

BREAST IMAGING OUTCOMES INTELLIGENCE

Tier 1 Patient Retention and Return Compliance

THE 2023 ENTRY COHORT

A second cohort, one year on. Does the 2022 picture hold when we follow a fresh group of normal-screen patients?

Study population: 2023 entry cohort (first Tier 1 screen in 2023), same de-identified facility

Observation window: January 2023 through May 30, 2026 (up to 3.4 years, one year shorter than the 2022 cohort)

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Companion to: the 2022 Tier 1 cohort report, using identical methods

1,940

women entered Tier 1 in 2023

66.0%

returned at least once

30.5%

not seen again

Executive summary

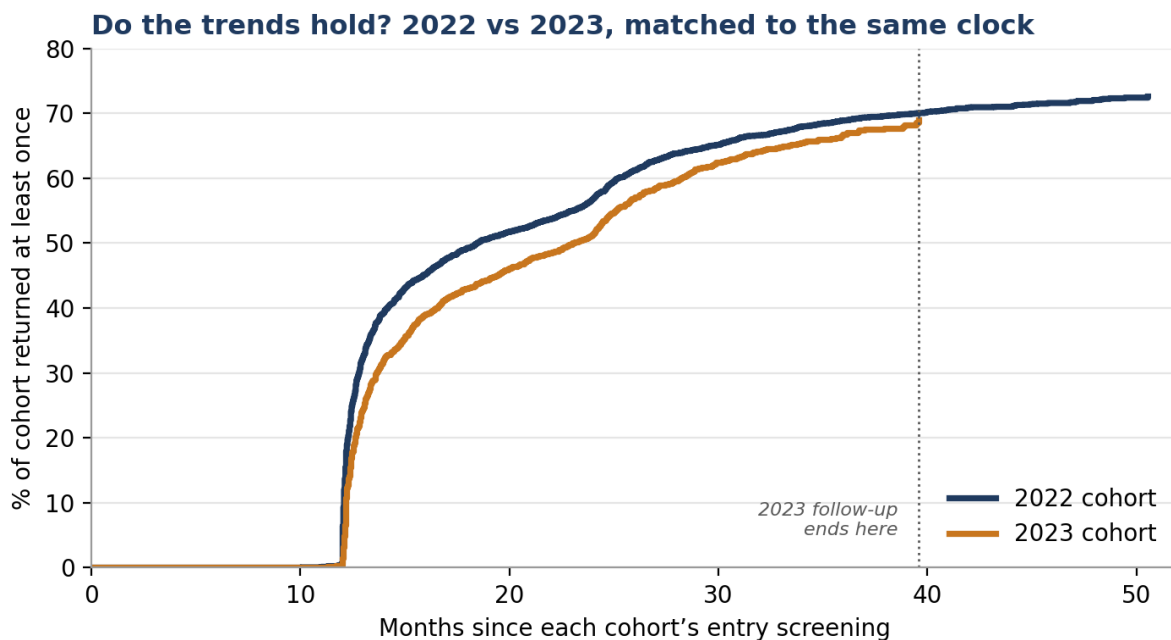
This is the companion analysis to the 2022 Tier 1 report, run on a fresh group: the **1,940 women whose first normal screening mammogram at this practice fell in 2023**. The purpose is not just to describe them, but to test whether the patterns we saw in 2022 were a one-year accident or a stable feature of how this practice retains its healthiest patients. The short answer: **the picture holds**. Same signature, modestly softer, and entirely consistent with one less year of follow-up.

As before, the encouraging news sits in the middle and the opportunity sits at the edges. **When these women return, they still return on a recognizably annual rhythm**: 55.8% of return visits are strict-annual and better than four in five fall within roughly twenty-one months. And as before, the real issue is not lateness but disappearance. About a third of the cohort has not come back for a Tier 1 screen, and **591 women have not been seen at this practice in any capacity since their 2023 visit**.

One honest caveat drives the whole comparison. The 2023 cohort has had a year less to come back, so its raw return rate (66%) will keep climbing and should not be set against the 2022 cohort's four-year figure directly. Every cross-cohort number below is matched to the same clock, which is the only fair way to ask whether retention is improving or slipping.

How the 2023 cohort compares to 2022

Matched to the same number of months since entry, the two cohorts track remarkably closely, with 2023 running a few points behind early and converging by the third year.



Metric (matched where follow-up differs)	2022 cohort	2023 cohort
Women entering Tier 1	3,686	1,940
Returned at least once, by 33 months	67.2%	64.8%
Strict-annual share of returns	63.8%	55.8%

Within ~21 months (strict+semi+loose)	84.3%	81.1%
Never seen again (attrition tail)	25.7%	30.5%

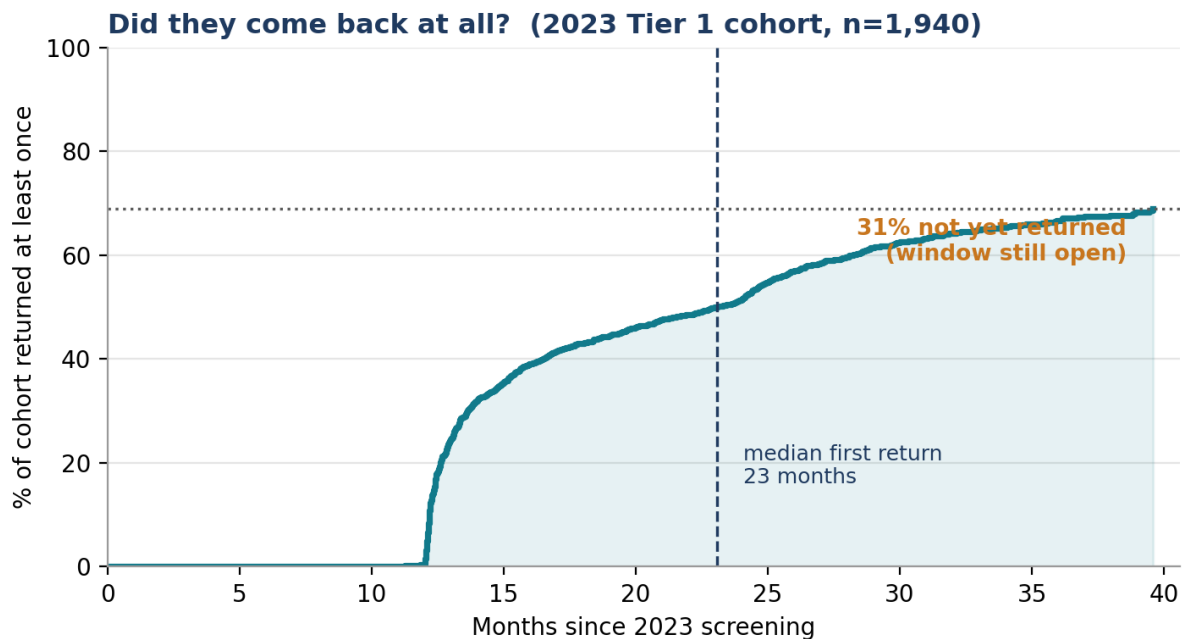
Read this honestly for the board. The 2023 cohort is slightly slower to return and slightly less strictly on-time, and its attrition tail is a little larger. None of those gaps is dramatic, and part of each is explained by the shorter window. The value of seeing two cohorts side by side is not the small differences; it is that the **fundamental shape repeats**. A strong on-time culture for those who stay, and a persistent silent-attrition problem, is now a documented feature of this practice across two independent years, not a fluke of one.

1. What this report measures

The definitions are identical to the 2022 report. A **Tier 1 patient** is a woman who presented for an asymptomatic screening mammogram, was assessed negative or benign, and was advised to return to routine annual screening. The 2023 cohort is the set of women whose **first such qualifying screen falls in 2023**, which by construction excludes the 2022 entrants and gives us a clean, independent group to follow.

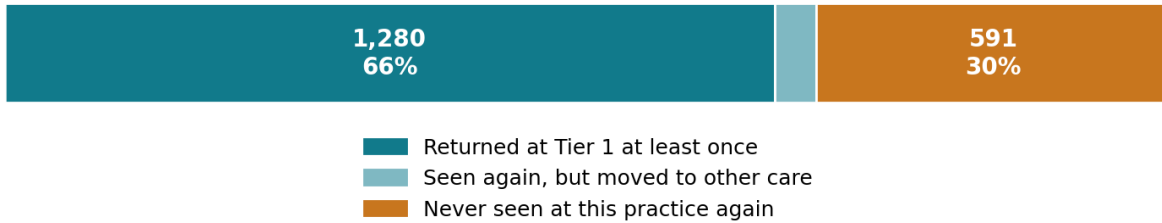
A woman who returns and is again a normal screen stays in Tier 1; a woman who returns but is recalled or arrives with symptoms is recorded as **seen, but not at Tier 1** for that year and may re-enter later. As in the prior report, all return modeling is censoring-adjusted, so no woman is counted against the practice for failing to return before she is due. That correction matters more here than it did for 2022, precisely because this cohort is younger and more of its women are legitimately not yet due.

2. Finding one — Did they come back?



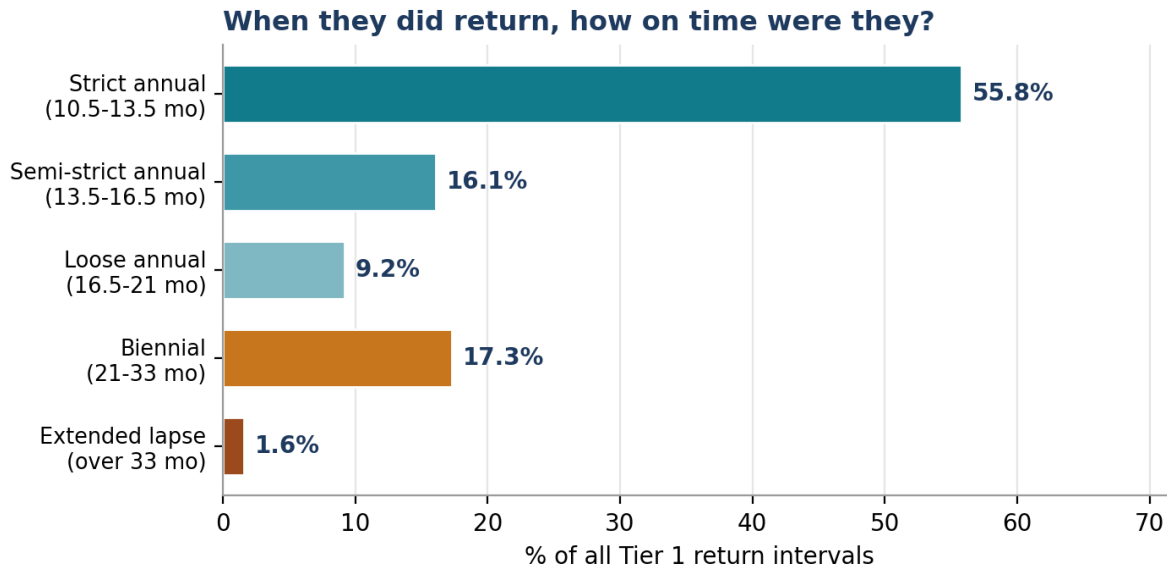
The curve has the same shape as the 2022 cohort: almost no returns before twelve months, then a brisk climb. The difference is that this cohort's curve is still actively rising at the right edge, because its follow-up runs out around three and a half years. The **median woman who returns does so at about 23 months**, later than 2022's 18, but a meaningful part of that gap is the shorter observation window rather than worse behavior. The plateau you see is not a true ceiling; it is where the clock stops.

Where the 2023 cohort went over three-plus years



Of the 660 women who have not returned at Tier 1, only 69 were seen again in any other capacity. The other **591 women have not been seen at this practice since their 2023 screen**. Some fraction of these will still resurface as the cohort matures, which is the one place the 2023 number should be read more gently than the 2022 one. But the structure is the same: the dominant reason women leave Tier 1 is that they leave the practice, not that they escalate into other care.

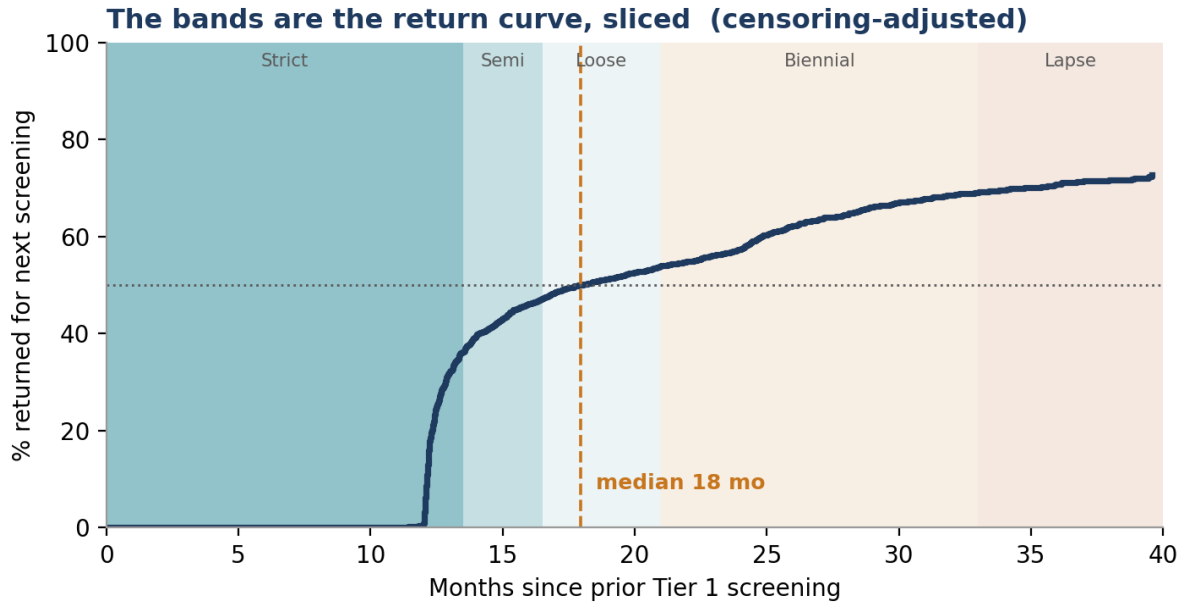
3. Finding two — When they returned, were they on time?



Strict annual (55.8%) remains the single largest group by far, and adding **semi-strict (16.1%)** and **loose annual (9.2%)** puts better than four in five returns within roughly twenty-one months. The **biennial group (17.3%)** is somewhat larger than in 2022, and the **extended-lapse group (1.6%)** is smaller, but that last figure is an artifact of the shorter window: a cohort observed for three years simply cannot accumulate many 33-month gaps yet. The honest read is that the on-time culture is **slightly looser than the 2022 cohort but still clearly annual in character**.

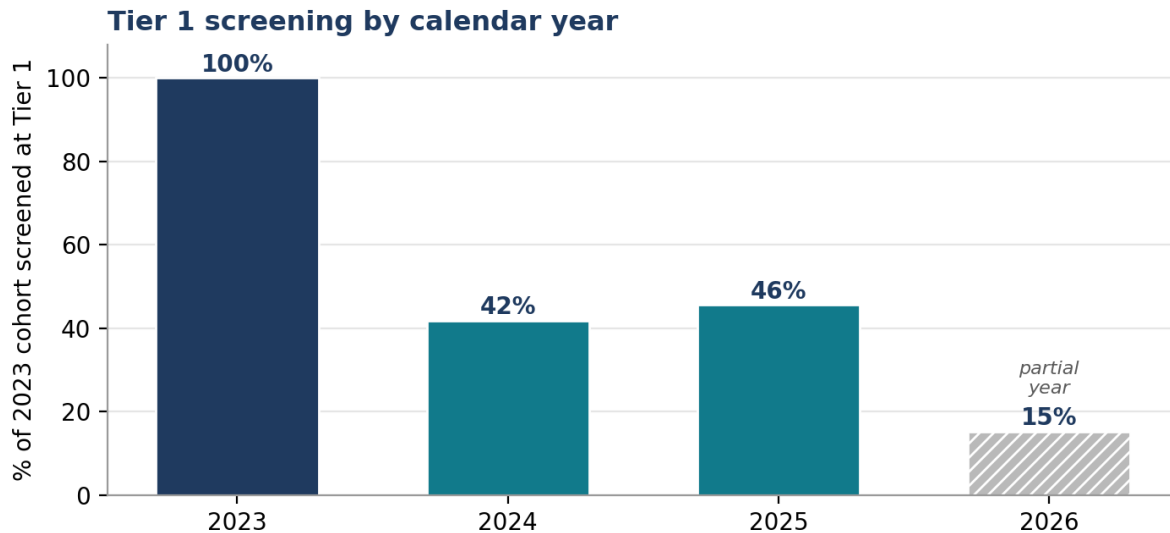
Why this holds up to scrutiny

As in the prior report, the bands are not a separate scoring scheme; they are the censoring-adjusted return curve cut into labeled segments. Showing it this way is what keeps the percentages honest for a younger cohort whose members are still moving through their windows.



The median time to the next screen is about 18 months for this cohort. The shape of the curve, and the way the bands sit on it, mirrors 2022; it is simply shifted slightly to the right, which is the visual signature of a modestly softer cadence.

4. Finding three — The year-by-year view



Every woman is present in 2023 by definition. Tier 1 participation then settles into the low-to-mid forties each year, close to the 2022 cohort's steady state. (2026 is lighter because it is a partial year and will rise as the year completes.) The same operational truth applies: in any given year, roughly four to five in ten of the eligible cohort are actually getting their annual screen here, and closing that gap is the practical target.

5. Finding four — Why this matters, and what is on the table

The recall opportunity is, again, concrete and immediate. As of today, **1,094 women from the 2023 cohort are past their recommended return date with no subsequent screen on record.** They sort by urgency:

- **680 women** are more than fifteen months overdue — the deepest-lapse, highest-risk group.
- **124 women** are nine to fifteen months overdue — recently slipped and most recoverable.
- **180 women** are three to nine months overdue — a reminder likely suffices.

Combined with the 2022 cohort's list, the practice is now looking at more than three thousand individually identifiable women who are overdue across just these two entry years and this single tier. That is the scale of the standing recall opportunity.

The clinical stakes carry across cohorts as well. Within the 2023 group, **19 women received a malignant diagnosis** during the window. As in the prior report, we are not attributing these outcomes to specific gaps here; that requires the dedicated outcomes study we continue to recommend. But two cohorts now show the same thing: the women most exposed to delayed detection are the ones who lapse, and they are knowable by name.

6. Every patient has a record

As before, the aggregate numbers are built from individual histories. Three real, de-identified 2023-cohort records below show the same three patterns that drove the 2022 report. Identifiers are masked to the final four characters.

Pattern A — the steady returner (••A8WA), one of 490 like her

Date	Reason	Assessment	Status
2023-02-10	Asymptomatic	Negative	Tier 1
2024-09-25	Asymptomatic	Negative	Tier 1
2025-11-21	Asymptomatic	Negative	Tier 1

Plain-language record: Returned at Tier 1 three years running, averaging about 1.4 years between screens. She drifts a little past the strict annual mark each time, which is exactly the slightly-softer cadence that distinguishes this cohort from 2022. Her next visit is due in late 2026.

Pattern B — seen, but not at Tier 1 (• 88F3), one of 44 like her

Date	Reason	Assessment	Status
2023-11-01	Asymptomatic	Benign	Tier 1
2024-12-16	Asymptomatic	Needs additional imaging	Seen, not Tier 1 (recalled)
2024-12-19	Symptomatic	Benign	Seen, not Tier 1 (worked up)
2025-12-18	Asymptomatic	Benign	Tier 1

Plain-language record: Entered Tier 1 in 2023, returned on schedule in 2024 but was recalled and then worked up to a benign result, so she does not count as Tier 1 that year, and re-entered Tier 1 in 2025. The same managed-correctly story we saw in the 2022 cohort.

Pattern C — the lost patient (••184B), one of 591 like her

Date	Reason	Assessment	Status
2023-02-13	Asymptomatic	Negative	Tier 1

Plain-language record: A single normal screen in 2023 and then nothing. Never recalled, never symptomatic, never seen again. She was due back in February 2024 and is now more than two years overdue. This is the patient the recall program exists to recover, and there are 591 of her in this cohort alone.

7. What we recommend

1. **Fold the 2023 overdue list into the active recall program.** The 1,094 overdue women here join the 2022 list; together they exceed three thousand identifiable patients across two years and one tier.
2. **Treat the 591 vanished 2023 patients as re-engagement targets,** with the understanding that a portion are simply not yet due and will return on their own; outreach accelerates the rest.
3. **Adopt the named-band spectrum as a standing, cohort-over-cohort metric.** Reported each year, it will show whether the modest softening from 2022 to 2023 is noise or the start of a trend worth managing.
4. **Commission the outcomes linkage across both cohorts,** connecting lapse to the combined malignant diagnoses and stage at detection.

And now the case makes itself. Two independent cohorts, analyzed identically, tell the same story with the same structure. That is what turns a single interesting report into a program. The natural next steps are the 2024 and 2025 cohorts, which will sharpen the trend line, and the higher tiers, which will show how the practice manages its more complex patients. Each additional cohort costs little to produce on this engine and adds a year to a picture administration can now trust.

Appendix — Methods and definitions

Cohort and Tier 1 definition

The 2023 cohort comprises women whose earliest qualifying Tier 1 event (asymptomatic screening mammogram, negative or benign event-level assessment, identified by the MM procedure component) falls in calendar 2023, with no qualifying Tier 1 event in 2022. This yields an independent incident cohort of 1,940 women, distinct from the 3,686 in the 2022 report. The qualifying logic is identical to the prior report and reproduces the practice's Tier 1 extract.

Matched-horizon comparison

Because the 2023 cohort has up to a year less follow-up, all cross-cohort figures compare the two groups at the same number of months since entry, using the censoring-adjusted curves up to the point where the shorter cohort's observation ends. Raw lifetime figures (such as the 66% return rate) are not comparable to the 2022 cohort's four-year figures and are presented only as within-cohort descriptions that will continue to rise.

Bands, censoring, and overdue determination

Band cutpoints (strict 10.5-13.5 months, semi-strict 13.5-16.5, loose 16.5-21, biennial 21-33, extended lapse beyond 33) and the two Kaplan-Meier curves (first-return and cadence) are defined exactly as in the 2022 report, including patient-level clustering for cadence confidence intervals and the separation of true lapse from not-yet-due. The shorter window means the extended-lapse band and the never-returned figure are both under-observed relative to a mature cohort and should be read as lower bounds. A woman is overdue when her most recent Tier 1 screen plus its recommended follow-up date precedes May 30, 2026 with no later qualifying screen.

Prepared by Mammologix, Inc. (powered by I/O Trak). Companion to the 2022 Tier 1 cohort report. De-identified clinical operations analysis for internal administrative use.