

# Real-World Healthcare Resource Utilization in Patients With Idiopathic Pulmonary Fibrosis Initiating Antifibrotic Therapy in a Medicare Fee-for-Service Population

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## PURPOSE

- Idiopathic pulmonary fibrosis (IPF) is a progressive and irreversible lung disease that causes scarring of lung tissue, leading to impaired respiratory function and a poor prognosis<sup>1</sup>
- Claims-based evidence on persistence, adherence, healthcare resource utilization (HCRU), and costs for antifibrotic therapies in IPF remains limited<sup>2-4</sup> and is primarily based on older data
- We sought to characterize treatment patterns and HCRU in patients with IPF initiating antifibrotic therapy

## METHODS

### Data Source

- This retrospective cohort study analyzed 100% Medicare fee-for-service data from 06/30/16 to 12/31/22

### Selection Criteria

- Patients with IPF initiating antifibrotic therapy between 01/01/17 and 12/31/22 were identified and indexed on the date of the first antifibrotic therapy

### Inclusion Criteria:

- ≥1 fill of pirfenidone or nintedanib during the study period
- Aged ≥18 years at index
- ≥1 inpatient or ≥2 outpatient medical claims separated by at least 30 days with a diagnosis of IPF in the 6-month pre-index period
- Continuous enrollment in the 6-month pre-index period

### Exclusion Criteria:

- Procedure code for lung transplant in the pre-index period
- Claims for antifibrotics agent in the pre-index period

### Outcomes

- Persistence: No therapy gap ≥45 days during the post-index period. Patients were censored at antifibrotic switch, lung transplant, death, loss of continuous enrollment, or end of data
- Survival: Measured from index date until death or censoring
- HCRU and costs: Calculated on a per-patient, per-month (PPPM) basis during baseline and follow-up

### Statistical Analysis

- Unadjusted time-to-event analysis was estimated using Kaplan-Meier (KM)
- The Cox proportional hazards model identified characteristics associated with discontinuation

## RESULTS

- A total of 5,397 patients were identified, with 2,496 initiating pirfenidone and 3,555 initiating nintedanib
- The average age for all patients at initiation was 76 years; 38% were female, 87% were White, and the mean Deyo-Charlson Comorbidity Index (CCI) score was 3 (Table 1)

Table 1. Baseline Characteristics

	All antifibrotics
N	5,397
Age (years), mean (SD)	76 (7)
Male (%)	62%
Race/ethnicity (%)	
White	87%
Black	3%
Region (%)	
Northeast	17%
Midwest	20%
South	41%
West	22%
Medicare-Medicaid dual eligibility (%)	
Non	86%
Partial/full	14%
Deyo-CCI, mean (SD)	3 (2)

- The mean (SD) follow-up was 10 (13) months
- 25% of patients discontinued antifibrotic therapy at 3 months and 50% at 11 months (Figure 1)

Figure 1. KM Curve of Time to Discontinuation

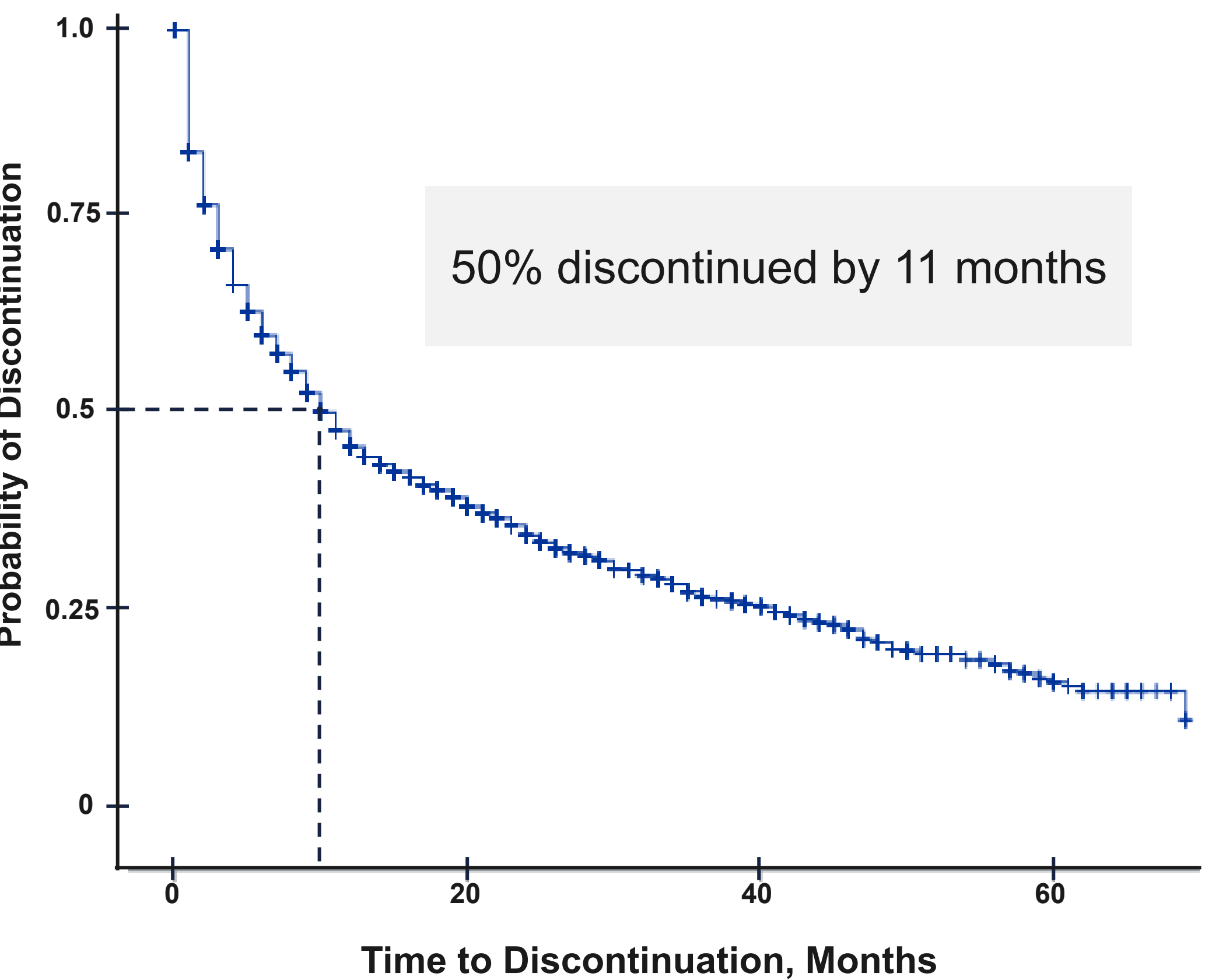
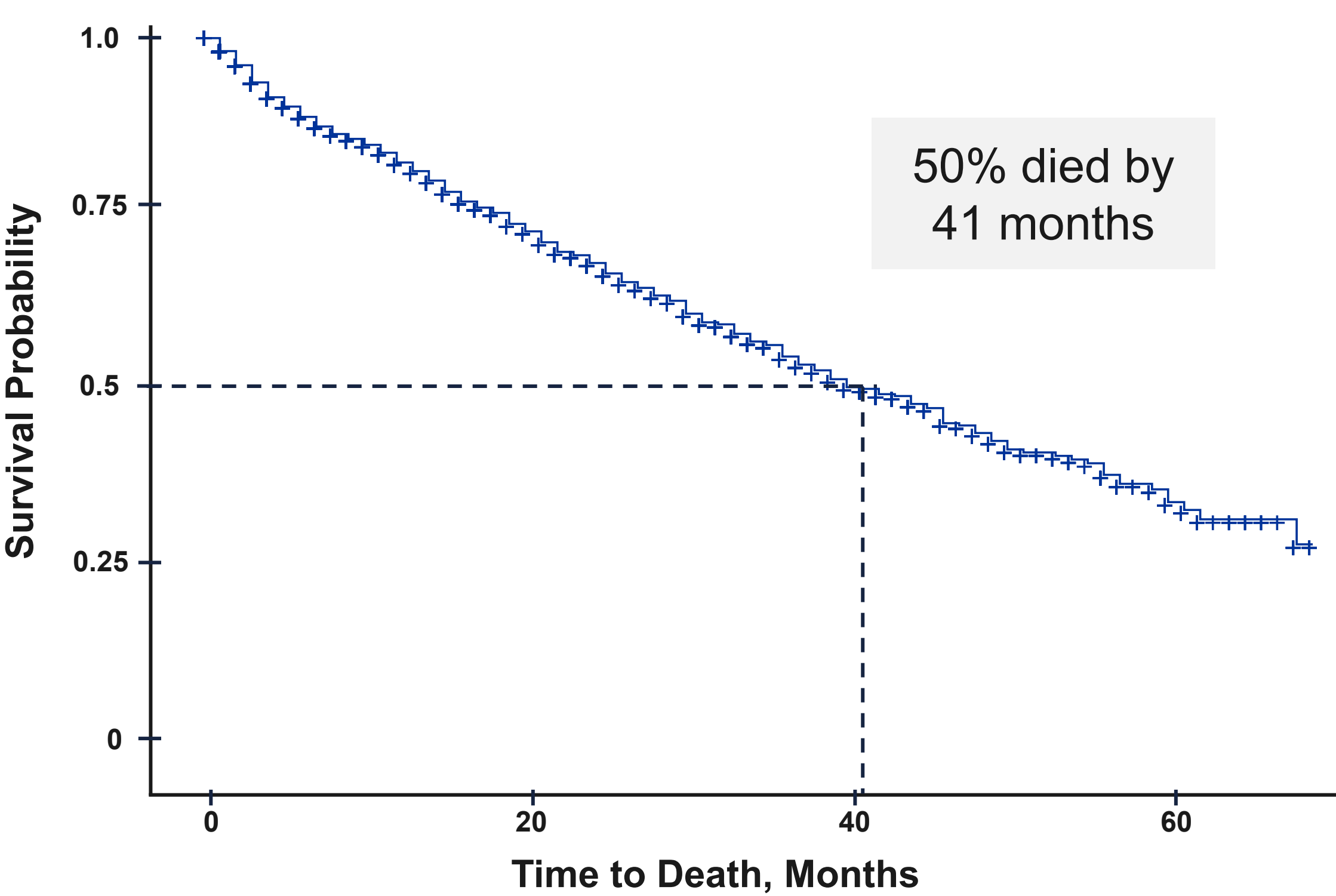
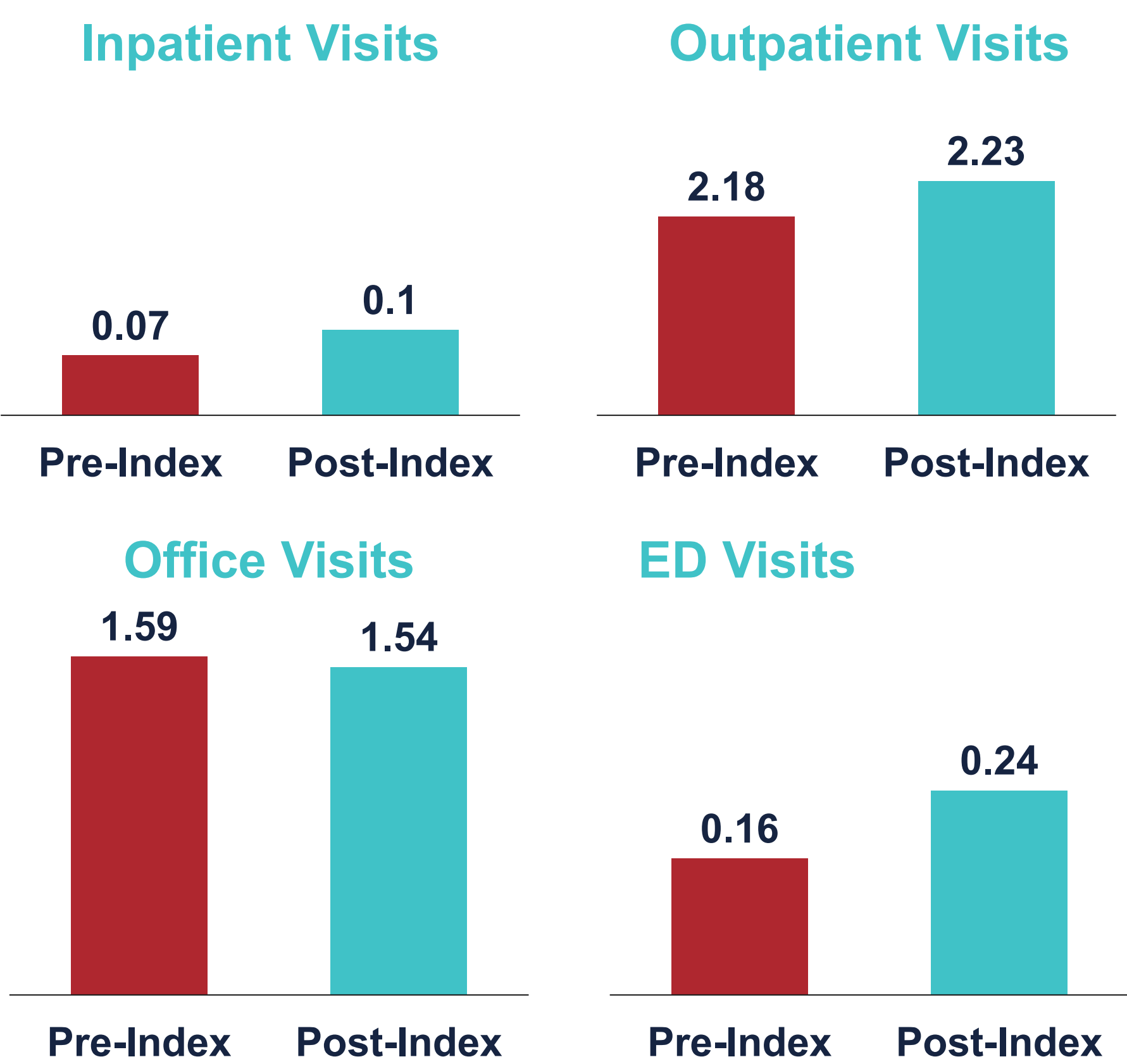


Figure 2. KM Curve of Time to Death



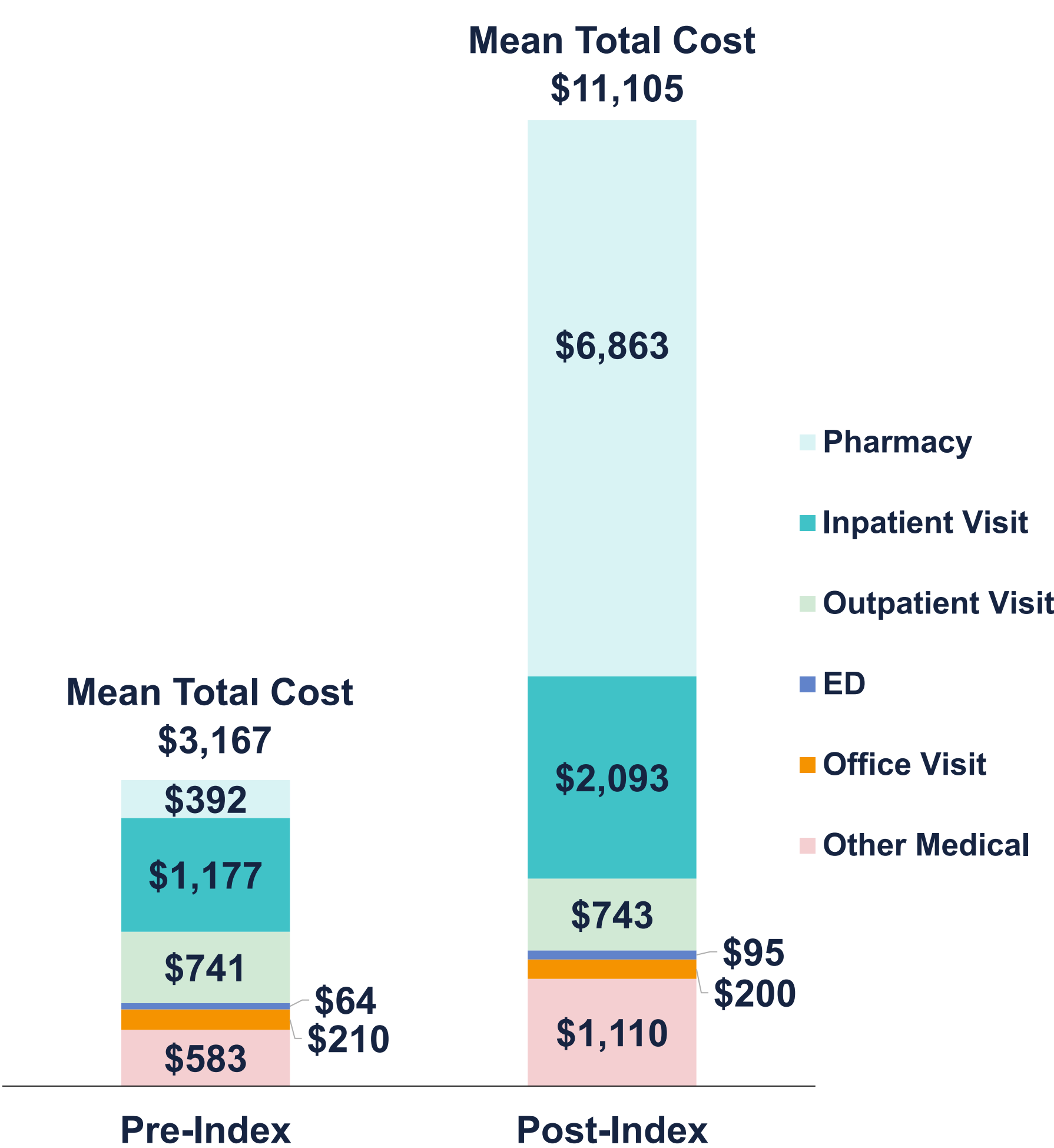
- 25% and 50% of patients died at 18 and 41 months after initiation, respectively (Figure 2)
- Patients who were aged ≥75 years were more likely to discontinue therapy (hazard ratio [HR]: 1.23; 95% confidence interval [CI]: 1.14-1.33) relative to those aged <75 years. Males (HR: 0.76; 95% CI: 0.71-0.81) and patients who experienced a hospitalization prior to initiation (HR: 0.85; 95% CI: 0.78-0.94) were less likely to discontinue therapy after adjustment

Figure 3. All-Cause HCRU (PPPM)



- Mean PPPM utilization increased from the pre-index to post-index period for inpatient hospitalizations, outpatient visits, and emergency department (ED) visits, while office visit costs decreased (Figure 3)
- The mean total medical cost increased from \$3,167 during the pre-index period to \$11,105 post-index, primarily driven by higher pharmacy costs (Figure 4)

Figure 4. All-Cause Healthcare Cost (PPPM)



## CONCLUSION

Patients with IPF have high treatment discontinuation rates to antifibrotic therapy and are at increased risk for hospitalizations and mortality. A large unmet need remains in patients with IPF

## REFERENCES

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