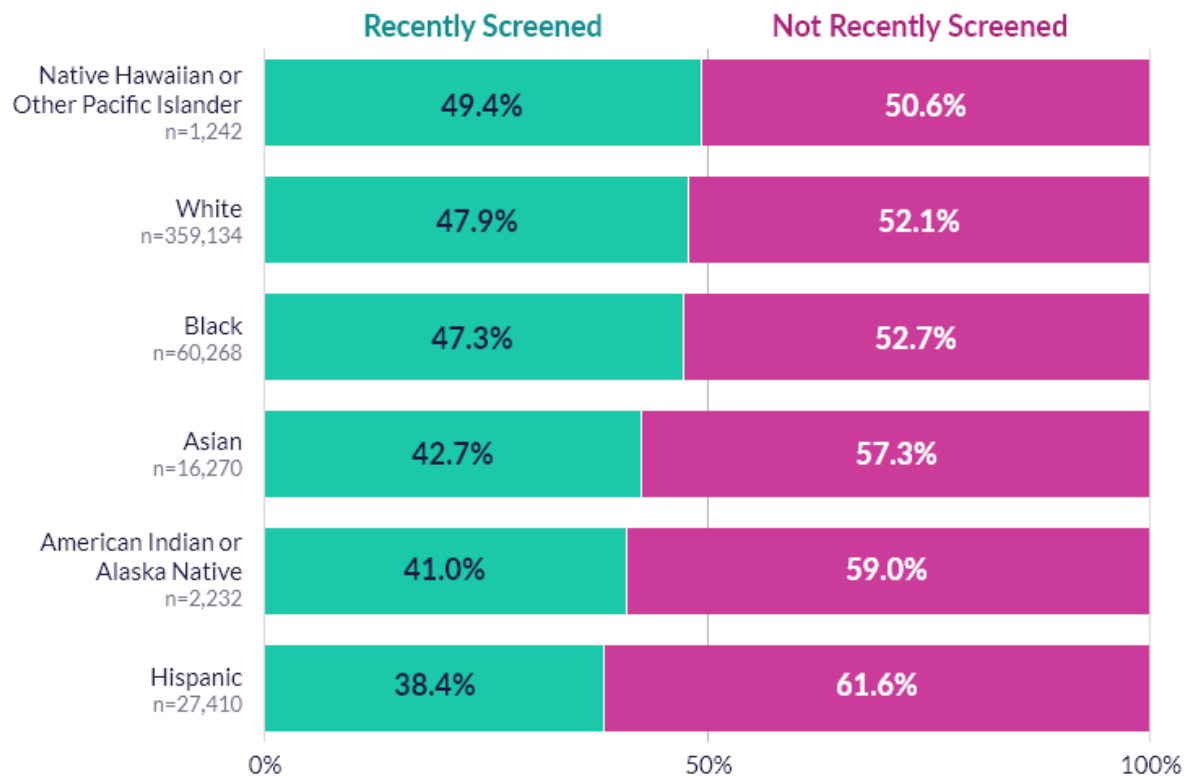


"Average Age at Breast Cancer Diagnosis by Race and Ethnicity," 2023. EpicResearch.org

Figure 2. Average age at breast cancer diagnosis in 2023 by race and ethnicity.

We found that Hispanic and Latino patients were least likely to have had a recent documented screening, with fewer than two in five patients diagnosed having a screening within one year prior to their breast cancer diagnosis. This may suggest that patients are seeking care based on experiencing symptoms rather than through screening. However, screenings may be undercounted in our data as screenings performed outside of the organization where the initial breast cancer diagnosis was made may not be reported.

Percentage of Breast Cancer Diagnoses with Recent Screening by Race and Ethnicity



"Percentage of Breast Cancer Diagnoses with Recent Screening by Race and Ethnicity," 2023. EpicResearch.org

Figure 3. Percentage of breast cancer diagnoses with a documented breast cancer screening encounter within one year prior to diagnosis by race and ethnicity.

These data come from Cosmos, a HIPAA-defined Limited Data Set of more than 196 million patients from 208 Epic organizations including 1,123 hospitals and more than 22,500 clinics, serving patients in all 50 states and Lebanon. This study was completed by two teams that worked independently, each composed of a clinician and research scientists. The two teams came to similar conclusions.

References

1. U.S. Preventive Services Task Force. Draft Recommendation Statement: Breast Cancer: Screening. May 9, 2023. [Draft Recommendation: Breast Cancer: Screening | United States Preventive Services Taskforce \(uspreventiveservicestaskforce.org\)](https://www.uspreventiveservicestaskforce.org). Accessed July 10, 2023.
2. Wilkerson AD, Obi M, Ortega C, et al. Young Black Women May be More Likely to Have First Mammogram Cancers: A New Perspective in Breast Cancer Disparities [published correction appears in *Ann Surg Oncol*. 2023 Apr;30(4):2175]. *Ann Surg Oncol*. 2023;30(5):2856-2869. doi:10.1245/s10434-022-12995-y

Data Definitions

Term	Definition
Study period	1/1/2018 – 5/31/2023
Study population	Female patients with no prior breast cancer diagnosis before 1/1/2018 with at least one face-to-face encounter in the two years before the initial diagnosis. Patients with an initial breast cancer diagnosis on the problem

	list or evidence of breast cancer treatment prior to their initial breast cancer diagnosis were excluded.
Breast cancer diagnosis	A diagnosis with an ICD-10 code C50* excluding remission codes
Breast cancer screening diagnosis	A diagnosis with an ICD-10 code Z12.3*
Prior breast cancer treatment	Any medication orders related to the following breast cancer medications (identified by RxNorm code) prior to the Breast cancer diagnosis date: Neratinib: 1940643 Pertuzumab: 1298944 Ado-trastuzumab emtansine: 1371041 Abemaciclib: 1946825 Alpelisib (Piqray only): 2169302 Palbociclib: 1601374 Ribociclib: 1873916 Lapatinib: 480167 Tamoxifen: 10324 Exemestane: 258494 Anastrozole: 84857 Letrozole: 72965 Fulvestrant: 282357 Epirubicin: 3995
Controlling for SVI and recent screening usage	To control for multiple demographic factors simultaneously, we developed a multivariate linear regression model to estimate the impact of SVI, race/ethnicity, and existence of a pre-diagnosis breast cancer screening event on the age of a breast cancer onset for our population. We found that SVI played significantly less of a role in influencing the patient's age of breast cancer onset when compared to Race/Ethnicity.

Table 1: Average Age at Breast Cancer Diagnosis

Month	Total Diagnoses	Median Age at Diagnosis	Average Age at Diagnosis	Avg. Age Upper 95% CI	Avg. Age Lower 95% CI
2018 - 1	5932	64	63.58	63.76	63.41
2018 - 2	6127	64	63.38	63.56	63.21
2018 - 3	6808	64	63.25	63.42	63.09
2018 - 4	6566	64	63.56	63.73	63.39
2018 - 5	7178	65	63.74	63.90	63.57
2018 - 6	6712	65	63.43	63.60	63.27
2018 - 7	6686	65	64.27	64.44	64.10
2018 - 8	6953	65	64.30	64.47	64.14
2018 - 9	6474	65	64.31	64.48	64.14
2018 - 10	7089	65	64.04	64.21	63.88
2018 - 11	6934	65	64.24	64.40	64.07
2018 - 12	7083	65	63.81	63.97	63.65
2019 - 1	6588	64	63.48	63.65	63.31
2019 - 2	6713	64	63.11	63.28	62.95
2019 - 3	7322	64	62.77	62.93	62.60

2019 - 4	7064	64	63.23	63.40	63.07
2019 - 5	7264	64	63.51	63.68	63.35
2019 - 6	6661	65	63.68	63.85	63.51
2019 - 7	6907	65	64.50	64.66	64.33
2019 - 8	7247	65	64.34	64.51	64.18
2019 - 9	6854	65	64.32	64.49	64.16
2019 - 10	7802	65	64.20	64.36	64.04
2019 - 11	7855	65	64.00	64.16	63.85
2019 - 12	7290	65	63.97	64.13	63.81
2020 - 1	6867	65	63.72	63.89	63.56
2020 - 2	7618	64	63.44	63.60	63.29
2020 - 3	7619	64	63.28	63.43	63.12
2020 - 4	4635	63	62.24	62.44	62.05
2020 - 5	3409	63	62.27	62.51	62.03
2020 - 6	5065	64	62.87	63.07	62.67
2020 - 7	6526	66	64.41	64.58	64.24
2020 - 8	7084	66	64.26	64.43	64.10
2020 - 9	7143	65	64.26	64.42	64.10
2020 - 10	8174	65	63.94	64.09	63.79
2020 - 11	8061	65	64.04	64.19	63.88
2020 - 12	7832	64	63.65	63.80	63.50
2021 - 1	7214	64	63.42	63.58	63.27
2021 - 2	7486	64	63.21	63.37	63.05
2021 - 3	8140	64	62.84	62.99	62.68
2021 - 4	8014	64	62.91	63.07	62.76
2021 - 5	8294	64	63.32	63.48	63.17
2021 - 6	7853	65	63.41	63.56	63.25
2021 - 7	8192	66	64.50	64.66	64.35
2021 - 8	8421	66	64.41	64.56	64.26
2021 - 9	7925	65	64.14	64.29	63.98
2021 - 10	8423	65	64.17	64.32	64.02
2021 - 11	8401	65	63.96	64.11	63.81
2021 - 12	8164	65	63.56	63.71	63.40
2022 - 1	7485	65	63.51	63.67	63.36
2022 - 2	7510	65	63.48	63.64	63.32
2022 - 3	8696	64	62.91	63.06	62.77
2022 - 4	8506	64	63.26	63.40	63.11
2022 - 5	8764	65	63.37	63.52	63.23
2022 - 6	8204	65	63.47	63.63	63.32
2022 - 7	8297	66	64.16	64.31	64.01
2022 - 8	8554	66	64.32	64.47	64.17

2022 - 9	8423	66	64.15	64.30	64.00
2022 - 10	9441	65	64.28	64.42	64.14
2022 - 11	9190	66	64.23	64.38	64.09
2022 - 12	9073	65	64.07	64.22	63.93
2023 - 1	8593	65	63.34	63.49	63.19
2023 - 2	8598	65	63.54	63.70	63.39
2023 - 3	9323	64	63.20	63.34	63.06
2023 - 4	8359	65	63.14	63.30	62.99
2023 - 5	4492	64	62.91	63.12	62.70

Table 2: Average Age at Breast Cancer Diagnosis by Race and Ethnicity

Race/Ethnicity	Weighted Average Age at Diagnosis	Count of Diagnoses
American Indian or Alaska Native	61.09	190
Asian	58.12	1456
Black or African American	61.67	5413
Hispanic or Latino	57.19	2693
Native Hawaiian or Other Pacific Islander	59.18	95
Other/Non-Hispanic	60.86	1297
White	64.55	28221

Table 3: Percentage of Breast Cancer Diagnoses with Recent Screening by Race and Ethnicity

Race/Ethnicity	No Recent Screening	Recent Screening
American Indian or Alaska	59.57%	40.43%
Asian	57.44%	42.56%
Black or African American	52.80%	47.20%
Hispanic or Latino	61.69%	38.31%
Native Hawaiian or Other Pacific Islander	50.59%	49.41%
Other/Non-Hispanic	72.91%	27.09%
White	52.20%	47.80%