

# Patterns of Treatment Initiation By Sarcoidosis Type in a Real-World Hybrid Claims Database

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## Background

Patients with sarcoidosis, a systemic inflammatory disease, are faced with substantial physical and economic burden.<sup>1</sup> Many sarcoidosis patients experience multi-organ involvement, which leads to increased morbidity and mortality.<sup>1,2</sup> Sarcoidosis treatment includes low-dose corticosteroids before moving on to methotrexate and infliximab to avoid cumulative steroid toxicity and/or to address the progressing disease. Additional treatments are available for specific organ involvement.<sup>3</sup>

## Objective

To describe patterns of treatment initiation by type of sarcoidosis diagnosis in a real-world setting.

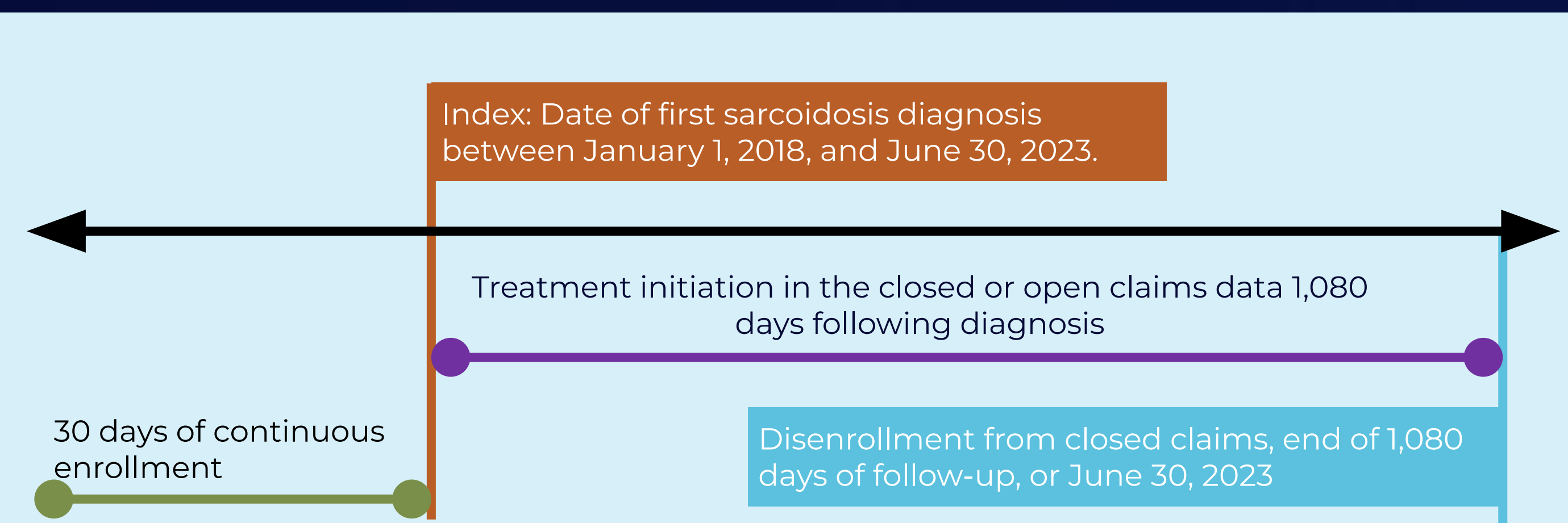


Figure 1. Study Diagram

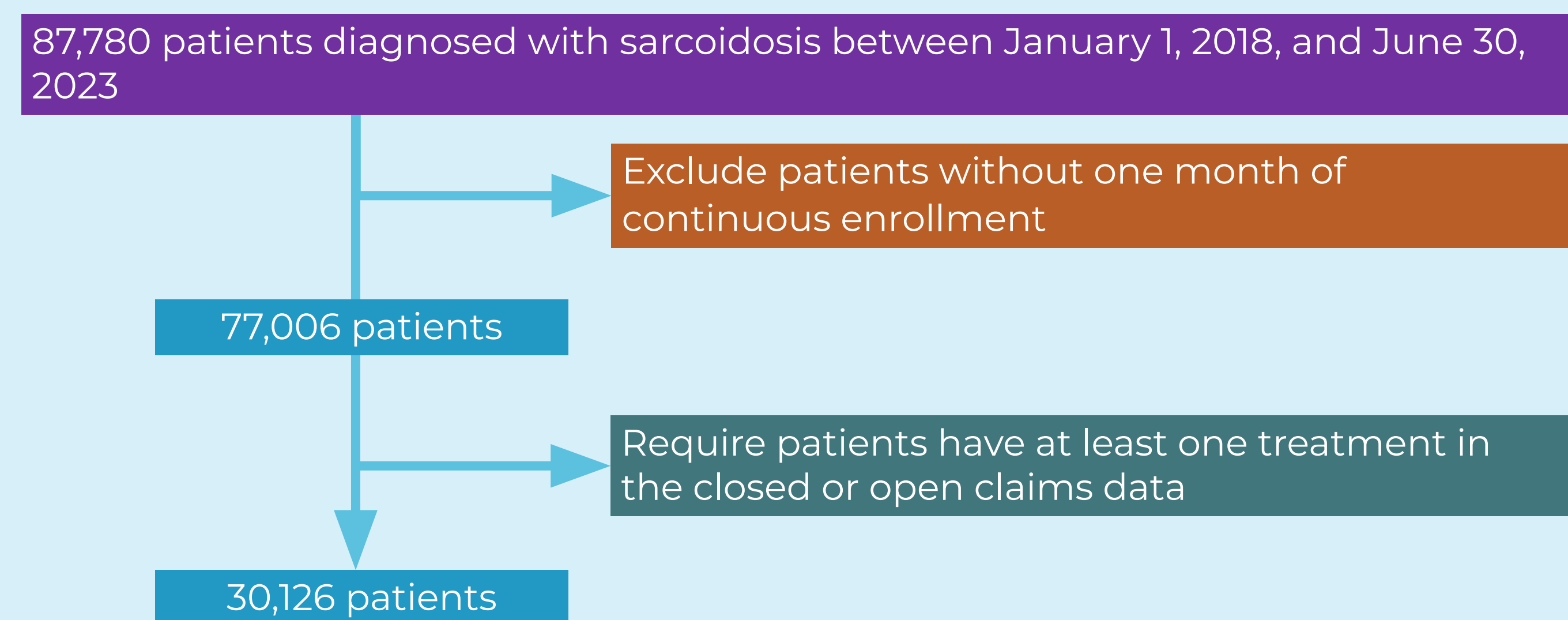


Figure 2. Attrition Criteria and Final Study Sample

## References

- Gerke, et al. (2017). Disease Burden and Variability in Sarcoidosis. Ann Am Thorac Soc. Vol 14, Supplement 6, pp S421-S428.
- Obi, et al. (2022). Sarcoidosis: Updates on therapeutic drug trials and novel treatment approaches. Front Med. 9:991783.
- Papanikolaou, et al. (2022). State-of-the-Art Treatments for Sarcoidosis. Methodist DeBakey Cardiovasc J. 18(2):94-105.

## Methods

Newly diagnosed sarcoidosis patients (ICD-10-CM: D86.0-D86.9) were identified in CHRONOS, a linked open claims, closed claims, and social determinants of health database of US patients between January 1, 2018, and June 30, 2023.

All patients were treated with:

- corticosteroids,
- methotrexate,
- a combination corticosteroids and methotrexate, or
- other medications (azathioprine, leflunomide, mycophenolate mofetil, infliximab, adalimumab, rituximab, hydroxychloroquine).

Patients had at least one month of continuous enrollment before the first diagnosis (index) in the closed claims and at least one treatment from the closed or open claims (Figure 1).

Kaplan-Meier curves measured the median event-free probability from index to dis-enrollment in the closed claims. Curves were stratified by index diagnosis type (i.e., pulmonary, cutaneous, lymph node, and cardiac sarcoidosis) and first medication category.

All study variables were defined by ICD-10-CM, HCPCS, and NDC codes.

## Results

Sarcoidosis patients (n=30,126; Figure 2) were 51.6 (SD: 9.9) years old on average at index and 53.7% female. Although 40.3% of sarcoidosis patients had an unknown race/ethnicity, 9.1% of patients were Black, 2.7% were Hispanic, and 0.8 were Asian.

At index, 66.7% of patients had pulmonary, 8.8% cutaneous, and 4.0% cardiac sarcoidosis. Types of sarcoidosis did not differ meaningfully by age group (Figure 3).

Corticosteroids and methotrexate were the first treatments for 81.7% and 7.7% of patients, respectively. Patterns of initiation were similar across type with methotrexate more common among patients with cardiac sarcoidosis (Figure 4). Of patients first treated with a corticosteroid, 97.1% received no other treatment, while 96.6% first treated with methotrexate eventually received a steroid. Other treatments varied.

Median event-free probability was lowest in cardiac and highest in pulmonary sarcoidosis patients (p<0.001; Figure 5).

## Conclusions

This analysis of treated sarcoidosis patients from a real-world hybrid claims database found corticosteroids were most often the first-line option. The timing of treatment initiation differed by sarcoidosis diagnosis, indicating severity and other underlying conditions influence clinician decision-making in the real-world.

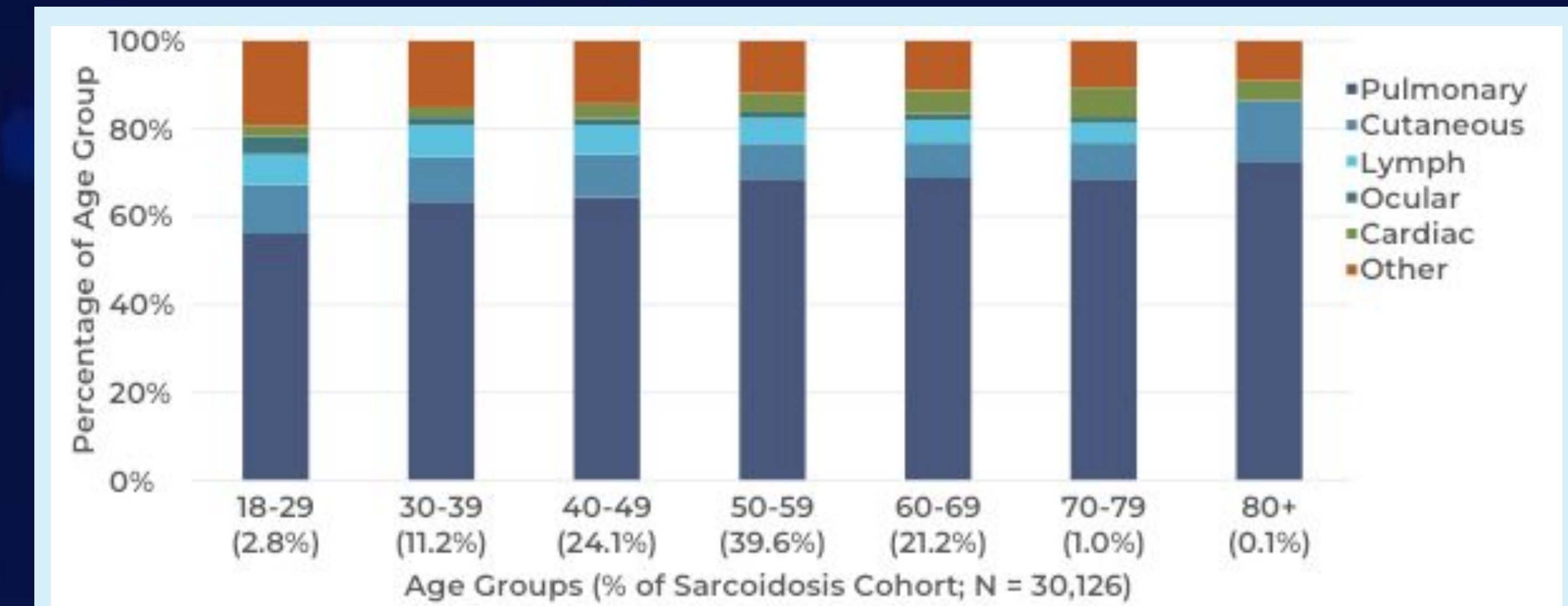


Figure 3. Sarcoidosis Type by Age Group

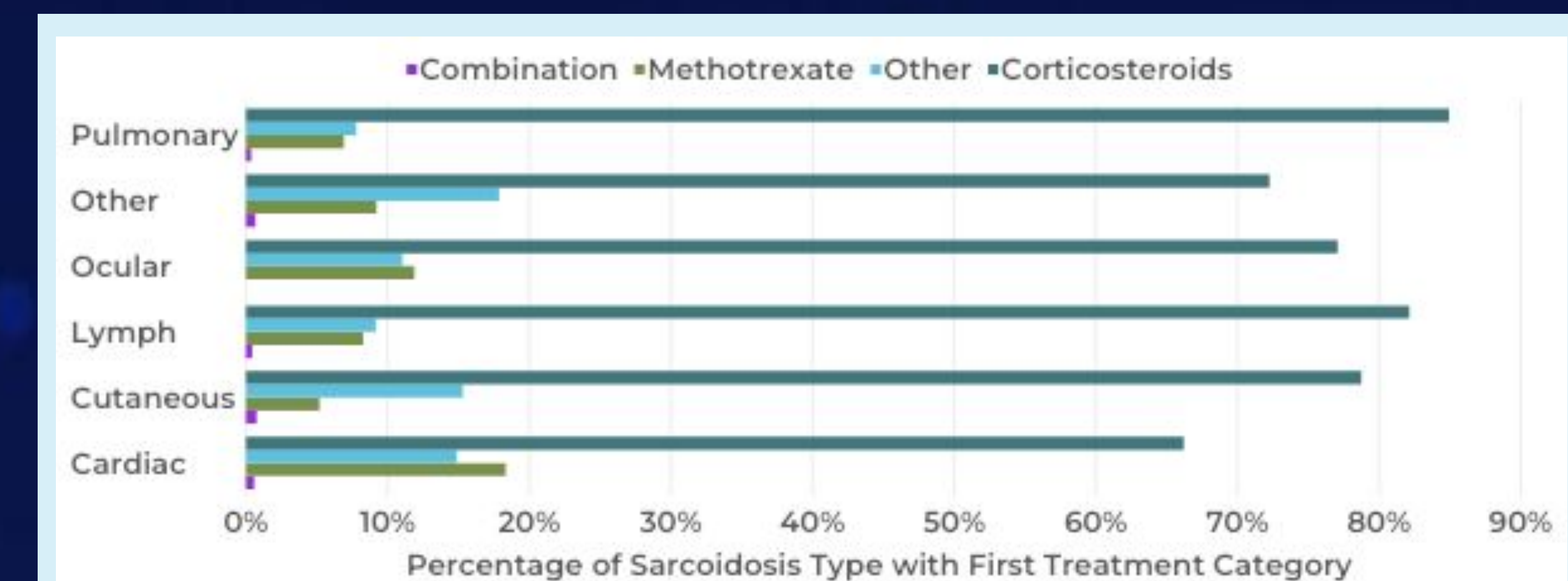


Figure 4. First Treatment by Sarcoidosis Type

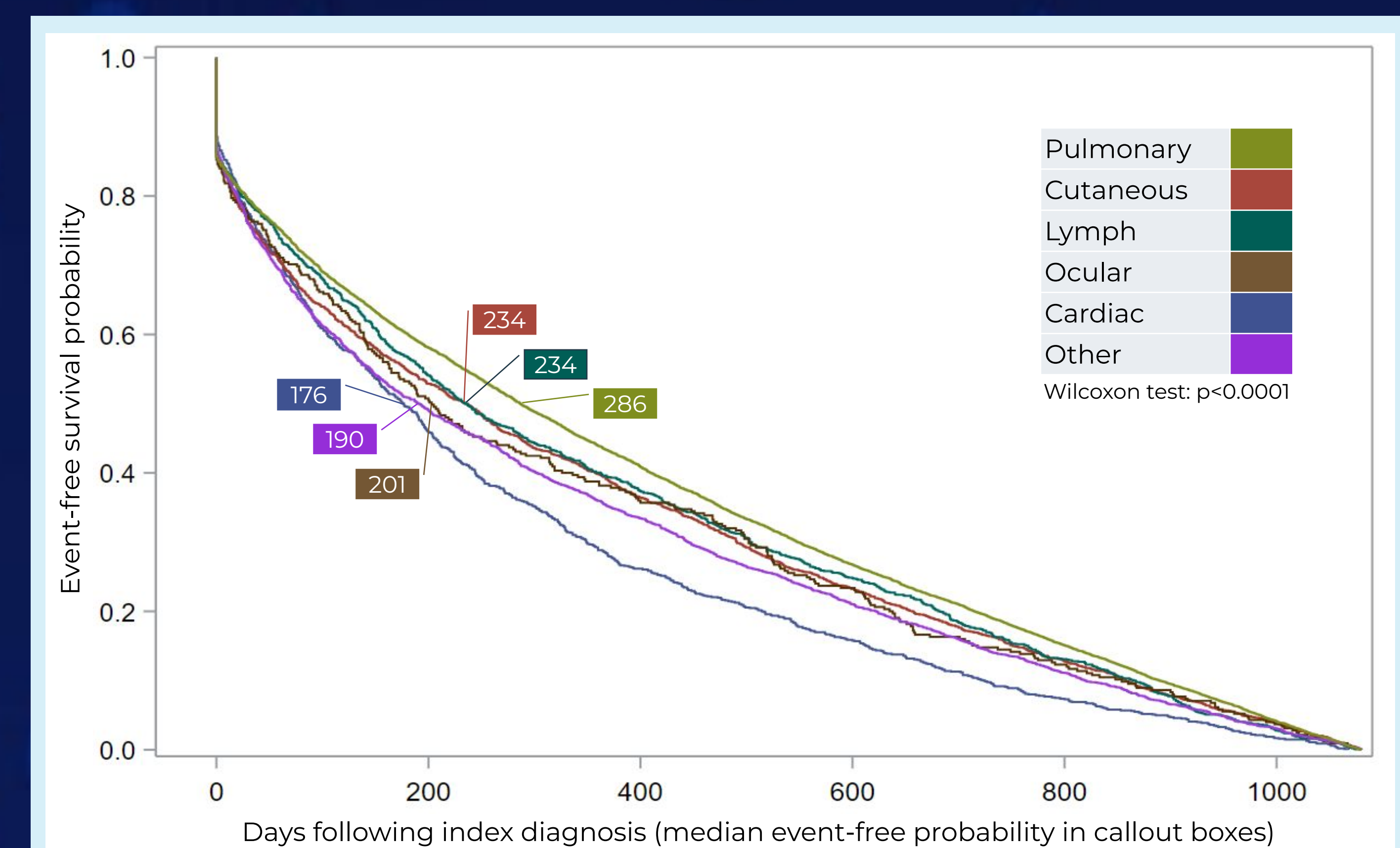


Figure 5. Kaplan-Meier Curves Describing Treatment Initiation Over 1,080 Days of Follow-Up