

High Adherence To Mammography Screening Before and After Multi-Cancer Early Detection (MCED) Testing

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INTRODUCTION

- Breast cancer screening through routine mammography remains a cornerstone of early detection and is recommended by established guidelines for eligible women¹
- Blood-based multi-cancer early detection (MCED) tests, such as Galleri®, offer a novel approach for detecting signals across multiple cancers, including those without existing screening options, using a single blood draw
- As MCED testing is adopted in clinical practice, there is growing concern that it could reduce adherence to established cancer screening practices, particularly mammography
- This study evaluates changes in women’s mammography behavior by comparing screening patterns before and after receipt of the Galleri® test to assess its real-world impact on guideline-recommended care

OBJECTIVE

- Examine mammography screening rates before and after receiving a negative MCED test result in a cohort of women eligible for breast cancer screening

KEY RESULTS: HIGH MAMMOGRAPHY ADHERENCE BEFORE AND AFTER MCED

- Of the 2820 women included in the final sample (Table 1), the majority were white non-Hispanic (61.9%) and had commercial health insurance (80.4%) (Table 2)
- Geographic representation across the 4 Census regions ranged from 19.1% in the Northeast to 27.3% in the West region
- Baseline characteristics were comparable among women in the overall sample and in the subset excluding those aged 62-67 years on the index date
- In the primary analysis, 83.6% (2,357) of women received a mammogram in the post-index period, compared to 82.2% (2,317) in the pre-index period (Figure 1A)
- Similar high adherence (>77%) was observed across sensitivity analyses, indicating robustness of findings (Figure 1B-1E)
- Post-index adherence was nominally slightly higher than pre-index adherence in all analyses
- Excluding diagnostic mammograms lowered overall adherence to ~78%, but patterns remained consistent between pre- and post-index periods (Figure 1C)

Table 1. Sample Attrition.

Criterion	N
Women with ≥1 negative result on MCED test during 07/01/2022 - 06/30/2023 ^a	27,364
No MCED test prior to 07/01/2022 or index date	25,060
Age 42-72 years on index date	19,727
Closed medical insurance medical coverage on index date	6122
≥24 months of continuous closed medical insurance coverage immediately prior to and immediately following the index date	2820
Sensitivity Analysis 4: Excluding women who crossed Medicare eligibility during the study period	2306

^aOnly patients with a unique one-to-one match between their record and a Komodo ID were included.

Table 2. Baseline Demographic Characteristics.

	Overall N=2820	Sensitivity Analysis 4 ^a N=2306
Age		
Mean (SD)	57.3 (7.5)	55.8 (7.5)
Median (IQR)	57.0 (52.0, 63.0)	55.0 (51.0, 60.0)
Race/Ethnicity, n (%)		
White	1746 (61.9)	1373 (59.5)
Other ^b	512 (18.2)	429 (18.6)
Unknown	562 (19.9)	504 (21.9)
Insurance Type, n (%)		
Commercial	2268 (80.4)	1881 (81.6)
Medicaid, Medicare, or Unknown	552 (19.6)	425 (18.4)
Census Region, n (%)		
Northeast	540 (19.1)	454 (19.7)
Midwest	742 (26.3)	585 (25.4)
South	768 (27.2)	620 (26.9)
West	770 (27.3)	647 (28.1)

^aExcluding women who crossed Medicare eligibility during the study period (ie, women aged 62-67 years on the index date).

^bOther^b race and ethnicity includes ‘Asian or Pacific Islander,’ ‘Black or African American,’ ‘Hispanic or Latino,’ and ‘Other.’

Figure 1. Adherence to Mammography or Breast Imaging Procedures Pre- and Post- Index Date (n, % of women).



METHODS

PRIMARY ANALYSIS

- This retrospective cohort study included women aged 42-72 years with negative (cancer signal not detected) results on Galleri®, the MCED test of interest for this analysis (Table 1)
- Patients were observed for 2 years before and 2 years after their first observed MCED test with a negative result (index date), with follow-up continuing until the first identified mammogram or until the end of respective observation periods
- Descriptive statistics were used to summarize baseline demographic characteristics and mammography receipt during the pre-index and post-index 24-month observation periods
- Mammograms were identified using CPT and HCPCS codes for both screening and diagnostic procedures
- To minimize the impact of COVID-19–related disruptions, the pre-index observation period was defined after the pandemic recovery phase.² Therefore, the descriptive analysis included women whose index MCED test date occurred between July 01, 2022, and June 30, 2023
- Data were obtained from GRAIL, Inc. on MCED test use and linked to de-identified US healthcare claims from Komodo Health via anonymous tokenization. The final linked dataset contained no protected health information

SENSITIVITY ANALYSES

To test the robustness of our findings, additional sensitivity analyses were conducted. These included:

- Sensitivity Analysis 1:** Excluding mammograms ordered within 1 month of the index date
- Sensitivity Analysis 2:** Including breast ultrasound and breast MRI (identified using CPT and HCPCS codes) in addition to mammograms
- Sensitivity Analysis 3:** Restricting to screening mammograms only
- Sensitivity Analysis 4:** Excluding women who crossed Medicare eligibility during the study period (ie, women aged 62-67 years on the index date)

CONCLUSION

- Women maintained high adherence to mammography at 24 months following receipt of a negative MCED test result, with over 80% receiving mammograms
- These findings suggest that use of the MCED testing does not appear to negatively impact participation in guideline-recommended cancer screening

References

- National Comprehensive Cancer Network. NCCN Guidelines for Patients: Breast Cancer Screening. Version 2.2026. 2026. https://www.nccn.org/professionals/physician_gls/pdf/breast.pdf.
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