

# Patient Portal Users Are More Likely to be Up to Date with Breast Cancer Screenings

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## Key Findings:

- Of women aged 40 to 54, 77.3% who use a patient portal are up to date with their breast cancer screening, compared to only 58.1% of non-users.
- The most significant difference in screening rates across racial and ethnic groups was observed in White non-Hispanic patients (76.6% for users vs. 53.9% for non-users).
- High-risk patients were more likely to be screened, regardless of whether they used a patient portal. 89.0% of high-risk portal users are up to date with their screenings compared to 81.3% of high-risk non-users.

The U.S. Preventative Services Task Force (USPSTF) recommends breast cancer screening every other year for women aged 40 to 74 with average risk of breast cancer. Screening makes early detection possible and can significantly improve treatment outcomes.<sup>1</sup> Additionally, patient engagement through electronic health portals has been associated with improved preventive care adherence.<sup>2</sup> We aimed to understand whether active use of a patient portal, such as Epic’s MyChart, is correlated with a higher rate of being up to date on breast cancer screenings.

We studied 11,764,325 women aged 40 to 74 with no prior history of breast cancer who had a medical visit in 2024 and another at least two years prior. To assess breast cancer screening history, we reviewed care provided within the three years prior to their visit in 2024.

We found that patient portal users consistently had higher rates of screening in alignment with USPSTF screening recommendations in each age group studied, as seen in Figure 1.

## Rate Up-to-Date Breast Cancer Screenings by Patient Portal Usage and Age

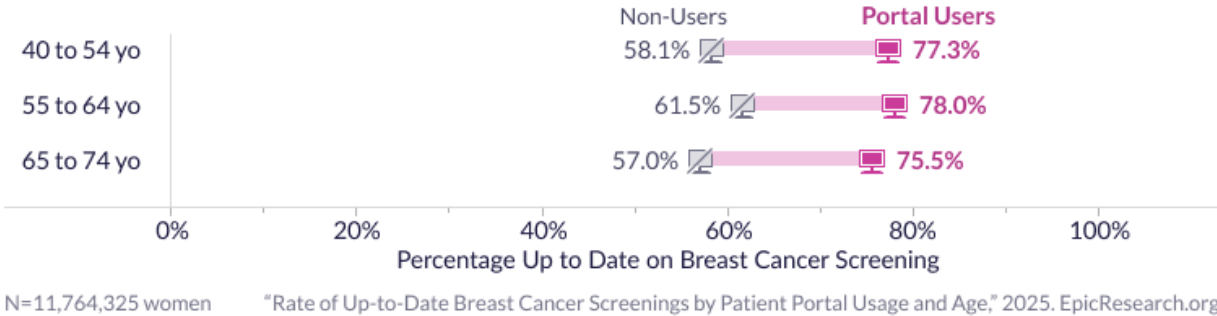
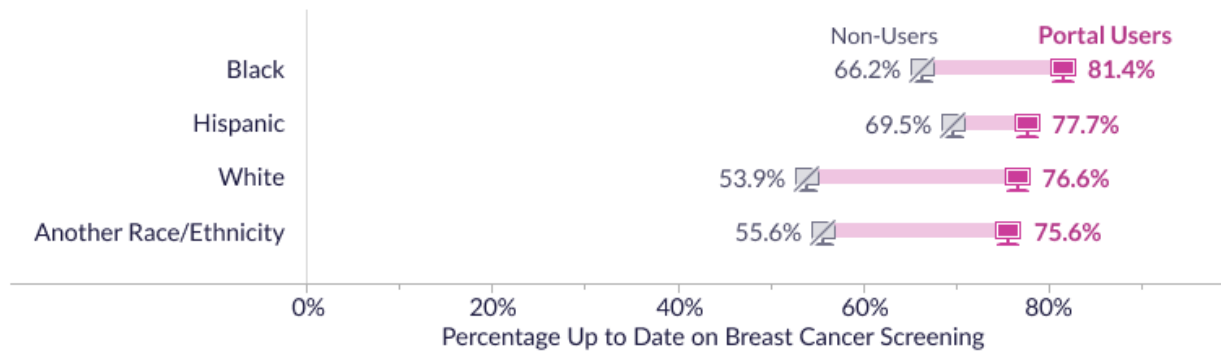


Figure 1. The rate of women having an up-to-date breast cancer screening by patient portal usage and age.

White patients had the largest gap between portal users and non-users, and White non-portal users were screened at the lowest rate compared to patients of other races and ethnicities at 53.9%, as seen in Figure

2. Breast cancer screening rates were the highest among Black portal users at 81.4%, while Black non-users were screened 66.2% of the time.

### Rate of Up-to-Date Breast Cancer Screenings by Patient Portal Usage, Race, and Ethnicity

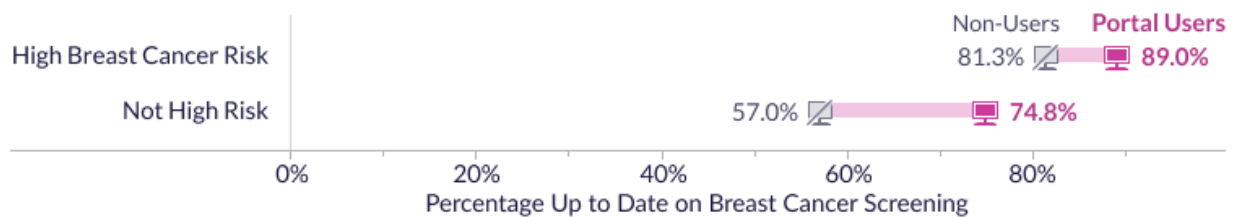


N=11,764,325 women "Rate of Up-to-Date Breast Cancer Screenings by Patient Portal Usage, Race, and Ethnicity," 2025. EpicResearch.org

Figure 2. The rate of women having an up-to-date breast cancer screening by patient portal usage, race, and ethnicity.

Women classified as high risk had higher screening rates than all other studied groups, with portal users still having higher rates than non-users (89.0% for users vs. 81.3% for non-users), as seen in Figure 3. Among women not classified as high risk, portal users still had higher screening adherence (74.8% for users vs. 57.0% for non-users). However, high-risk non-users had higher screening rates than not-high-risk portal users.

### Rate of Up-to-Date Breast Cancer Screenings by Patient Portal Usage and Risk



N=11,764,325 women "Rate of Up-to-Date Breast Cancer Screenings by Patient Portal Usage and Risk," 2025. EpicResearch.org

Figure 3. The rate of women having an up-to-date breast cancer screening by patient portal usage and whether they are considered high risk for having breast cancer.

Of note, screenings that occur outside of a Cosmos-participating organization are not always documented, which might contribute to an undercounting of screenings in this analysis.

These data come from Cosmos, a dataset created in collaboration with a community of Epic health systems representing more than 298 million patient records from 1,700 hospitals and more than 39,000 clinics from all 50 U.S. states, Lebanon, and Saudi Arabia. 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. Graphics by Brian Olson.

## References

1. Breast cancer: Screening. U.S. Preventative Services Task Force. April 30, 2024. <https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/breast-cancer-screening>. Accessed February 18, 2025.
2. Huang J, Chen Y, Landis JR, Mahoney KB. Difference Between Users and Nonusers of a Patient Portal in Health Behaviors and Outcomes: Retrospective Cohort Study. J Med Internet Res. 2019;21(10):e13146. Published 2019 Oct 7. doi:10.2196/13146

## Data Definitions

Term	Definition
<b>Study period</b>	Time period: Latest encounter in 2024
<b>Study population - inclusions</b>	Women aged 40 to 74 as of their <b>lookback period</b> with: <ul style="list-style-type: none"> <li>• At least two <b>outpatient face to face</b> encounters <ul style="list-style-type: none"> <li>○ The most recent one must be in the <b>study period</b></li> <li>○ The earlier encounter must be at least two years before the most recent one</li> <li>○ All qualifying encounters were required to be at organizations that started using MyChart before 2021</li> </ul> </li> </ul>
<b>Study population - exclusions</b>	Patients with: <ul style="list-style-type: none"> <li>• A personal history of <b>breast cancer</b> before the patient's <b>lookback period</b></li> <li>• A MyChart account activated later than the start of their <b>lookback period</b></li> <li>• All their qualifying outpatient face-to-face encounters in our lookback period at organizations with MyChart go-live prior to 2021</li> </ul>
<b>Exposures</b>	Patients can fall into the following buckets: <ul style="list-style-type: none"> <li>• Has a MyChart account that is listed as "Active" that has been used between a month before the most recent encounter or any time after</li> <li>• Does not have a MyChart account, or the activation date is the same as the last access date, indicating that the patient created an account but has not accessed it since</li> </ul>
<b>Outcomes</b>	<b>Breast cancer screening</b> in the <b>lookback period</b>
<b>Lookback period</b>	Three years from the most recent encounter observed in 2024
<b>Outpatient face to face visit</b>	An encounter with a type of Emergency, Office Visit, Well Child, Follow-Up, Telemedicine, Urgent Care, Walk-In, Routine Prenatal, Postpartum Visit, or Fetal Care Consult
<b>Breast cancer</b>	A diagnosis with ICD-10-CM code of C50*
<b>Breast cancer screening</b>	A procedure with CPT code 77067, 77063, 77065, 77066, 76641, 76642, 76981, 76982, 76983, 77046, 77047, 77048, 77049, with HCPCS code G0279, or with SNOMED code 24623002 or 384151000119104, an encounter or billing diagnosis with ICD-10-CM code Z12.31, or an imaging procedure with LOINC code 24606-6
<b>Race and ethnicity</b>	Patients were classified by self-reported race and ethnicity as non-Hispanic Black only (Black), Hispanic (any race), or non-Hispanic White only (White)
<b>High risk</b>	One of the following before or during the <b>lookback period</b> : <ul style="list-style-type: none"> <li>• Family history of breast cancer: ICD-10-CM code Z80.3</li> </ul>

	<ul style="list-style-type: none"> <li>BRCA-positive, progesterone receptor positive, or estrogen receptor positive result</li> <li>History of mastectomy, lumpectomy</li> </ul>
<b>BRCA-positive</b>	A diagnosis with ICD-10-CM code Z15.01 or a lab result with LOINC code 42778-1, 42779-9, 21638-2, 21636-6, 21637-4, 50995-0, 38530-2, 21640-8, 21639-0, 59041-4, 38531-0, 79207-7, 79208-5, or 94191-4 with a result of "Positive" or "Detected"
<b>Progesterone receptor positive</b>	A diagnosis with ICD-10-CM code Z17.21 or a lab result with LOINC code 16113-3, 31207-4, 10861-3, 40557-1, 10480-2, 85339-0, 85331-7, 14230-7, or 85325-9 with a result of ">90," "Positive," "3+," "STRONG," "2+," "POSITIVE, 1 to 5%," "MODERATE," ">95%," "1+," "Low Positive," ">90% / POSITIVE," "1TOS," "1-5," or "(1-9)0% / POSITIVE"
<b>Estrogen receptor positive</b>	A diagnosis with ICD-10-CM code Z17.0 or a lab with LOINC code 16112-5, 14130-9, 40556-3, 85337-4, 10480-2, 85310-1, 14228-1, or 85329-1 with a result of ">90," "Positive," "Positive (>10%)," "3+," "STRONG," "Strong 4/4," "Moderate ¾," "2+," ">95," "POSITIVE, 1 to 5 %," "1+," ">90% / POSITIVE," "Moderate 2/4," "Weak ¼," "MODERATE," "90% / POSITIVE," "Low Positive," "Low Positive (1-10%)," or "1-5"
<b>Mastectomy</b>	A procedure with CPT code 19305, 19306, 19303, or 19307
<b>Lumpectomy</b>	A procedure with CPT code 19301, 19302, 19120, 19125, or 19126

**Table 1: Breast Cancer Screening Rates and Patient Portal Use**

Series Name	MyChart User			MyChart Non-User			PP Diff
	Patients	Screened	% Screened	Patients	Screened	% Screened	
40 to 54	4,309,679	3,329,781	77.26%	531,339	308,957	58.15%	19.12%
55 to 64	3,029,503	2,361,870	77.96%	631,161	388,040	61.48%	16.48%
65 to 74	2,495,043	1,884,413	75.53%	767,600	437,806	57.04%	18.49%
Black	971,178	790,679	81.41%	341,946	226,250	66.17%	15.25%
Hispanic	567,409	440,799	77.69%	308,632	214,646	69.55%	8.14%
White	7,042,344	5,397,643	76.65%	1,014,881	546,780	53.88%	22.77%
Another Race/Eth.	1,253,294	946,943	75.56%	264,641	147,127	55.59%	19.96%
High Risk	1,573,185	1,400,623	89.03%	145,558	118,290	81.27%	7.76%
Not High Risk	8,261,040	6,175,441	74.75%	1,784,542	1,016,513	56.96%	17.79%