

Survival Outcomes Following TAVR in Tafamidis-Treated Cardiac Amyloidosis: A Propensity-Matched Analysis

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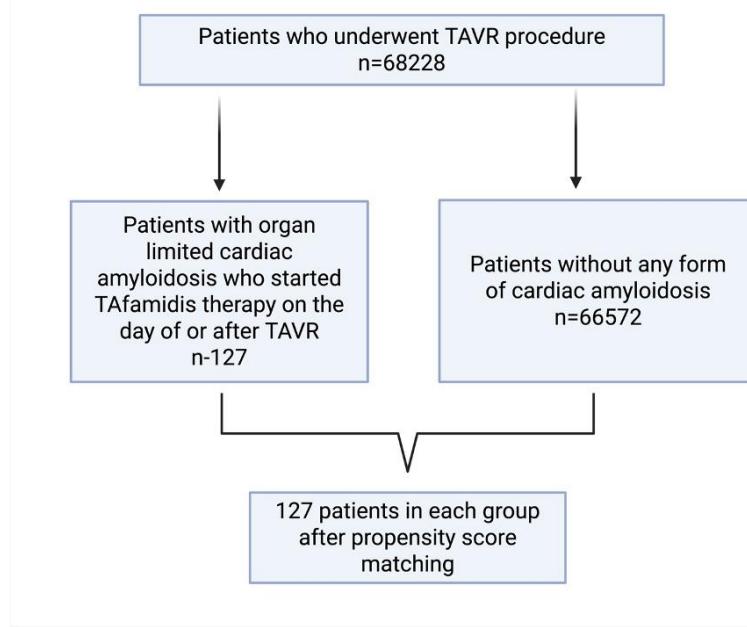
Disclosure of Relevant Financial Relationships

I, [Tamari Lomaia](#) DO NOT have any financial relationships to disclose.

Background

- Cardiac amyloidosis, particularly ATTR-CM, is increasingly recognized in older patients with aortic stenosis (AS) referred for TAVR, with prevalence estimates up to 16% in this population
- Historically, patients with dual pathology (AS and ATTR-CM) have worse baseline functional status and biomarker profiles, and untreated, they experience higher mortality than those with lone AS
- Recent multicenter registry data show that Tafamidis therapy independently reduces all-cause and cardiovascular mortality in patients with AS and ATTR-CM (weighted HR for all-cause mortality 0.40, 95% CI 0.24–0.68).
- Most studies evaluating outcomes in cardiac amyloidosis patients treated with Tafamidis who underwent TAVR have included relatively small cohorts, often fewer than 70 patients
- Fatima et al. (2024) included 6 studies with a pooled prevalence of 13.3% TTRCA among TAVR patients, but the tafamidis-treated subgroup was small and not the primary focus of the analysis
- Nitsche et al., which included 226 patients with both significant aortic stenosis and ATTR cardiac amyloidosis (ATTR-CA), of whom 69 received tafamidis. Outcomes in these patients were compared to a matched control cohort of patients with lone aortic stenosis (no amyloidosis) who underwent aortic valve replacement (primarily TAVR). The study found that patients with dual pathology (AS + ATTR-CA) who received both tafamidis and TAVR had survival rates comparable to those with lone aortic stenosis undergoing TAVR, however outcomes were limited to three years.

Study design



Cohort 1 – Patients with cardiac amyloidosis who underwent TAVR and started Tafamidis therapy on the day of or after TAVR.
Cohort 2 – Patients without cardiac amyloidosis

Methods

-Using a real-world TriNetX dataset, we identified 127 patients with cardiac amyloidosis who underwent TAVR and started Tafamidis on or after the procedure.

-These were compared to 66,572 patients without cardiac amyloidosis, followed by 1:1 propensity score matching with 127 patients remaining in each group.

- Baseline demographics and comorbidities were balanced after matching. The primary outcome was 5-year all-cause mortality.

Baseline Characteristics

Variables	Before Propensity Matching			After Propensity Matching		
	Cohort 1 N=127	Cohort 2 n=66572	P-value	Cohort 1 N=127	Cohort 2 N=127	P-value
Current age	85±5	81±8	<0.0001	85±5	85±5	0.92
Female sex	22(19.1%)	27264(40.6%)		22 (19.13%)	26 (22.61%)	0.63
Male sex	91(79.1%)	36616(52.55%)	<0.0001	91 (79.13%)	88 (76.522%)	
BMI	26.9±4	29.3±6	0.0003	26±4	27±5	0.34
White race	88(76.5%)	55362(82.4%)	0.09	88 (76.5%)	90(78.2%)	0.75
Black or African American race	15(13%)	2821(4.2%)	0.05	15(13.04%)	18(15.6%)	0.67
Asian	10(8.6%)	1828 (2.7%)	<0.001	10 (8.6%)	10 (8.6%)	1

Hypertensive diseases	112(97.4%)	55809(83.15%)	<0.0001	112(97.4%)	115(100%)	0.081
Ischemic heart disease	112(97.4%)	55797^83.1%)	<0.0001	112(97.4%)	114 (99%)	0.31
Diseases of arteries, arterioles and capillaries	78 (67.8%)	34006(50.6%)	0.0002	78 (67.8%)	84(73.04%)	0.39
Pulmonary heart disease and diseases of pulmonary circulation	67 (58.3%)	19982(29.7%)	<0.0001	67 (58.3%)	66 (57.4%)	0.89
Chronic rheumatic heart disease	66 (57.4%)	23259(24.6%)	<0.0001	66 (57.4%)	59 (51.3%)	0.35
Cerebrovascular diseases	43 (37.4%)	21641(32.2%)	0.24	43 (37.4%)	42 (36.5%)	0.89
Unspecified disorders of circulatory system	43 (37.4%)	14180(21.1%)	<0.0001	43 (37.4%)	42 (36.5%)	0.89
Diseases of veins, lymphatic vessels and lymph nodes	33 (28.696%)	11520(17.1%)	0.001	33 (28.696%)	25 (21.739%)	0.22
Acute rheumatic fever	0	190(0.28%)	0.57	0	0	1
Other forms of heart disease	115 (100%)	65951(98.3%)	0.15	115 (100%)	115 (100%)	1

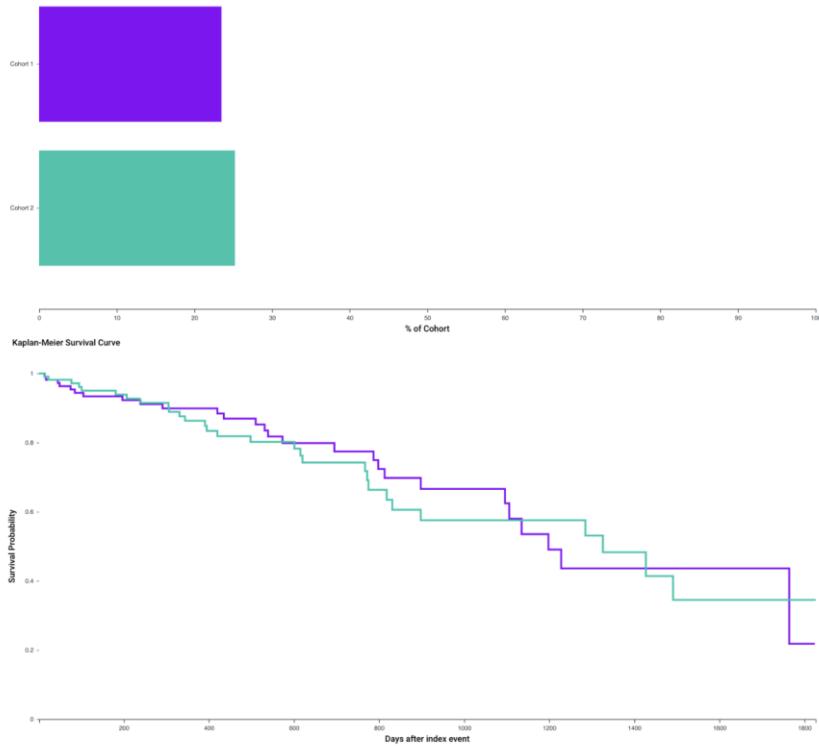
Echocardiographic characteristics

Variables	Before propensity matching			After propensity matching		
	Cohort 1	Cohort 2	P-value	Cohort 1	Cohort 2	P-value
Heart rate	74±16	72±14	0.24	74±16	70±14	0.13
Systolic Blood pressure	124±19	128±22	0.1	124±19	125±21	0.58
LVEF	57±10	57±13	0.86	57±10	55±11	0.46

5-year survival

Variable	Patients in cohort	Patients with outcome	Risk
Cohort 1	115	27	23.47%
Cohort 2	115	29	25.21%

Variable	Patients in cohort	Survival probability at the end of time window	P-value
Cohort 1	115	21.8%	0.78
Cohort 2	115	34.4%	



Conclusion

- Tafamidis-treated patients with cardiac amyloidosis undergoing TAVR demonstrated comparable 5-year survival to those without amyloidosis.
- These findings suggest that Tafamidis may mitigate the adverse prognostic impact of amyloidosis and could offer a protective survival benefit in this high-risk population.

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Thank you