

Management and Outcomes of Transcatheter Aortic Valve Replacement Valve Embolization: A Single-Center Experience

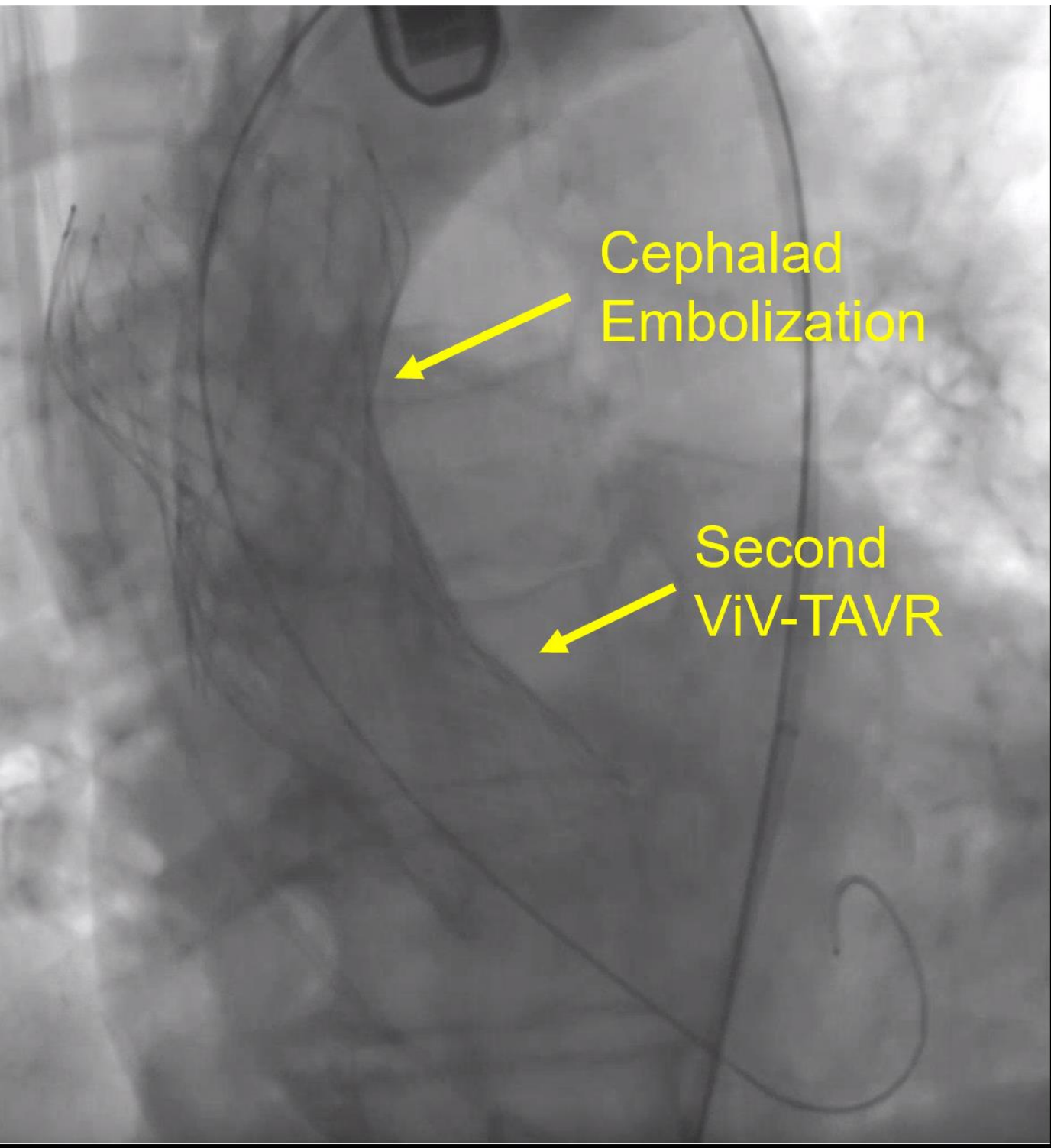
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INTRODUCTION

Transcatheter aortic valve replacement (TAVR) valve embolization is a rare but potentially catastrophic complication resulting from loss of prosthesis-annular contact after deployment. Contemporary data describing embolization patterns, management strategies, and associated outcomes remain limited.



OBJECTIVE

To evaluate the clinical presentation, treatment approaches, and short-term outcomes of TAVR valve embolization at a single center.

METHODS

- Consecutive cases of **TAVR valve embolization from 2014-2025** were reviewed from an institutional database.
- Valve embolization was defined as migration of the prosthesis from the intended annular position.
- Embolization timing, direction, and treatment strategy were recorded, including SAVR, valve-in-valve, and snare retrieval.
- Outcomes included 1-year mortality, stroke, length of stay, and procedural complications.**

RESULTS

Figure 1. Embolization Characteristics and Management Strategies

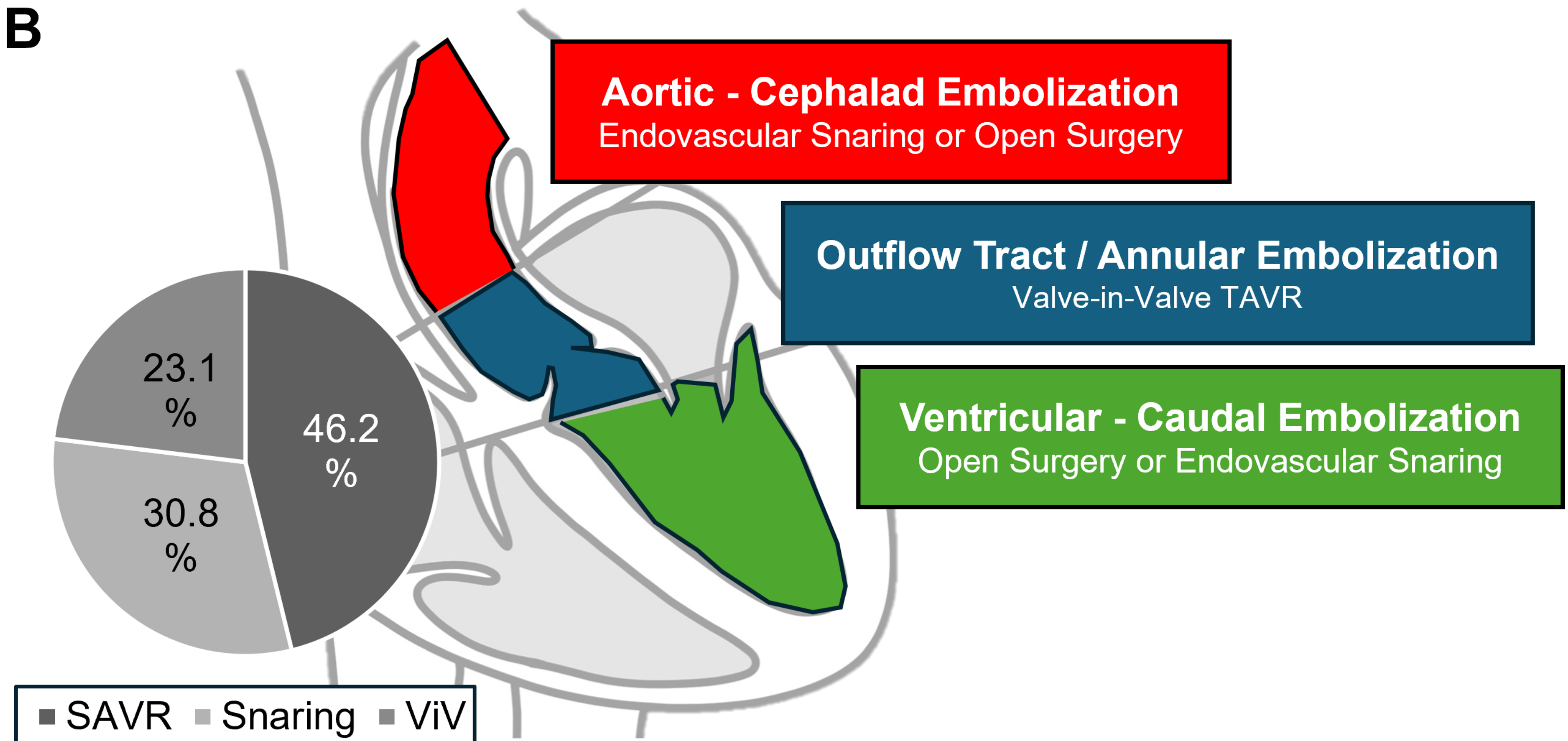
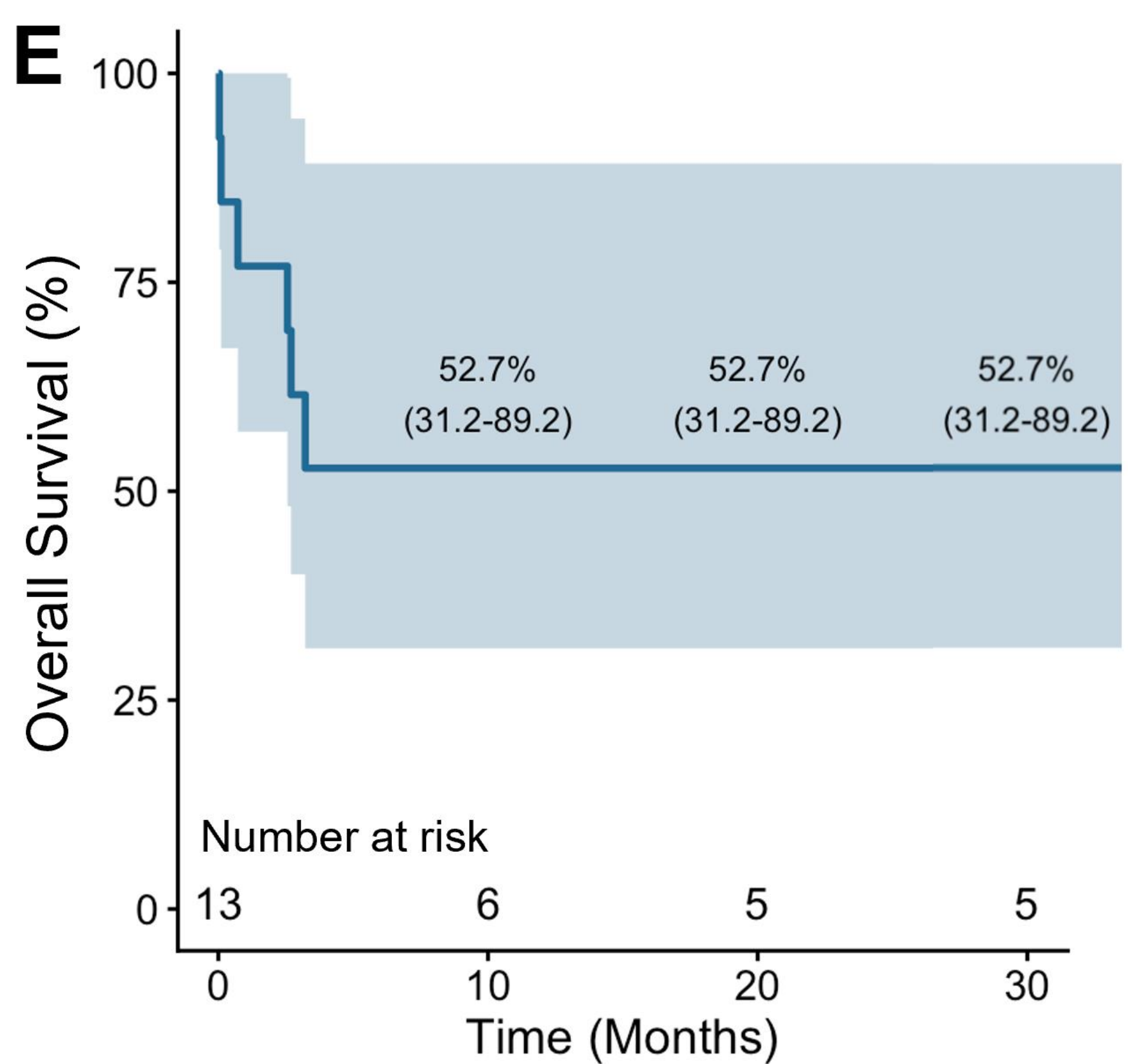


Figure 4. Overall Survival



Variable	N = 13
Age, years, (mean ± SD)	81.6 ± 5.1
Female sex, n (%)	6 (46.2)
STS PROM, (%)	4.29 ± 2.52
NYHA class III-IV, n (%)	5 (39.0)
LVEF, % (SD)	62.7 ± 5.5
Prior cardiac surgery, n (%)	2 (15.4)
Atrial fibrillation, n (%)	4 (30.8)
Diabetes mellitus, n (%)	5 (38.5)
Chronic lung disease, n (%)	2 (15.4)
Prior stroke, n (%)	1 (7.7)
Aortic valve area, cm ² (SD)	0.78 (0.24)
Mean gradient, mmHg (SD)	48.3 (12.5)
Peak gradient, mmHg (SD)	77.2 (17.6)
Moderate or greater MR, n (%)	9 (69.2)

Figure 2. Mortality Outcomes

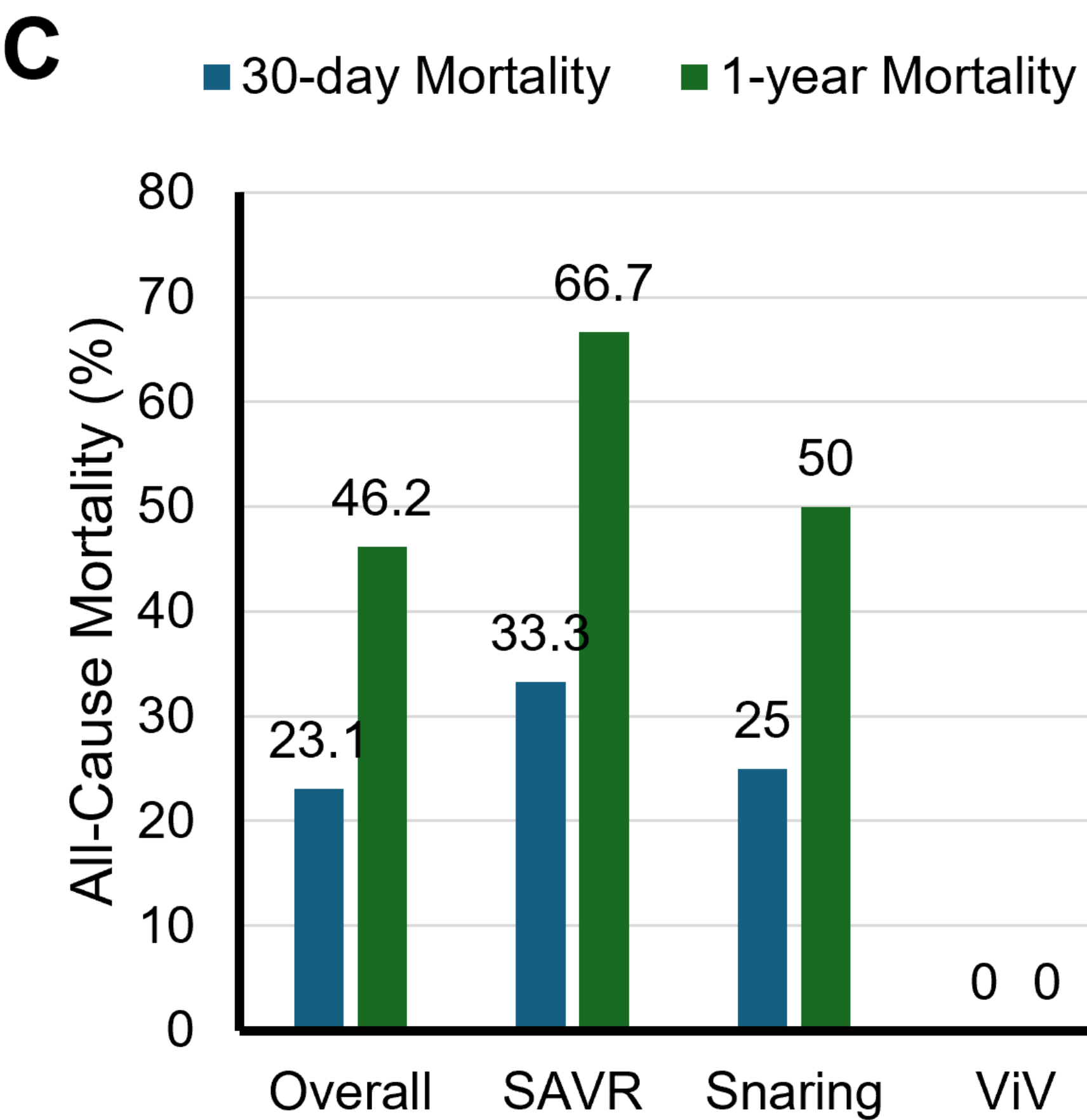
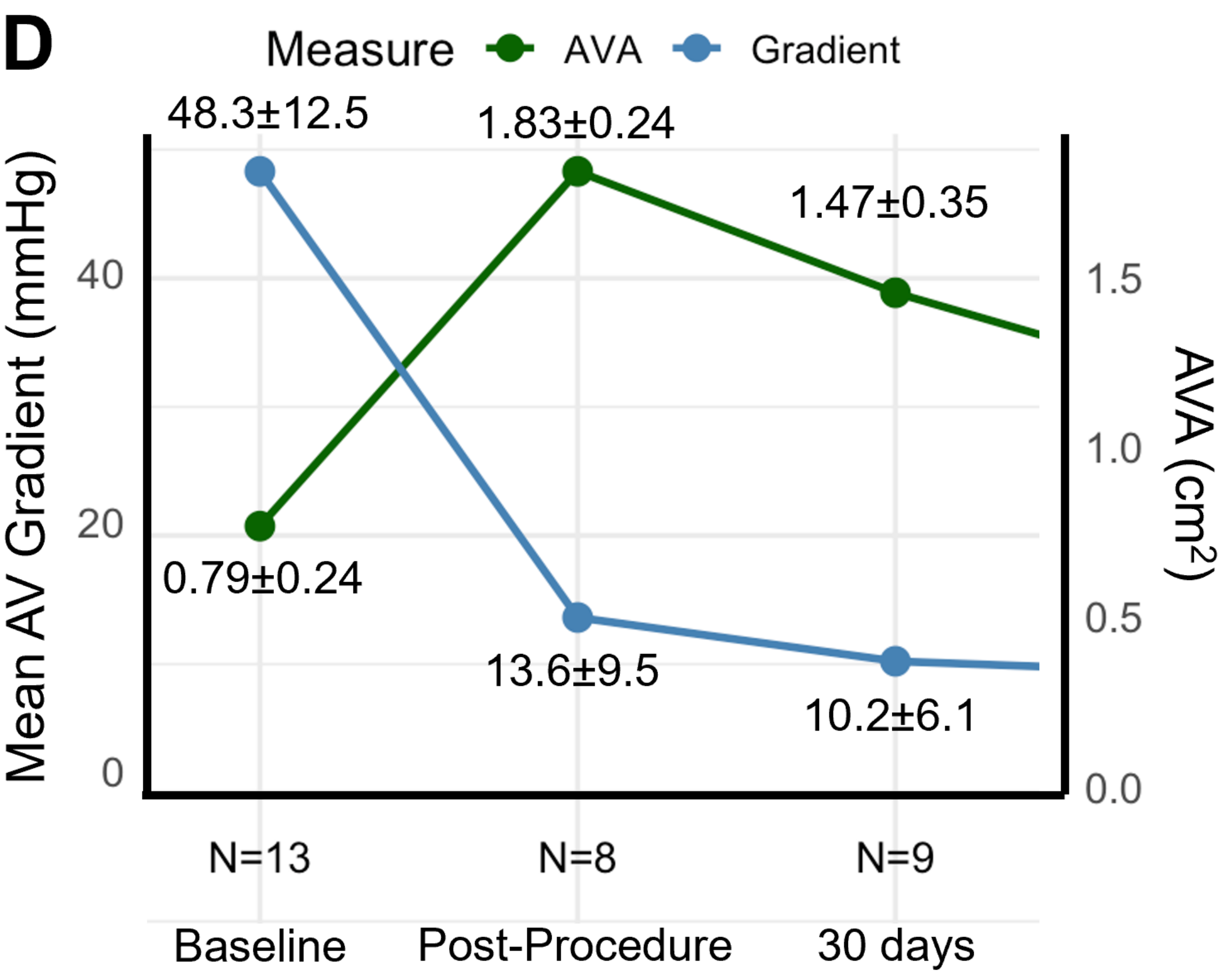


Figure 3. Echocardiography Follow-up



Outcome	N = 13
Length of stay, days	4.0 [2.0-14.0]
30-day mortality, n (%)	3 (23.1)
30-day stroke, n (%)	0 (0.0)
1-year mortality, n (%)	6 (46.2)
1-year stroke, n (%)	1 (7.7)
Cardiac hospitalization at 1 year, n (%)	4 (30.8)

CONCLUSIONS

TAVR valve embolization remains associated with **substantial mortality** particularly in patients requiring surgical bailout. Management strategies should be tailored to embolization location and direction.