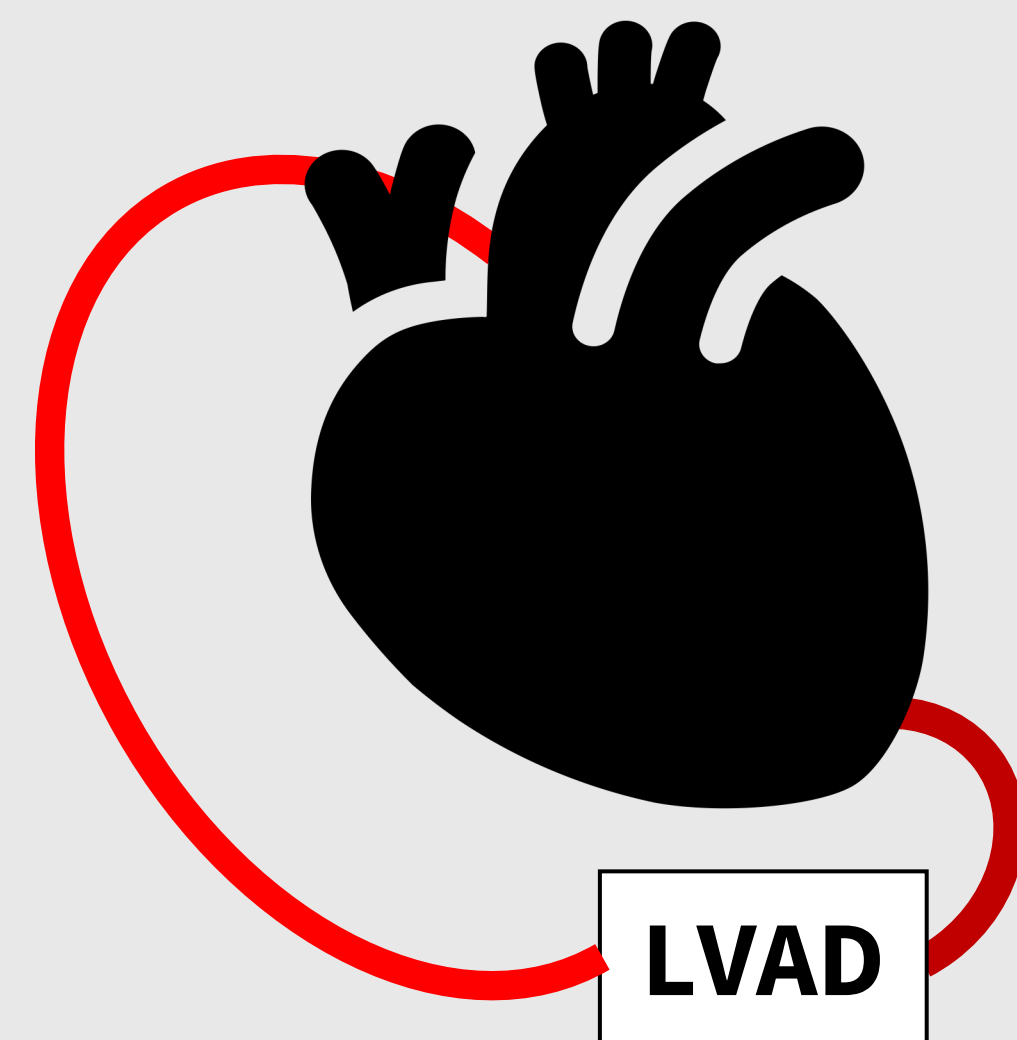


Background



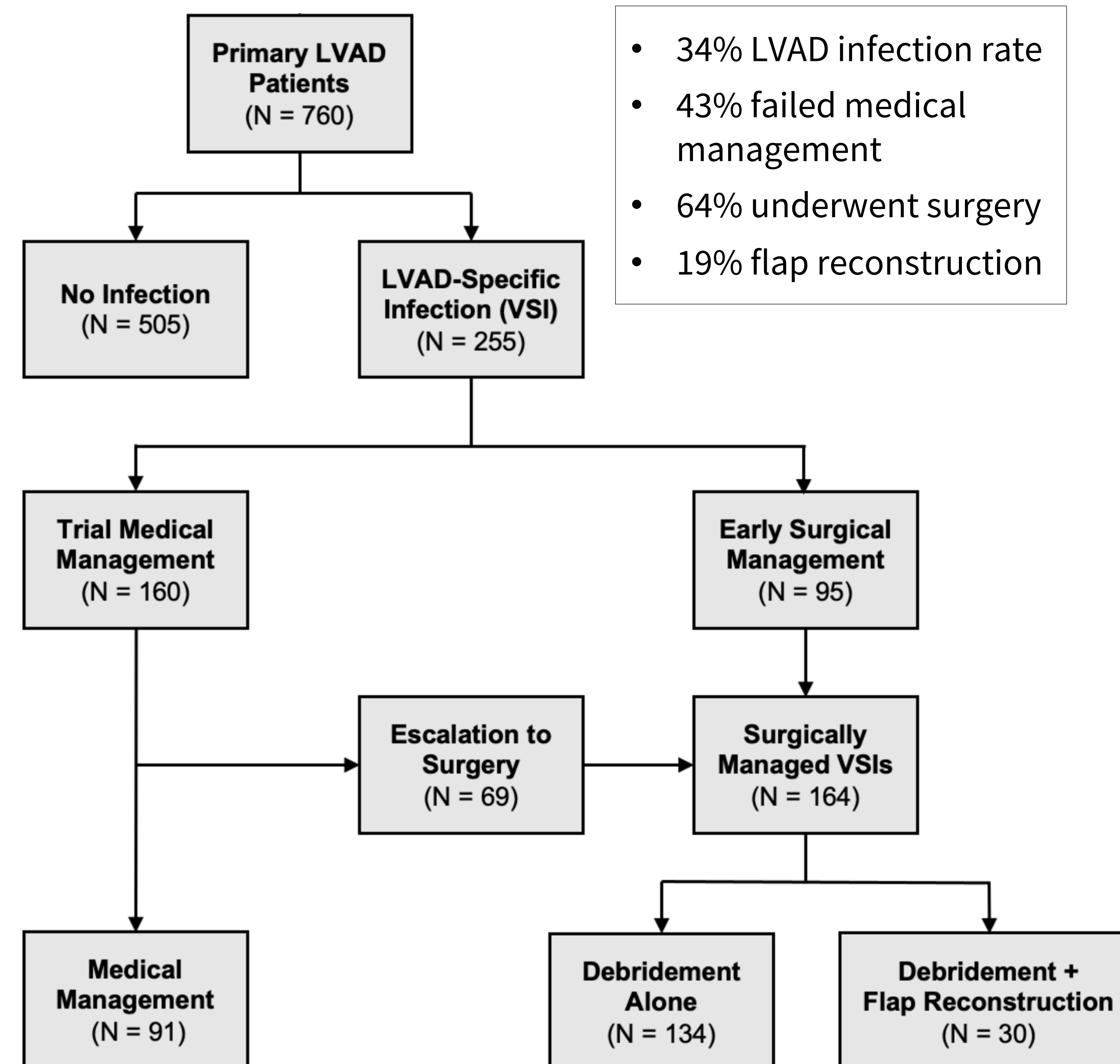
- Left ventricular assist devices (LVAD) provide life-saving mechanical circulatory support
- LVADs are prone to infections, causing increased mortality.
- Clinical guidelines remain unclear
 - Medical management
 - Surgical debridement
 - Flap reconstruction

Purpose

- Characterize incidence and risk factors for LVAD infections
- Generate clinical risk prediction score for mortality after LVAD infections
- Compare outcomes of LVAD infection management strategies

Methods

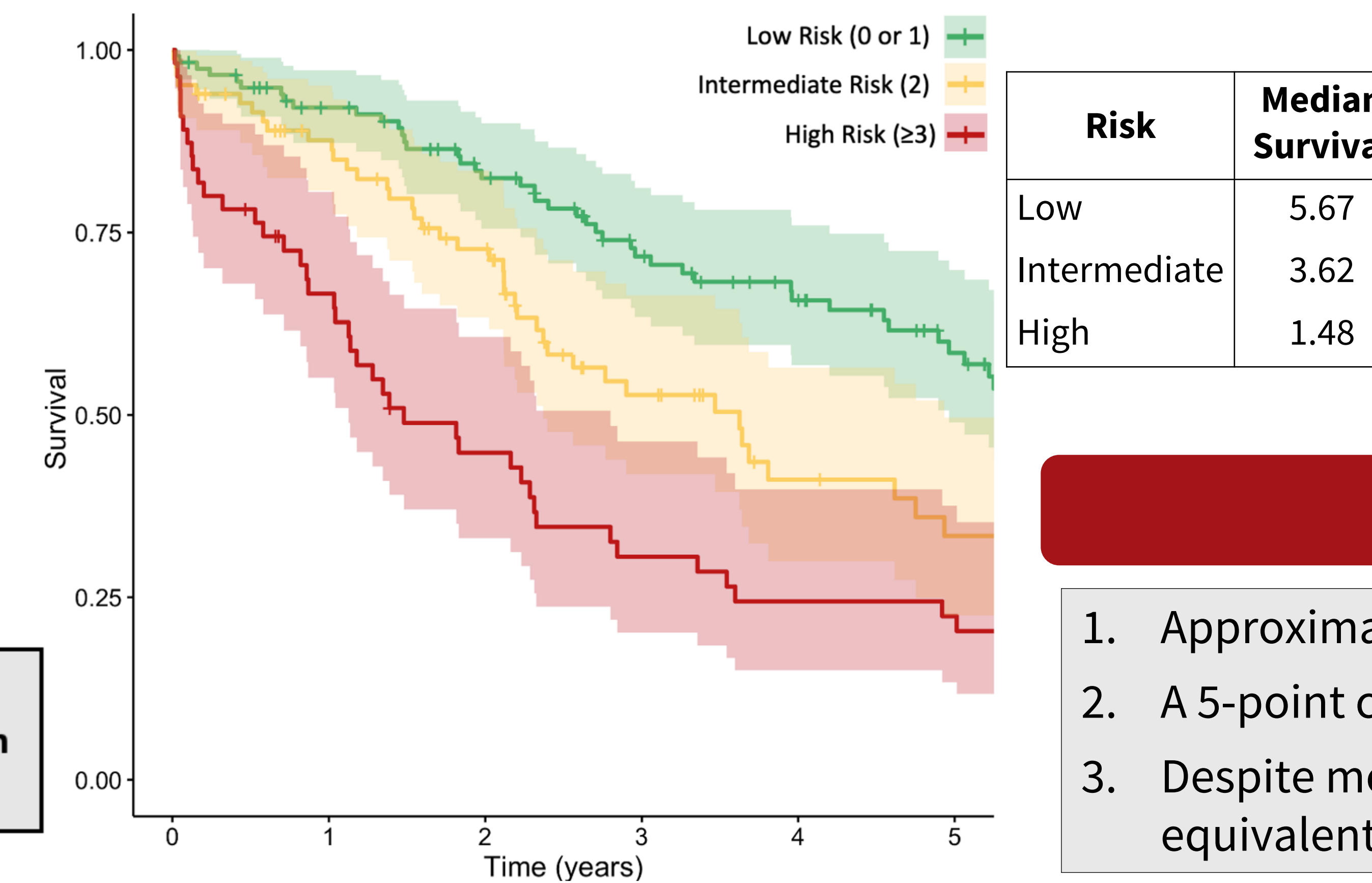
- Study Design: Prospectively maintained databases
 - Washington University
 - Society of Thoracic Surgeons (STS)
- Inclusion Criteria: Primary adult LVAD placement at Barnes-Jewish Hospital 2011-2021
- Primary Outcomes: Mortality from LVAD infection



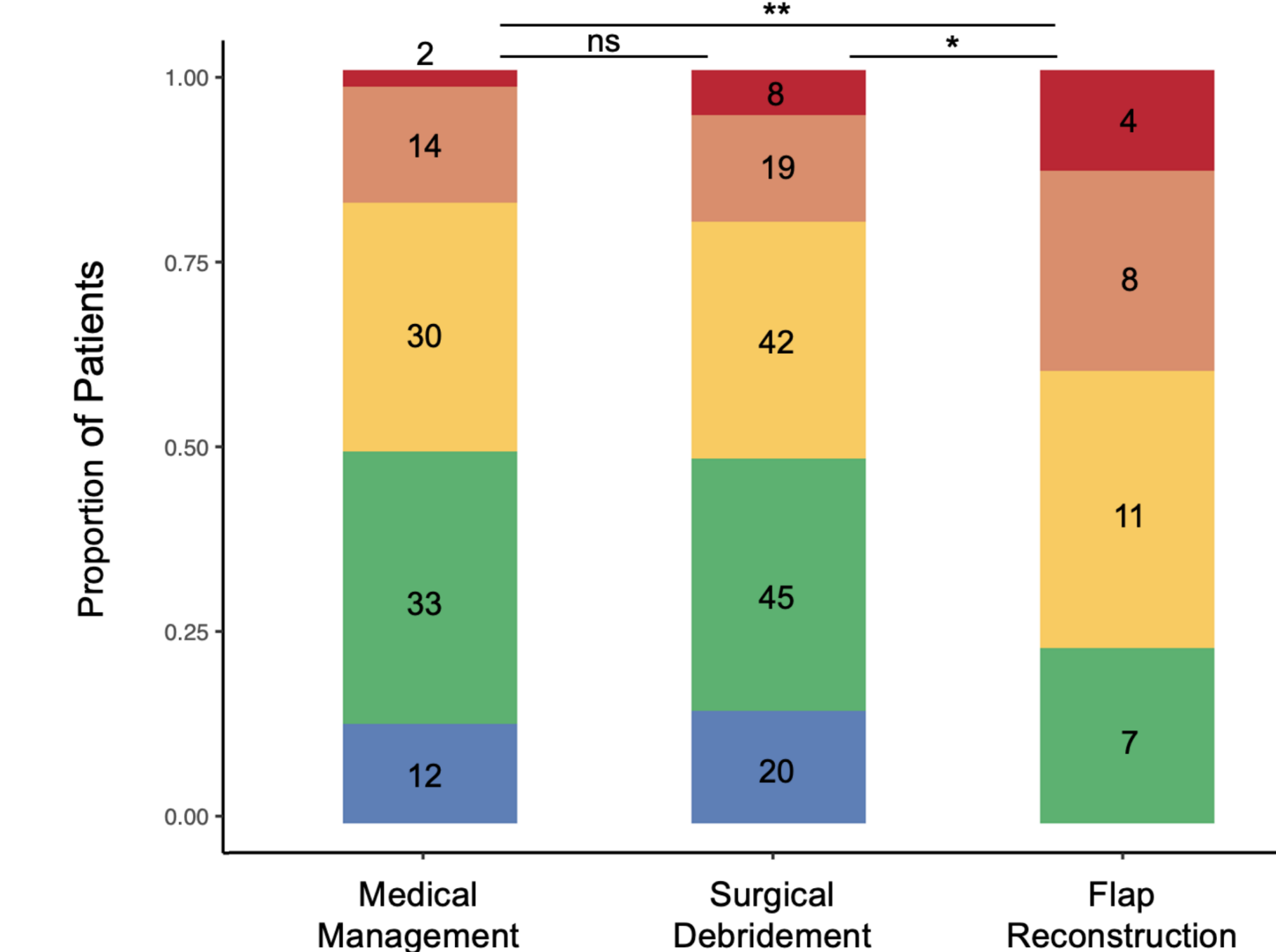
5-Point Clinical Risk Prediction Score

Infection Location	Points	Summation of Points	
Driveline only	0	Infection Location	+ _____
Pump pocket or outflow cannula	1	MRSA Infection	+ _____
MRSA Infection		MSSA Infection	+ _____
No	0	Diabetes	+ _____
Yes	1	ECMO after LVAD	+ _____
MSSA Infection		+ 1	
No	0	Total risk score = _____	
Yes	-1		
Diabetes			
No	0	Total risk score	Predicted risk of 90-day mortality, %
Yes	1	0 or 1	<5
ECMO after LVAD		2	5-7
No	0	3	8-12
Yes	2	4	13-20
		5	21-33
		6	≥34

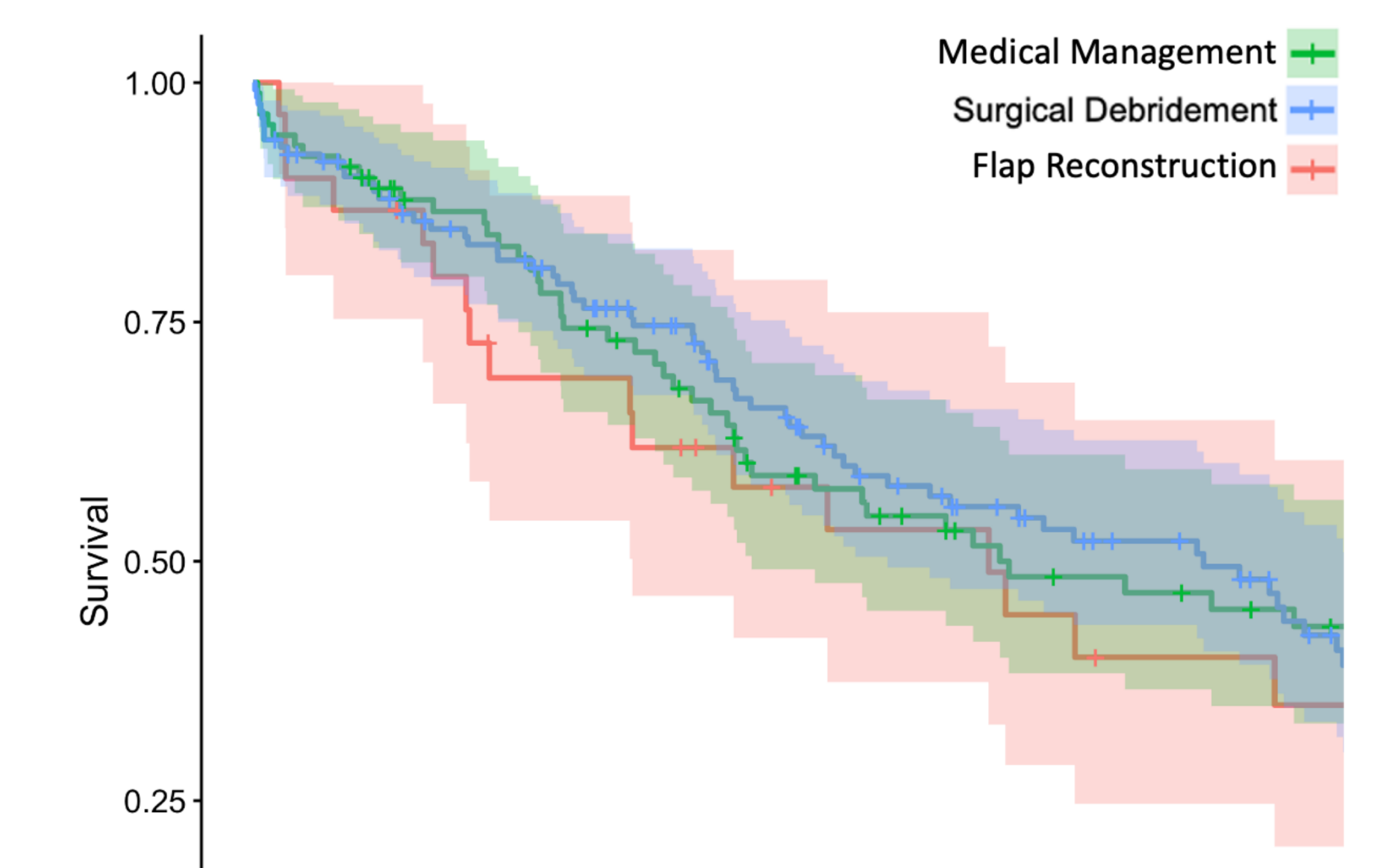
Higher risk score predicts increased mortality (p < 0.001)



Higher risk patients in flap cohort



Equivalent survival by management



Conclusions

- Approximately 1/3 of LVAD patients develop an infection
- A 5-point clinical risk score predicts mortality for LVAD infections
- Despite more severe infections, surgically managed patients have equivalent survival