

# Outcomes of Transcatheter Aortic Valve Replacement in Patients with Cardiac Amyloidosis: Impact of Disease Recognition and Treatment Response

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# Disclosure of Relevant Financial Relationships

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

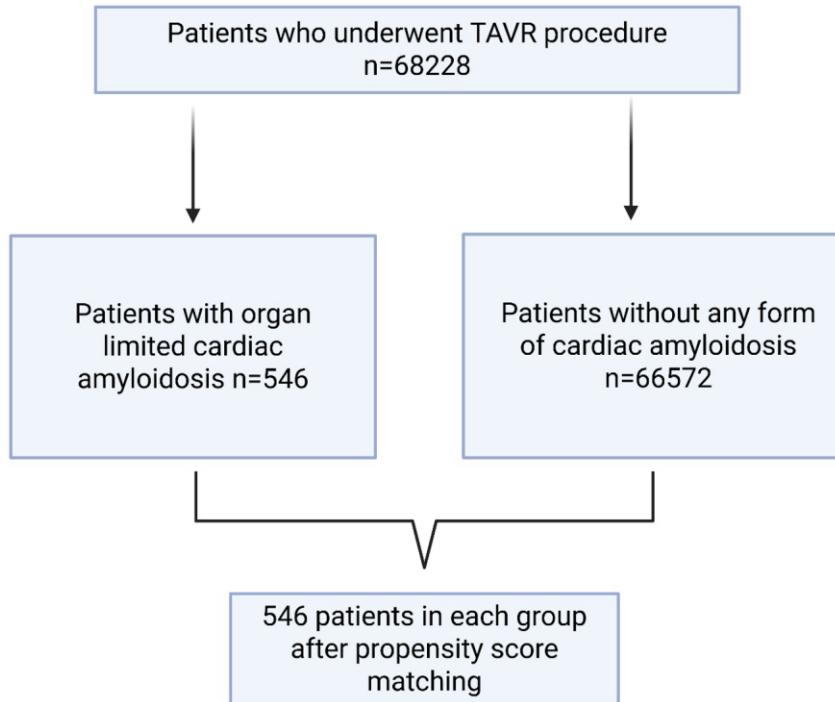
# Background

-prevalence of calcific aortic stenosis and amyloid transthyretin cardiomyopathy (ATTR-CM) increase with age, and they often coexist. Older patients with severe aortic stenosis (AS) are increasingly identified as having cardiac amyloidosis (CA)

-Studies have shown that TAVR improved outcomes in AS amyloid. However, cardiac amyloidosis itself is associated with worse outcomes.

*-No published study to date specifically compares patients with organ-limited cardiac amyloidosis to patients without amyloidosis, both groups having received transcatheter aortic valve replacement (TAVR), and reports 5-year mortality outcomes*

# Study design



# Methods

- Using TriNetX database, we identified 546 patients with cardiac amyloidosis who underwent TAVR and matched them 1:1 to 546 patients without documented cardiac amyloidosis using propensity score matching.
- Baseline demographics, comorbidities, and procedural variables were compared.
- Survival probabilities were estimated using Kaplan–Meier methods and compared using the log-rank test.

# Baseline Characteristics

Variables	Before Propensity Matching			After Propensity Matching		
	Cohort 1 N=546	Cohort 2 n=66572	P-value	Cohort 1 N=546	Cohort 2 N=546	P-value
Current age	82±7	81±8	0.01	82±7	83±7	0.06
Female sex	178(32.6%)	28460(40.7%)	<0.0001	178(32.6%)	178(32.6%)	1
Male sex	351(64.3%)	38193(54.6%)		351(64.3%)	351(64.3%)	1
BMI	27.7±6	29.3±6	<0.0001	27.7±6	28.1±6	0.33
White race	421(77.1%)	57630(82.4%)	0.001	421(77.1%)	417(76.3%)	0.77
Black or African American race	55(10%)	3099(4.4%)	<0.0001	55(10%)	56(10.2%)	0.92
Asian	29(5.3%)	1848(2.6%)	0.0001	29(5.3%)	28(5.1%)	0.89
Hypertensive diseases	521(95.4%)	58058(83.1%)	<0.0001	521(95.4%)	526(96.3%)	0.44
Ischemic heart disease	493(90.3%)	54502(77.9%)	<0.0001	493(90.3%)	500(91.6%)	0.46
Diseases of arteries, arterioles and capillaries	383(70.14%)	35588(50.9%)	<0.0001	383(70.14%)	386(70.7%)	0.84

Pulmonary heart disease and diseases of pulmonary circulation	296(54.2%)	20901(29.9%)	<0.0001	296(54.2%)	282(51.6%)	0.39
Chronic rheumatic heart disease	285(52.2%)	224157(24.6%)	<0.0001	285(52.2%)	279(51.1%)	0.71
Cerebrovascular diseases	269(49.3%)	22560(32.3%)	<0.0001	269(49.3%)	260(47.6%)	0.58
Unspecified disorders of circulatory system	222(40.6%)	14576(20.8%)	<0.0001	222(40.6%)	227(41.5%)	0.75
Diseases of veins, lymphatic vessels and lymph nodes	167(30.5%)	11881(16.9%)	<0.0001	167(30.5%)	149(27.3%)	0.22
Acute rheumatic fever	10(1.8%)	240(0.34%)	<0.0001	10(1.8%)	10(1.83%)	1
Other forms of heart disease	544(99.6%)	68414(97.8%)	0.004	544(99.6%)	546(100%)	0.15

Variables	Before propensity matching			After propensity matching		
	Cohort 1	Cohort 2	P-value	Cohort 1	Cohort 2	P-value
Heart rate	73±14	72±14	0.17	73±14	72±14	0.29
Systolic Blood pressure	127±21	128±22	0.26	127±21	127±21	0.65
LVEF	55.9±12	57±13	0.27	55.9±12	54.1±13.8	0.23

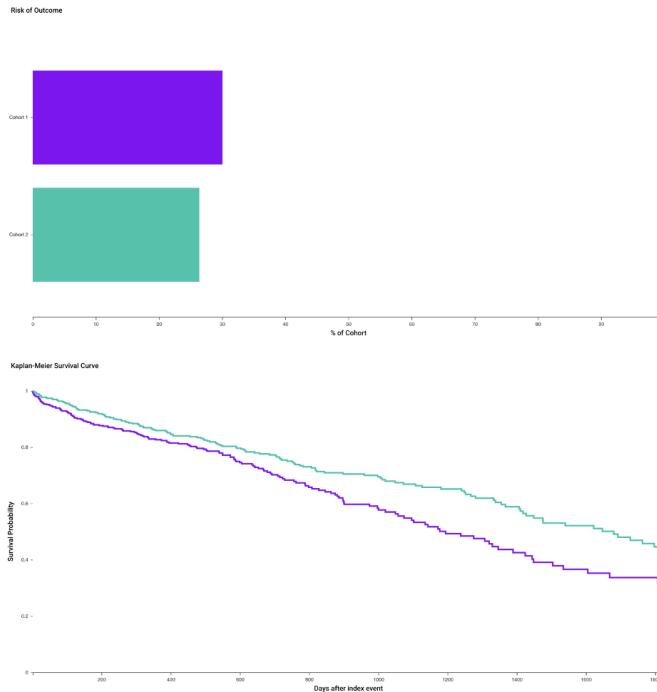
# 5-year survival

## Cohort Statistics

Variable	Patients in cohort	Patients with outcome	Risk of outcome
Cohort 1 (TAVR+Amyloid)	546	164	30%
Cohort 2 (TAVR without amyloid)	546	144	26.3%

## Log rank test

Variable	Patients in cohort	Survival probability at the end of time window	P-value
Cohort 1 (TAVR+Amyloid)	546	31.54%	0.0021
Cohort 2 (TAVR without amyloid)	546	44.58%	



# Conclusion

- TAVR offers a safe and effective treatment option for patients with or without cardiac amyloidosis. However, long-term survival may be adversely affected by disease progression and suboptimal response to therapies such as Tafamidis.
- These findings highlight the importance of routine screening for cardiac amyloidosis in TAVR candidates
- early detection and targeted treatment may significantly improve patient outcomes.

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**Thank you**