

REAL-WORLD GENOMIC PROFILING PATTERNS AMONG PATIENTS WITH METASTATIC PROSTATE CANCER: A RETROSPECTIVE MANAGED CARE CLAIMS ANALYSIS



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Background

- Genomic and molecular biomarker testing can identify alterations that influence treatment selection for patients with metastatic prostate cancer, including eligibility for certain biomarker-directed therapies.[1,5]
- Current ASCO and NCCN guidelines recommend germline and somatic genomic testing for patients with metastatic prostate cancer to identify clinically actionable alterations and inform treatment selection.[1,2]
- Despite guideline recommendations, real-world genomic testing remains incomplete and varies across care settings. Next-generation sequencing (NGS) was reported in 27.1% of patients with metastatic prostate cancer in a nationwide study through 2022 and in 59% of patients in a 2026 academic-center study.[3,4]
- The aim of this study is to measure observed genomic and molecular biomarker testing rates among Commercial and Medicare members with metastatic prostate cancer in a New Jersey regional health plan and to describe testing timing, treatment utilization, and health plan-paid costs by testing status.

Objective

- Primary objective:** To assess the frequency of observed genomic and molecular biomarker testing among Commercial and Medicare members with metastatic prostate cancer in a New Jersey regional health plan.

Methods

- Study design:** Retrospective, descriptive analysis of Commercial and Medicare members with metastatic prostate cancer in a New Jersey regional health plan.
- Data source and period:** Medical and pharmacy claims were used to identify eligible members from January 1, 2022, through June 30, 2024.
- Cohort selection:** Members needed ≥ 2 prostate cancer (C61) claims, ≥ 1 metastatic disease claim, ≥ 1 associated medication claim, and six months of continuous enrollment before and after index. Index was the first associated medication claim.
- Biomarker assessment:** Members were classified as tested if any qualifying biomarker claim was observed, regardless of timing. The earliest test claim was used for comparisons with the first observed C61 claim and index.
- Analysis:** Counts, percentages, treatment categories, and health plan-paid costs were summarized by testing status. Cost blanks represented \$0. No statistical tests were performed.

Results

Figure 1. Observed Biomarker Testing Among Cohort Members (N=247)

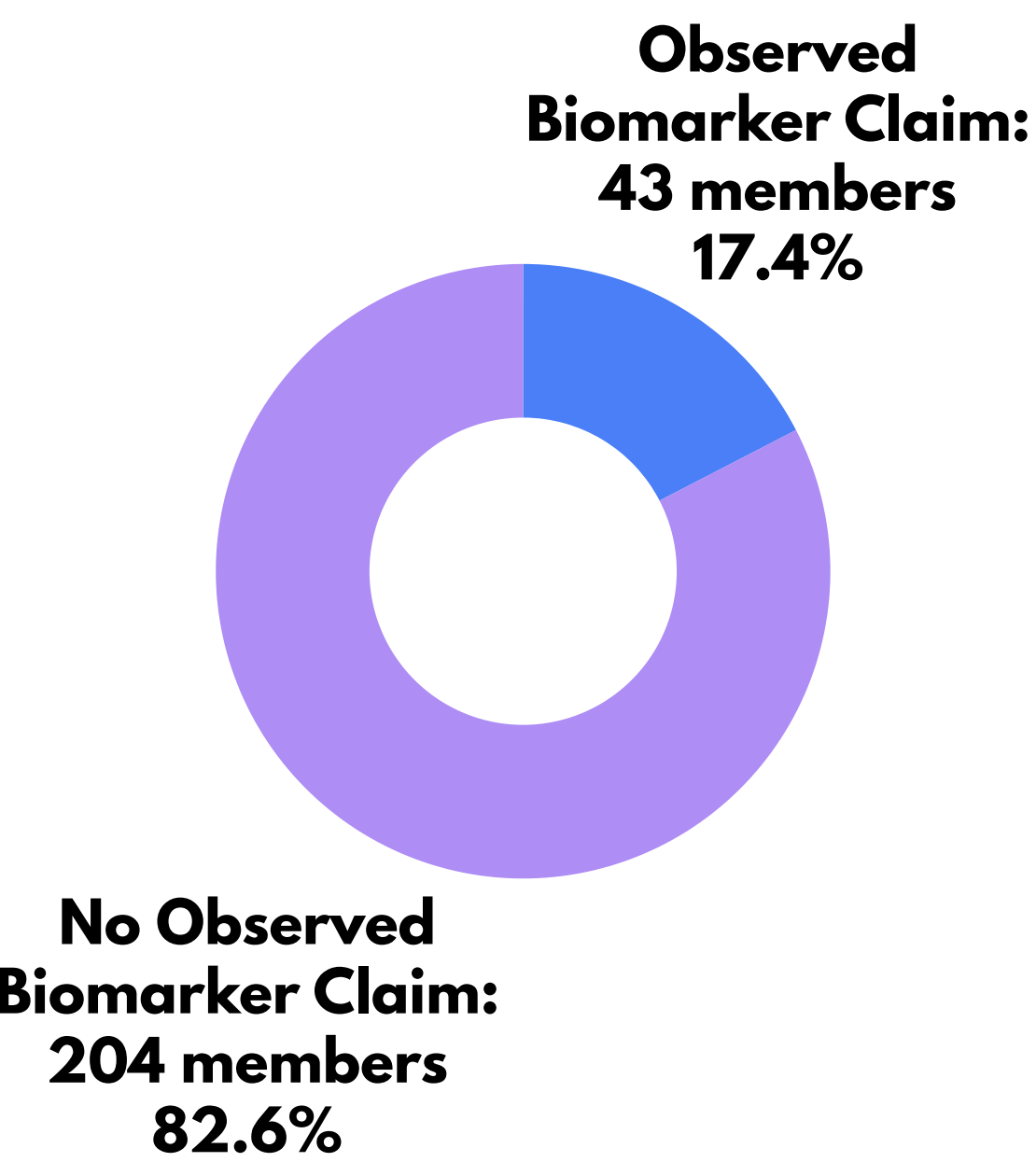
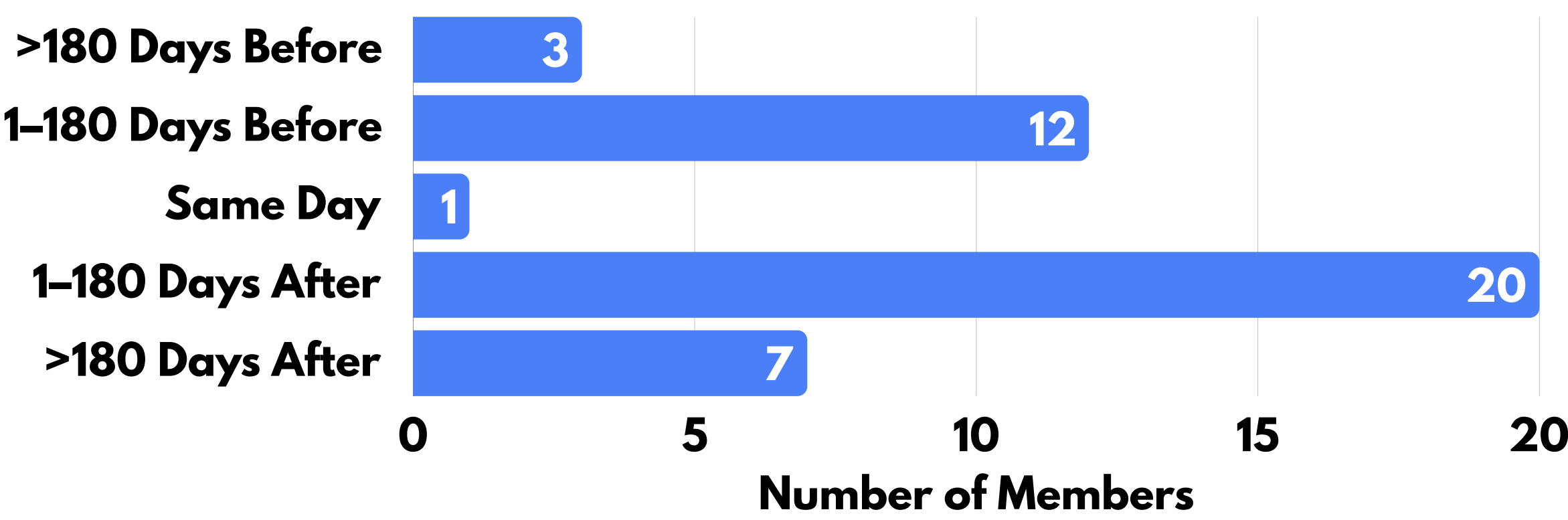
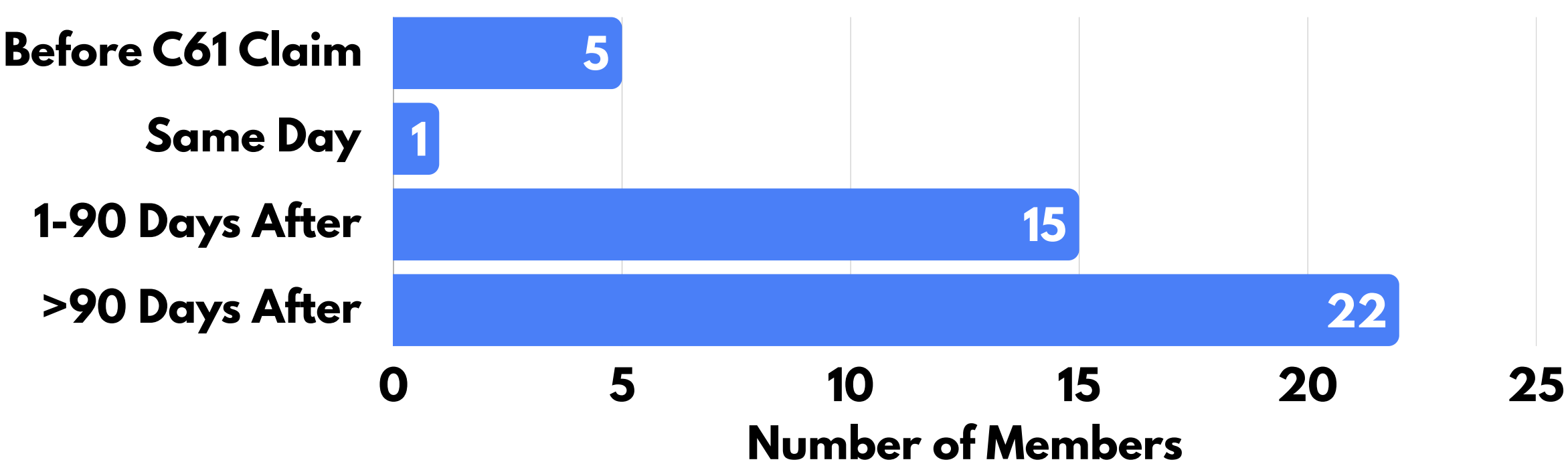


Figure 2. Earliest Biomarker Claim Relative to First Medication Claim



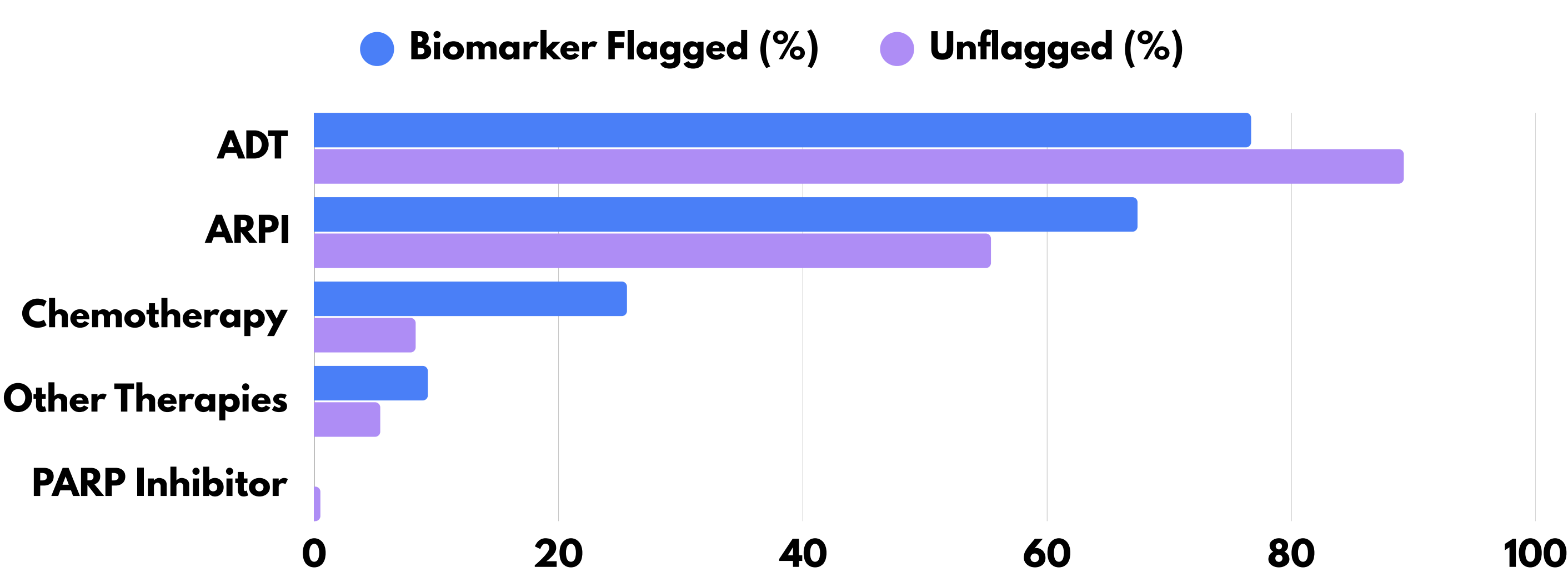
Note: Among members with an observed biomarker claim (n=43).

Figure 3. Earliest Biomarker Claim Relative to First Observed Prostate Cancer (C61) Claim



Note: n = 43; median 94 days after C61 claim (IQR 36-261 days).

Figure 4. Observed Treatment Categories by Biomarker Status



Note: Other therapies included pembrolizumab, sipuleucel-T, radium-223, and Lu-177.

Table 1. Six-Month Observed Health Plan-Paid Costs by Biomarker Testing Status

Health-plan paid cost per member	Biomarker flagged, n=43: median (mean)	Unflagged, n=204: median (mean)
Diagnosis-related medical	\$52,200.72 (\$95,328.55)	\$31,706.26 (\$56,830.86)
Medical drugs	\$7,414.30 (\$44,140.42)	\$3,613.08 (\$28,106.47)
Pharmacy drugs	\$18,933.79 (\$86,102.04)	\$12,291.26 (\$64,864.55)
Biomarker claims	\$3,210.33 (\$3,370.58)	N/A

Note: Observed paid totals; blanks counted as \$0. Cost fields overlap and were not summed. Observation lengths varied; values are not PMPM. Higher observed health plan-paid costs among biomarker-tested members should be interpreted descriptively, as differences may reflect treatment patterns, treatment follow-up length, disease severity, or other clinical factors not captured in the claims data.

Discussion

- Among tested members, 27 of 43 (62.8%) had their earliest observed biomarker claim after the first associated medication claim.
- Observed testing rates by approximate age at index were 19.0% (19/100) for ages 18-64, 19.3% (16/83) for ages 65-74, and 12.5% (8/64) for ages ≥ 75 .
- Observed testing rates were relatively low across the cohort, with testing occurring later in the treatment pathway for many tested members.
- Chemotherapy claims were more frequently observed among tested than untested members; this descriptive difference does not establish that testing influenced treatment selection.
- Precision therapy use was limited among biomarker-tested members; none had observed PARP inhibitor use, while two had pembrolizumab claims.
- Because biomarker results were unavailable, the analysis could not determine whether actionable alterations were identified or explain subsequent treatment selection.
- Higher observed costs among tested members may reflect differences in treatment patterns, disease severity, follow-up length, or other factors not captured in claims.

Limitations

This study was limited to claims analysis from a single health plan; claims paid through other plans were not accessible or included. Claims identify billed services, not test results, clinical intent, disease state, or the true date of metastatic diagnosis. Repeat biomarker testing could not be assessed from the available data. The first observed C61 (prostate cancer) diagnosis claim may not represent the patient's first prostate cancer diagnosis. Provider specialty was unavailable. Differences in treatment follow-up length and disease severity between groups may limit interpretation of unadjusted treatment and total paid-cost comparisons. Cost comparisons were descriptive and unadjusted for differences in disease severity or treatment utilization.

Conclusions

- Only 17.4% of eligible members had an observed qualifying biomarker claim, highlighting an opportunity to support greater integration of genomic and molecular testing in this managed care population.
- The timing of observed testing and limited precision therapy use highlight opportunities for further evaluation of how biomarker testing is incorporated into treatment pathways for metastatic prostate cancer.

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Key Sources & Acknowledgements

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