Real-World Persistency on Tafamidis: An Analysis of US Insurance Claims Data

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Conclusions

- **Observed persistency with tafamidis treatment in the US based real world database demonstrated substantial rates of discontinuation over 2 years of follow-up**
- **Further research is needed to identify the reasons for discontinuation and opportunities to improve treatment persistency in populations in which tafamidis may be an option for treatment of ATTR-CM**
- **There continues to be a significant unmet therapeutic need in ATTR-CM despite current disease management strategies**

Background and Rationale

- Transthyretin (TTR)-mediated amyloidosis (ATTR) is a rapidly progressive, debilitating, and fatal disease, caused by the accumulation of amyloid formed from misfolded TTR protein, with the potential for multisystem manifestations[1]
- Cardiomyopathy may arise as a result of TTR amyloid deposits in the myocardium; this is known as transthyretin amyloid cardiomyopathy (ATTR-CM)[2-4]
- Tafamidis was the first, and until recently, the only United States (US) Food & Drug Administration-approved medication for treatment of ATTR-CM[2,5,6]
- Mortality and rates of cardiovascular-related hospitalizations have been shown to be lower in patients treated with tafamidis vs those treated with placebo.[7] However, disease progression continues to occur, and rates of morbidity and mortality remain substantial in patients receiving tafamidis[8-11]
- Although previous real-world studies have reported high adherence to tafamidis, around 75-100%,[5,12-14] persistency on tafamidis treatment is not well-characterized

Objective

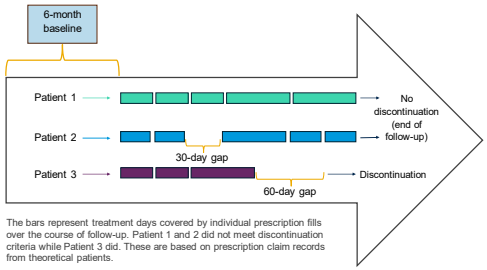
- The objective of this analysis was to examine real-world treatment persistency among patients receiving tafamidis

Methods

- This retrospective analysis from January 2017 to May 2024 utilized the Komodo Research Dataset, a comprehensive source of adjudicated medical claims from an insured population in the US
- Patients ≥18 years with ≥1 outpatient prescription claim for tafamidis and 6 months of continuous medical and prescription enrollment in the database before tafamidis initiation were included in the analysis
- As tafamidis is approved in the US only for ATTR-CM, diagnosis criteria for ATTR-CM using ICD-10 codes were not applied
- Patients were followed from tafamidis initiation (index date) to the end of continuous enrollment in the database, death, or last date of available data, whichever came first
- Treatment persistency was examined by assessing discontinuation rates; discontinuation was defined as a ≥60-day gap in days of treatment covered by a prescription fill for tafamidis (**Figure 1**), based on patients' prescription claims. Death was not counted as discontinuation

Methods (cont.)

Figure 1. Schematic Diagram Illustrating Study Definition of Tafamidis Discontinuation



The bars represent treatment days covered by individual prescription fills over the course of follow-up. Patient 1 and 2 did not meet discontinuation criteria while Patient 3 did. These are based on prescription claim records from theoretical patients.

Statistical Analysis

- Baseline patient demographic and clinical characteristics were analyzed descriptively
- Tafamidis treatment duration was calculated as the time between the index date and the first date of discontinuation or the censored date
- Rates of discontinuation of tafamidis were estimated at 12, 18, and 24 months, reported as the percentage of patients experiencing this outcome. Rates of persistence were calculated as 100% minus the rate of discontinuation
- A sensitivity analysis defining discontinuation as a ≥90-day gap in treatment days covered by prescription fills for tafamidis was also performed to estimate discontinuation rates at 12, 18, and 24 months

Results

- Among 3,340 patients included in the analysis, mean age (SD) was 77.8 (8.8) years, 79.8% of patients were male, and 81.8% had Medicare coverage (**Table**)
- Mean (SD) duration of follow-up was 482.3 (432.4) days
- The mean (SD) tafamidis treatment duration for all 3,340 patients (including both censored and discontinued patients) was 348.8 (368.1) days. The median treatment duration was 203.0 days

Results (cont.)

Table. Baseline Demographics and Clinical Characteristics

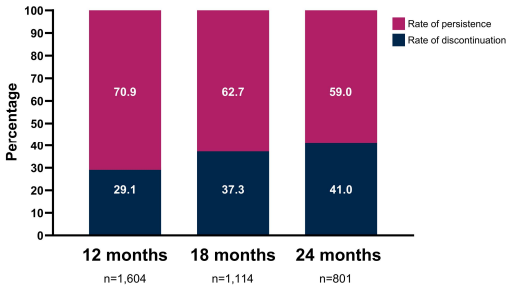
	All patients N = 3,340
Age, years, mean (SD)	77.8 (8.8)
Age category, years, No. (%)	
18-64	315 (9.4)
65-74	664 (19.9)
75-84	1,466 (43.9)
85-99	895 (26.8)
Gender, No. (%)	
Female	667 (20.0)
Male	2,666 (79.8)
Unknown	7 (0.2)
Region, No. (%)	
Midwest	777 (23.3)
Missing	1 (0.0)
Northeast	1,457 (43.6)
South	770 (23.1)
West	335 (10.0)
Insurance, No. (%)	
Commercial	544 (16.3)
Medicaid	60 (1.8)
Medicare	2,732 (81.8)
Missing	4 (0.1)
CCI, mean (SD)	4.6 (2.6)

Abbreviation: CCI, Charlson Comorbidity Index.

Discontinuation

- Discontinuation of tafamidis at 12, 18, and 24 months was observed in 29.1%, 37.3%, and 41.0% of patients, respectively (**Figure 2**)
- Among all 3,340 patients, 9.6% restarted tafamidis after having been classified as discontinued based on a ≥60-day gap
- Similar discontinuation rates were seen when discontinuation was defined as a gap ≥90 days (26.9%, 33.3%, and 38.3% at 12, 18, and 24 months, respectively)

Figure 2. Rates of Discontinuation (60-Day Gap) and Persistence Among Patients Treated with Tafamidis



The rate of persistence was calculated as 100% minus the rate of discontinuation.

Discussion

- This retrospective real-world analysis examined discontinuation of tafamidis in patients with ATTR-CM
- High adherence rates with tafamidis have been shown in prior real-world studies.[5,12-14] However, we observed substantial rates of discontinuation over time following tafamidis initiation
- Results of the sensitivity analysis using a ≥90-day gap in prescription fills to define discontinuation were similar to those in the main analysis (using a ≥60-day gap to define discontinuation). Thus, while there is no standard metric to define discontinuation using administrative data, the results were not sensitive to the exact definition used

Strengths and Limitations

- This is the first study to examine persistency to tafamidis using a large, geographically diverse, all-payor administrative claims database
- Patients who received tafamidis outside their regular health insurance (eg, through a patient assistance program) may not be reflected in this study
- The claims data used to assess persistency only reflect that the patient filled a prescription and do not provide direct information on whether the patient took all medication as prescribed
- Generalizability to patient populations outside the Komodo Research Dataset may be limited

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Disclosures: Ankur Patel, David Danese, and Teresa Kauf are employed by Alnylam Pharmaceuticals and report ownership of Alnylam Pharmaceuticals shares.

Abbreviations: ATTR, transthyretin-mediated amyloidosis; ATTR-CM, transthyretin amyloid cardiomyopathy; CCI, Charlson Comorbidity Index; ICD-10, International Classification of Diseases, Tenth Revision; SD, standard deviation; TTR, transthyretin; US, United States.