

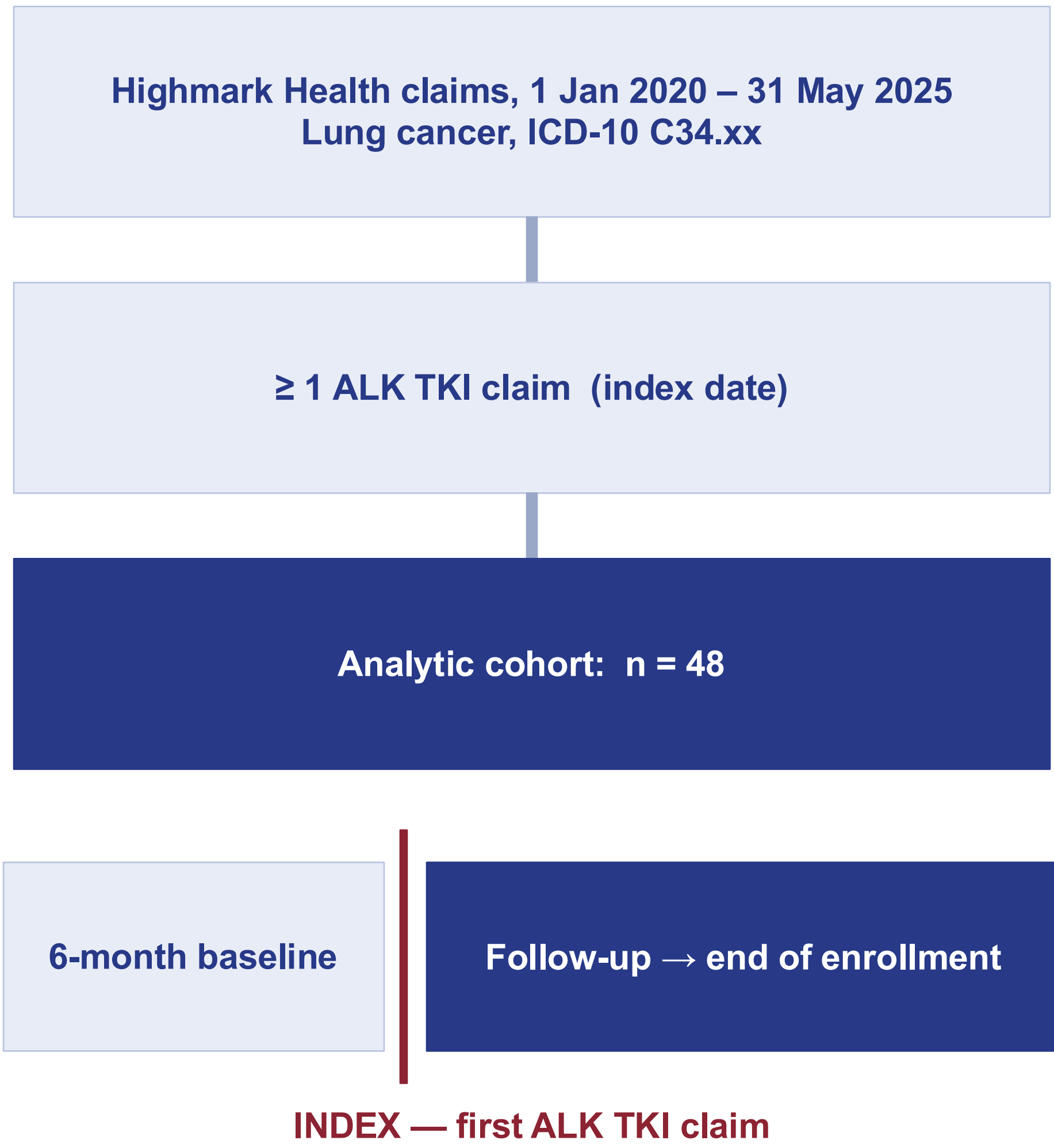
INTRODUCTION

- ALK rearrangements occur in ~3–5% of NSCLC and define a distinct, highly targetable subset.
- Successive generations of ALK Tyrosine kinase inhibitors (TKIs) have transformed survival but carry substantial acquisition cost.
- Real-world cost, utilization, and outcome data in commercially insured U.S. patients remain limited.
- **Objective:** characterize costs, healthcare utilization, safety, and survival among patients with ALK+ Non-small cell lung cancer (NSCLC) initiating ALK TKI therapy within a large regional payer network.

METHODS

Design:

- Retrospective cohort analysis of administrative claims from Highmark Health (Pittsburgh, PA).
- Groups — first generation (crizotinib) vs. second/third generation (ceritinib, alectinib, brigatinib, lorlatinib).
- Outcomes — Per-member-per-month (PMPM) total cost, ED visits and cost, adverse event claims, time to treatment discontinuation (TTD), and overall survival.



RESULTS

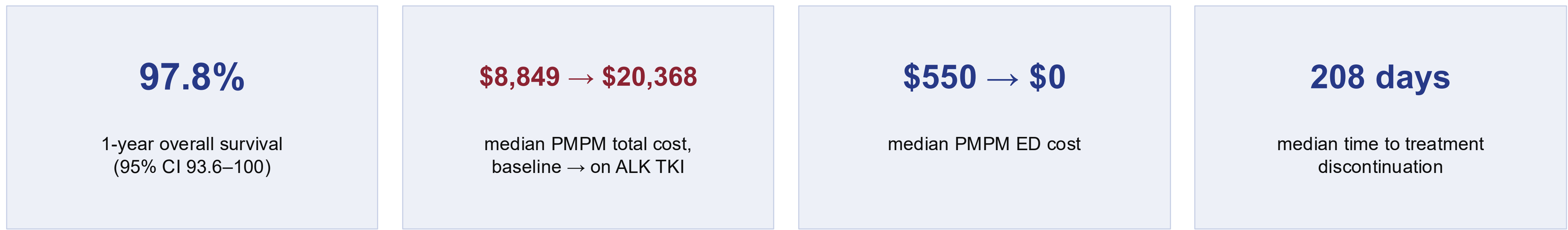


Table 1. Cohort characteristics and outcomes

Patients initiating ALK TKI	48
Median age, y (IQR)	60 (47–65)
Female	52%
Commercial, regional	52%
Medicare	23%
2nd / 3rd-generation TKI	44 (92%)
1st-generation TKI	3 (6%)
Median TTD, d (IQR)	208 (78–503)
On treatment > 365 d	33%
1-year overall survival	97.8%
≥ 1 adverse event claim	23 (48%)

Figure 1. Total cost of care (PMPM)

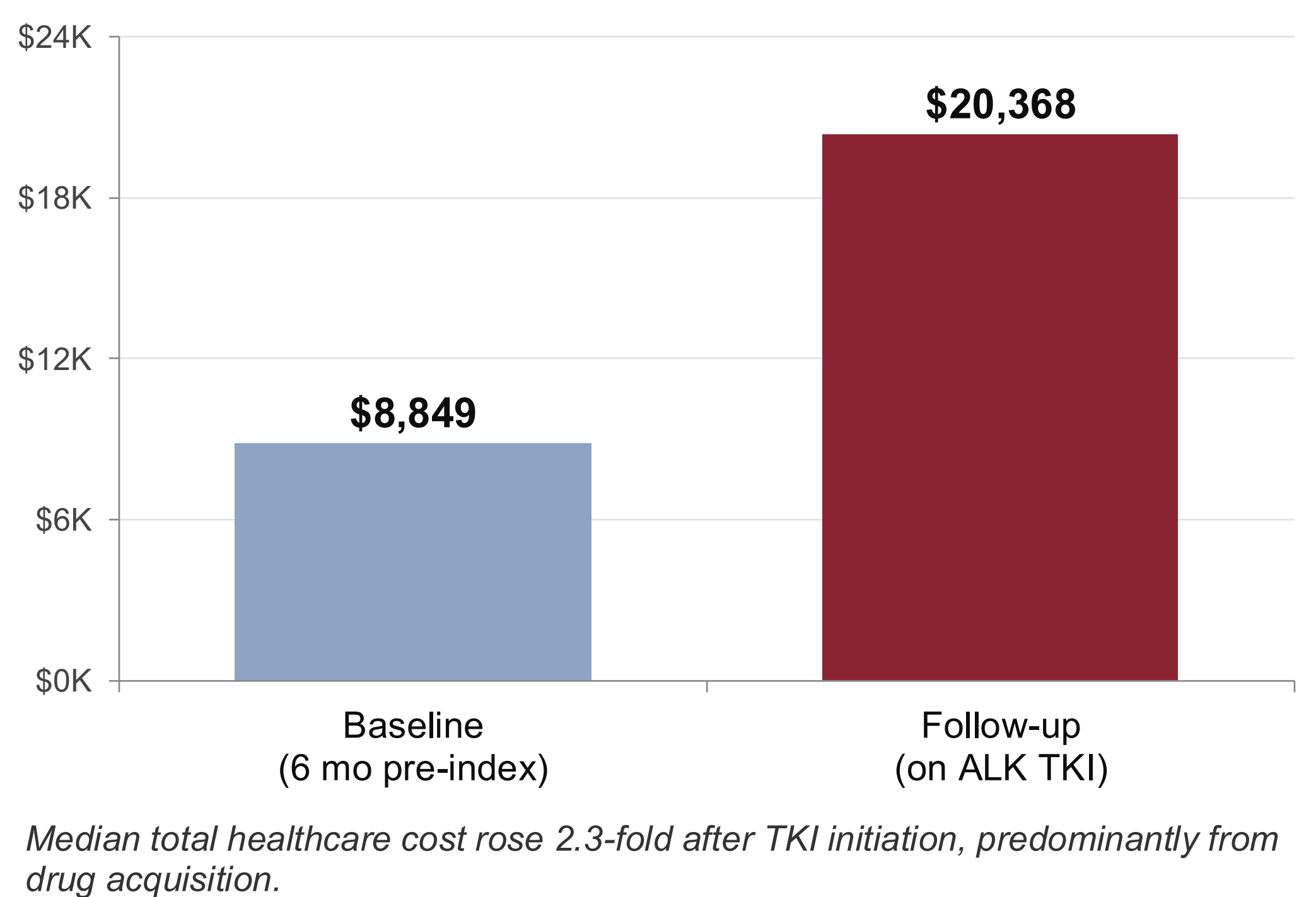


Figure 2. Cost by TKI duration

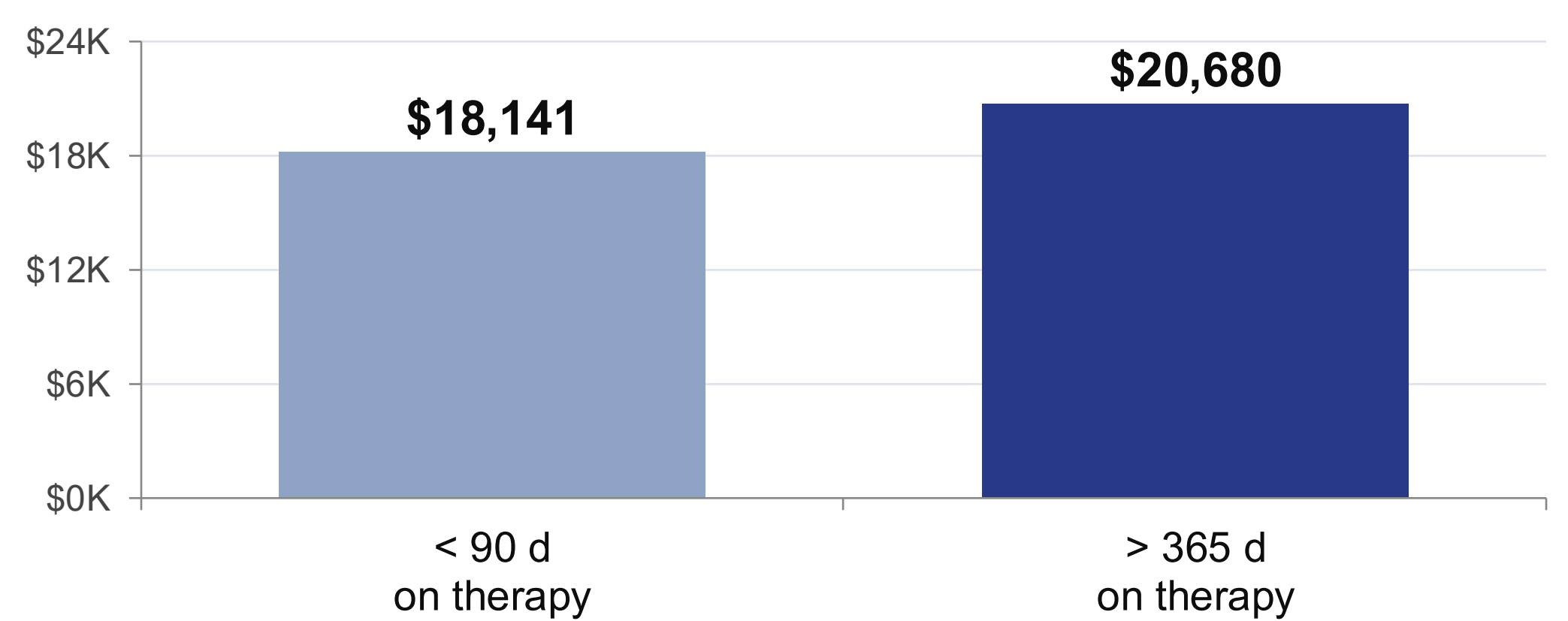


Figure 3. Emergency department cost (PMPM)

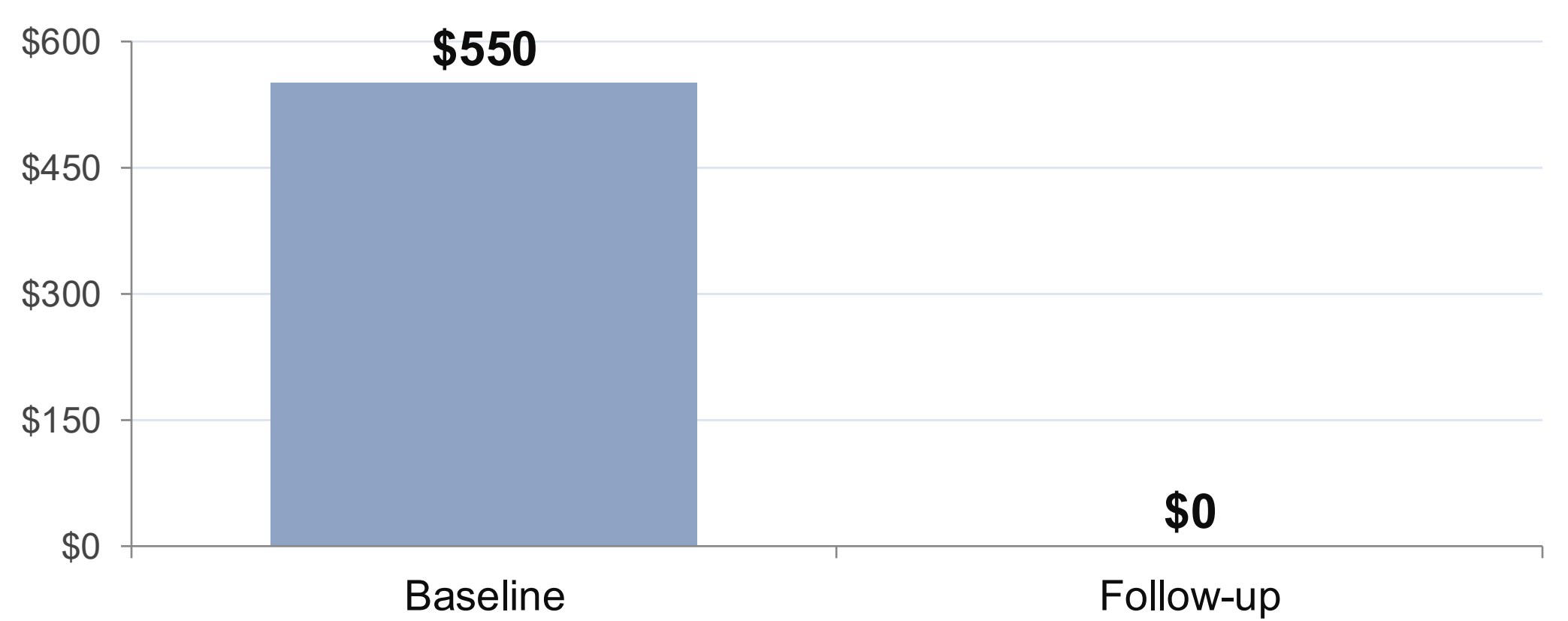
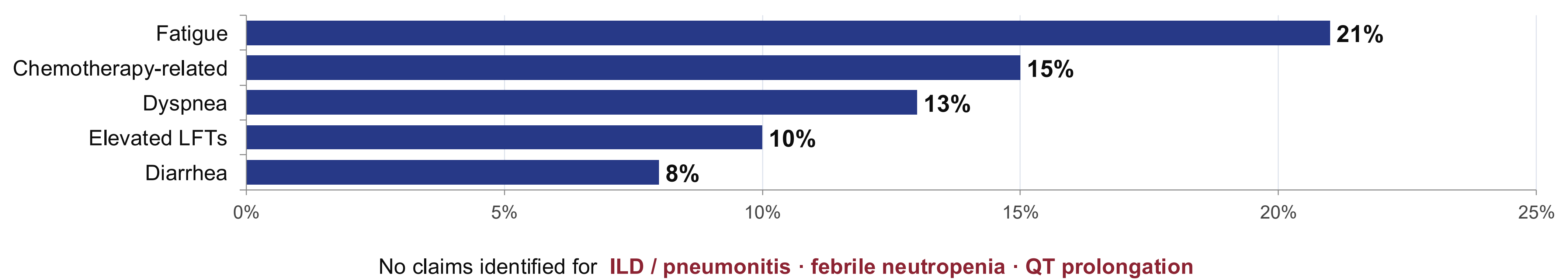


Figure 4. Treatment-emergent adverse event claims (% of patients)



DISCUSSION AND CONCLUSION

Actionable Take-Away Message

- ALK TKI initiation more than doubled median PMPM total healthcare cost, predominantly from drug acquisition.
- Monthly cost did not escalate with longer therapy — PMPM remained stable across duration strata.
- **Acute care burden fell markedly:** median PMPM ED cost and ED visits both dropped to zero after initiation.
- 1-year OS was 97.8% with a manageable AE profile and no ILD, febrile neutropenia, or QT prolongation claims.

Future Direction for Research

- Payer-level cost-consequence analyses are needed to capture the full value of ALK-targeted therapy.
- Larger multi-payer cohorts should confirm the ED offset and stratify outcomes by TKI generation.

REFERENCES & ACKNOWLEDGEMENTS

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