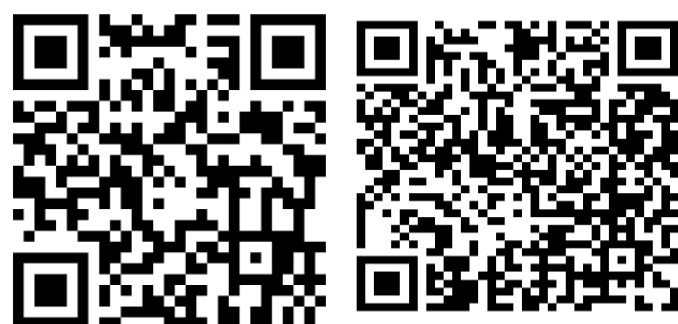


Assessing Health Disparities in Adherence and Persistence to Oral Targeted Therapies Among Patients with Advanced or Metastatic Non-Small Cell Lung Cancer in a Specialty Pharmacy Setting

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Introduction

- NSCLC is a leading cause of cancer death; many patients are diagnosed at an advanced stage.^{1,2}
- Oral targeted therapies improve survival but must be taken daily for a long time.³
- Real-world adherence is often low and may differ by race and ethnicity, insurance, and cost.^{4–7}
- Disparity evidence in specialty pharmacy is limited.
- Identifying which patients stop early can help specialty pharmacies target support to the groups most at risk.



Objective

To assess disparities in medication **adherence** and **persistence** to oral targeted therapies in patients with advanced/metastatic NSCLC

Methods

Design: Retrospective new-user cohort; Optum Specialty Pharmacy data linked to SVI and RUCA codes, Jan 2022–Dec 2025. This study was deemed exempt by the UnitedHealth Group® Institutional Review Board.

Population: Adults with advanced/metastatic NSCLC starting oral targeted therapy (Jul 2022–Dec 2024), ≥2 fills.

Adherence: proportion of days covered (PDC), first fill to last day of supply; adherent = PDC ≥80% (sensitivity ≥90%).

Persistence: time to discontinuation of the index drug (≥60-day gap; sensitivity 90 days). Index drug = GPI-8; a switch to another GPI-8 counted as discontinuation.

Analysis: Logistic regression (adherence); Kaplan–Meier and Cox models (persistence). N = 1,252; α = 0.05; SAS 8.5.

Figure 1: Study design

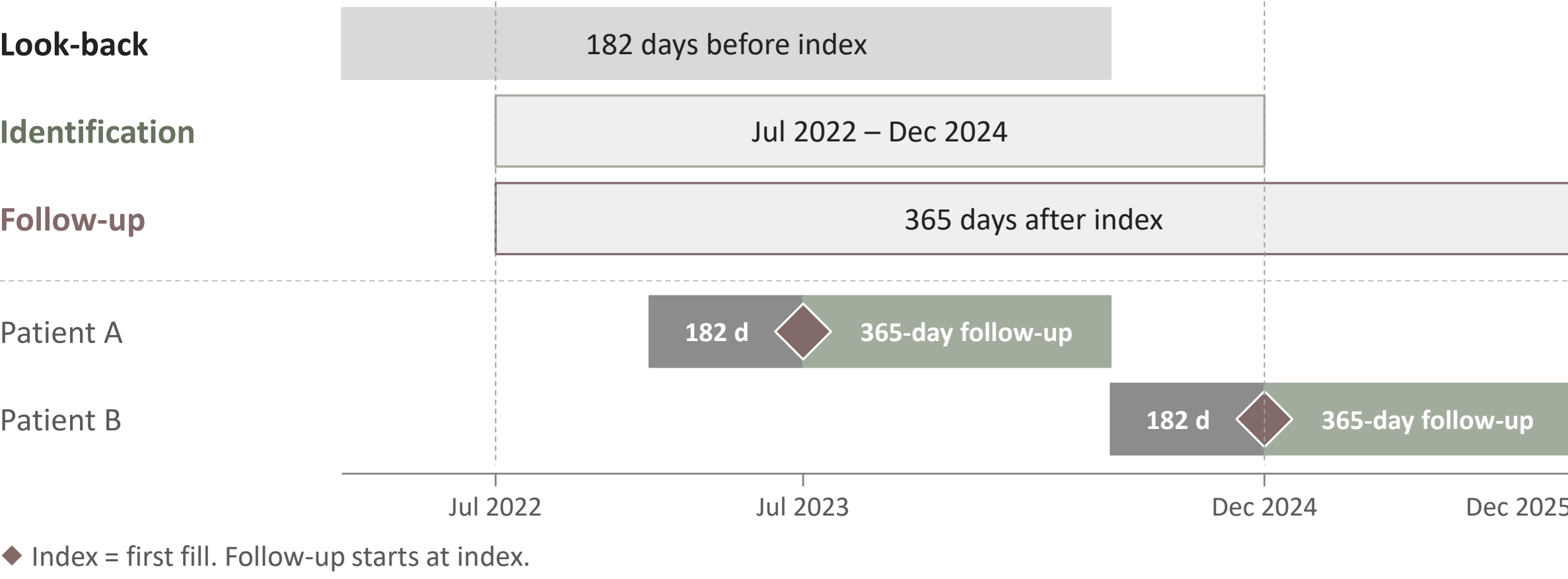
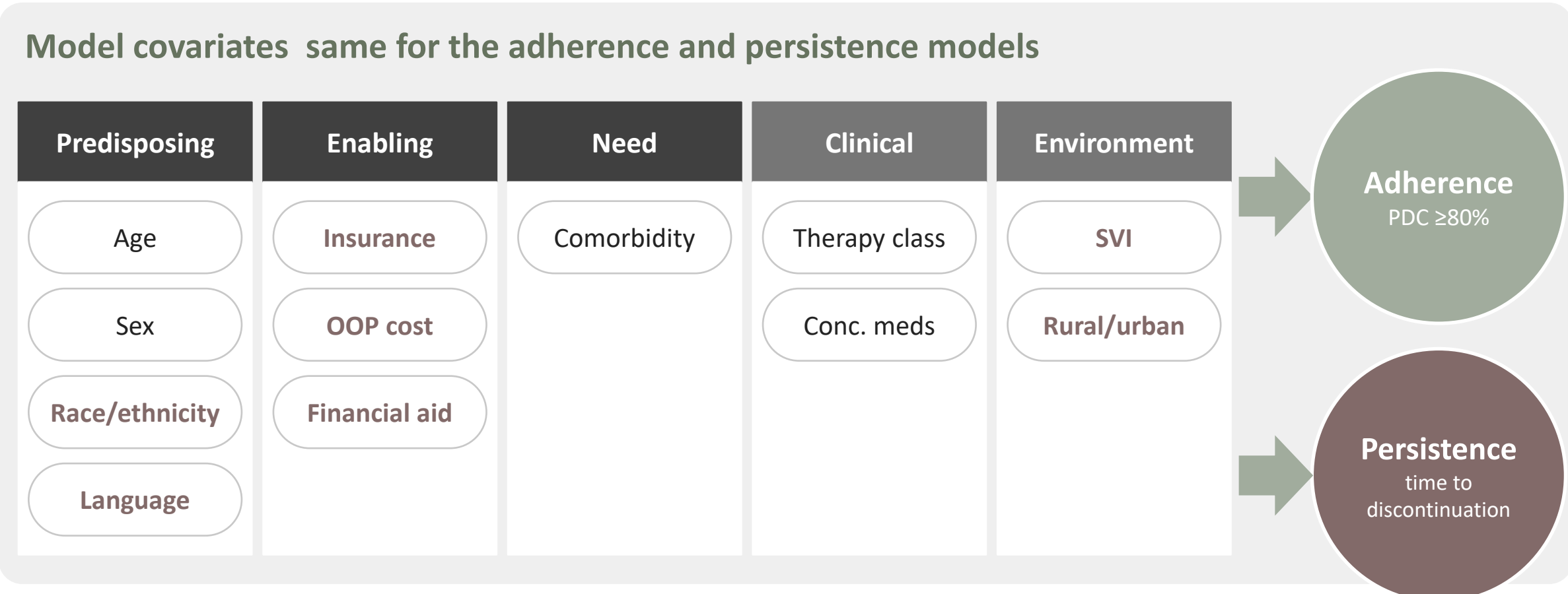


Figure 2: Andersen Behavioral Model⁸ for both outcomes



Rust text = health-equity factor. Results for both outcomes are shown in Figure 6.

Results

Figure 3: Cohort selection

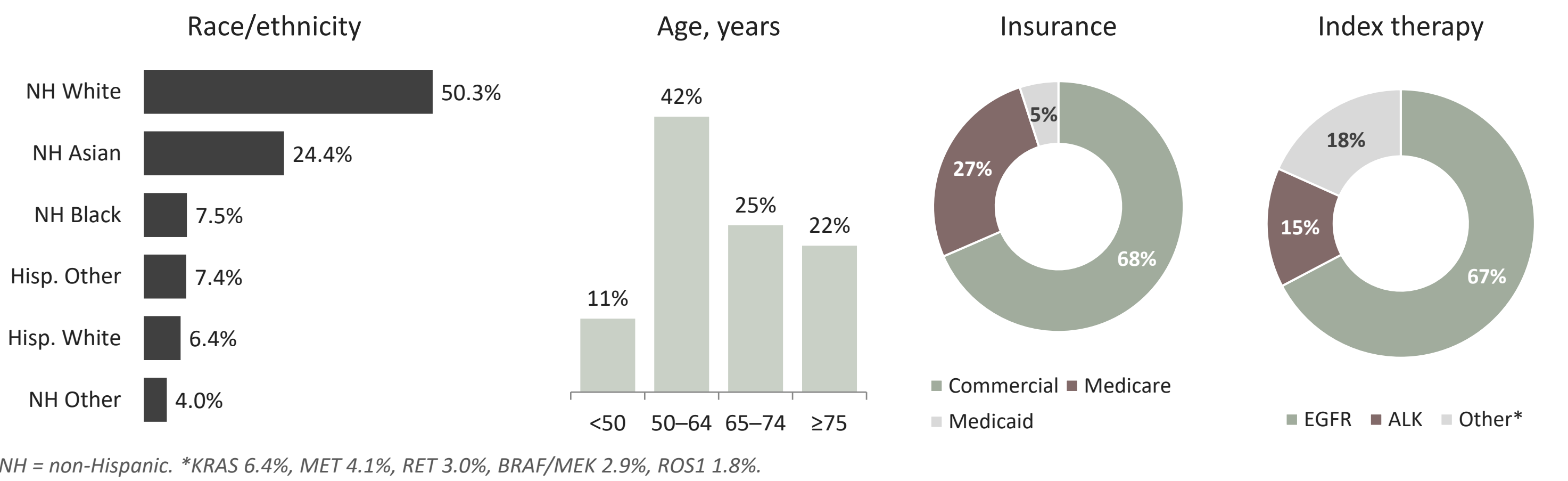


Table 1: Sample characteristics

Characteristic	n (%)	Characteristic	n (%)
Age, mean (SD)	64.4 (12.3)	OOP cost, median (IQR)	\$0 (0–4.60)
Female	805 (63.8)	Financial assistance	315 (25.0)
Rural residence	178 (14.1)	Comorbidity 1–2	340 (27.0)
Non-English language	60 (4.8)	Comorbidity 3 or more	253 (20.1)
Language not recorded	383 (30.4)	≥1 concomitant med*	320 (25.4)
SVI, mean (SD)	0.67 (0.23)		

Values are n (%) unless noted. *Noncancer medications filled alongside the oral targeted therapy. Comorbidity = Elixhauser count (groups do not overlap). OOP = out-of-pocket; SVI = Social Vulnerability Index.

Figure 4: Sample characteristics (continued)



NH = non-Hispanic. *KRAS 6.4%, MET 4.1%, RET 3.0%, BRAF/MEK 2.9%, ROS1 1.8%.

Key Findings about adherence and persistence

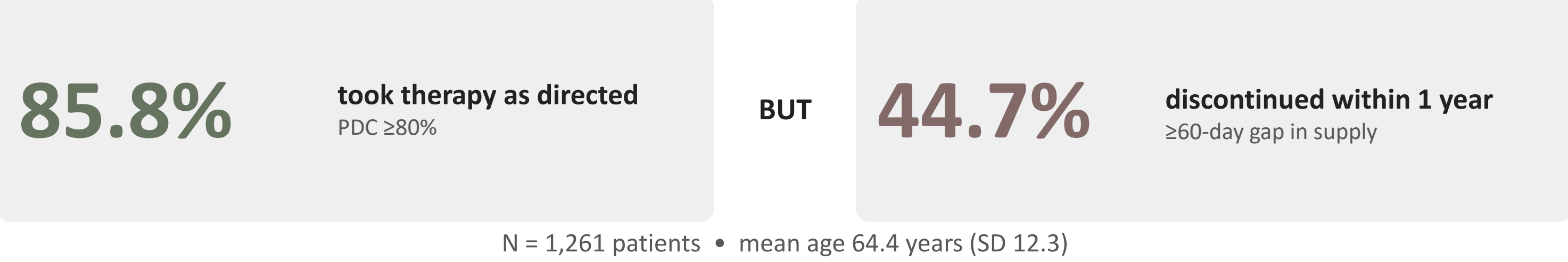


Figure 5: High adherence, but persistence declined over 1 year

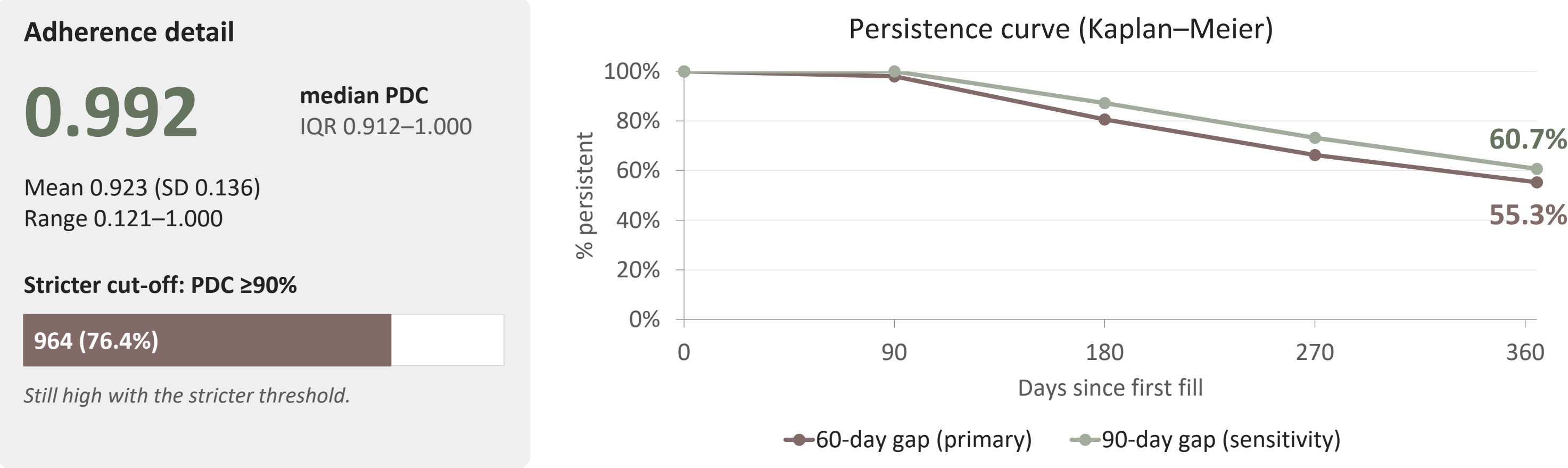
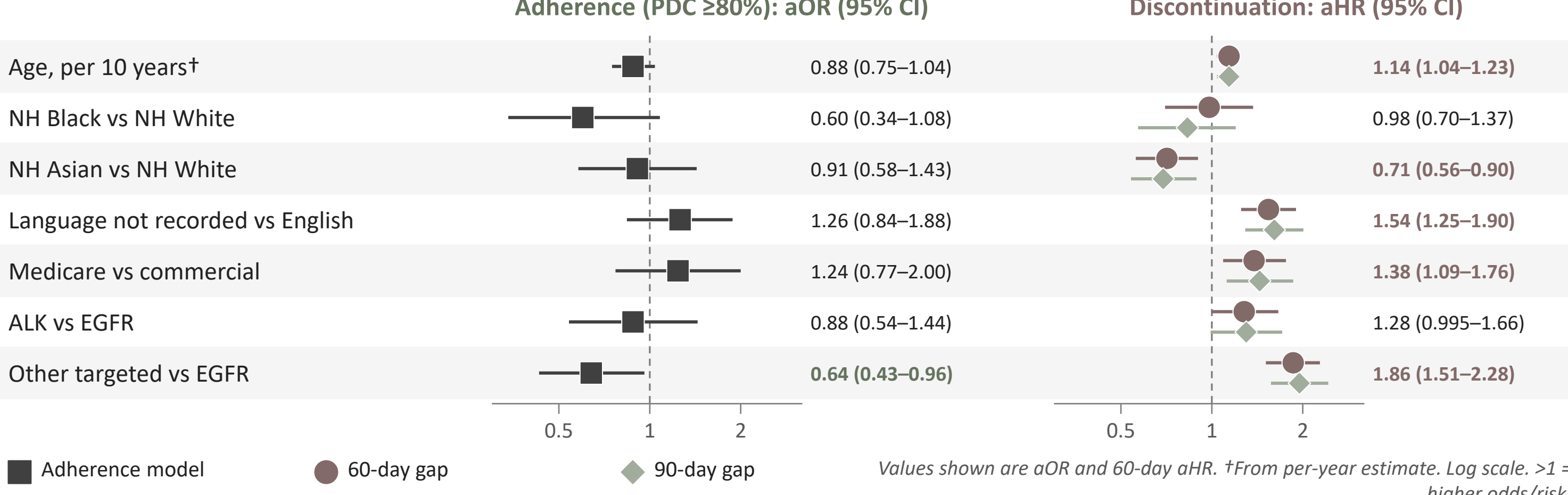
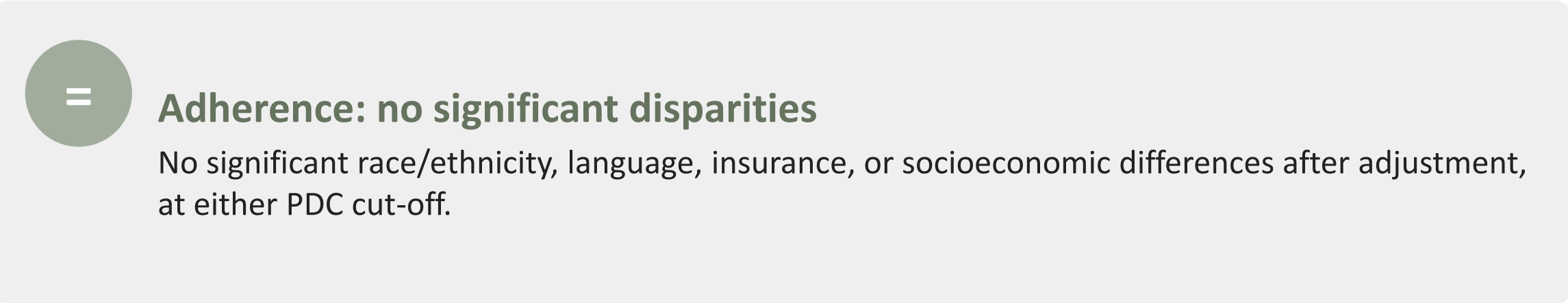


Figure 6: Multivariable Logistic Regression (adherence) and Cox Model (Discontinuation), N=1252



Key Findings about Health Disparity



Persistence: who was more likely to stop?

INSURANCE	aHR 60-day 90-day
Medicare vs commercial Higher risk of stopping than commercial.	1.38 1.44
CLINICAL	
Other targeted vs EGFR Higher risk of stopping than EGFR therapy.	1.86 1.95
PATIENT	
Age, per year 20 years older ≈ 30% higher risk.	1.01 1.01
EQUITY	
NH Asian vs NH White Lower risk: stayed on longer.	0.71 0.69

Implications

- The findings indicate an opportunity to support persistence in this population.
- Extra follow-up could benefit Medicare patients, older patients, and patients with less common mutations.
- Opportunity to increase capture of preferred language in the pharmacy setting.
- Future research should explore why patients stop and whether targeted support improves persistence.

Limitations

- Data came from one specialty pharmacy with active patient support, so results may not generalize.
- Fill records show medication dispensed, not doses taken, and no biomarker data were available.
- Requiring at least two fills excluded patients who discontinued very early.
- Adherence used a variable denominator, so it reflects time on therapy, not the full year

Conclusion

- Most patients took their therapy as prescribed.
- Adherence was similar across equity factors.
- Keeping patients on therapy is the next opportunity for specialty pharmacy.

References: 1. Jeon H, Lung 2025. 2. Hendricks LEL, Nat Rev Dis Primers 2024. 3. Phillips WJ, CMAJ 2024. 4. Manges-Bafalluy I, Farm Hosp 2025. 5. Rosentreter J, J Oncol Pharm Pract 2021. 6. Keating NL, JNCI 2022. 7. Vyas A, JMCP 2022. 8. Andersen RM, J Health Soc Behav 1995. **Abbreviations:** aHR, adjusted hazard ratio; aOR, adjusted odds ratio; IQR, interquartile range; NH, non-Hispanic; NSCLC, non-small cell lung cancer; OOP, out-of-pocket; PDC, proportion of days covered; RUCA, Rural–Urban Commuting Area; SVI, Social Vulnerability Index. **Acknowledgments:** The authors thank Optum Specialty Pharmacy, Genentech, the AMCP Foundation, and the University of Houston College of Pharmacy, and the project team for their support