

INTRODUCTION

- HeartMate 3 Improved long-term survival
- Unclear impact on lifetime surgical strategy after transplant
- This study aims to assess post-heart transplant outcomes in patients who were bridged with HM3 devices vs those who had a re-do HT in the current allocation era

METHOD

- UNOS retrospective cohort, 2018-2025; Adults >18
- Inclusion criteria: (1) Pre-existing HM3 or (2) Prior-Heart transplant
- Exclusion criteria: (1) prior HT or HM3 occurred ≤90 days before index HT or (2) >1 prior HT
- Primary outcome: survival at 30 days, 1 year, 3 years, and 5 years
- Secondary outcome: acute rejection, acute renal failure, pacemaker implant, stroke, and hospital length of stay (LOS)
- Univariable and multivariable cox regression models were performed for risk adjustment

RESULTS

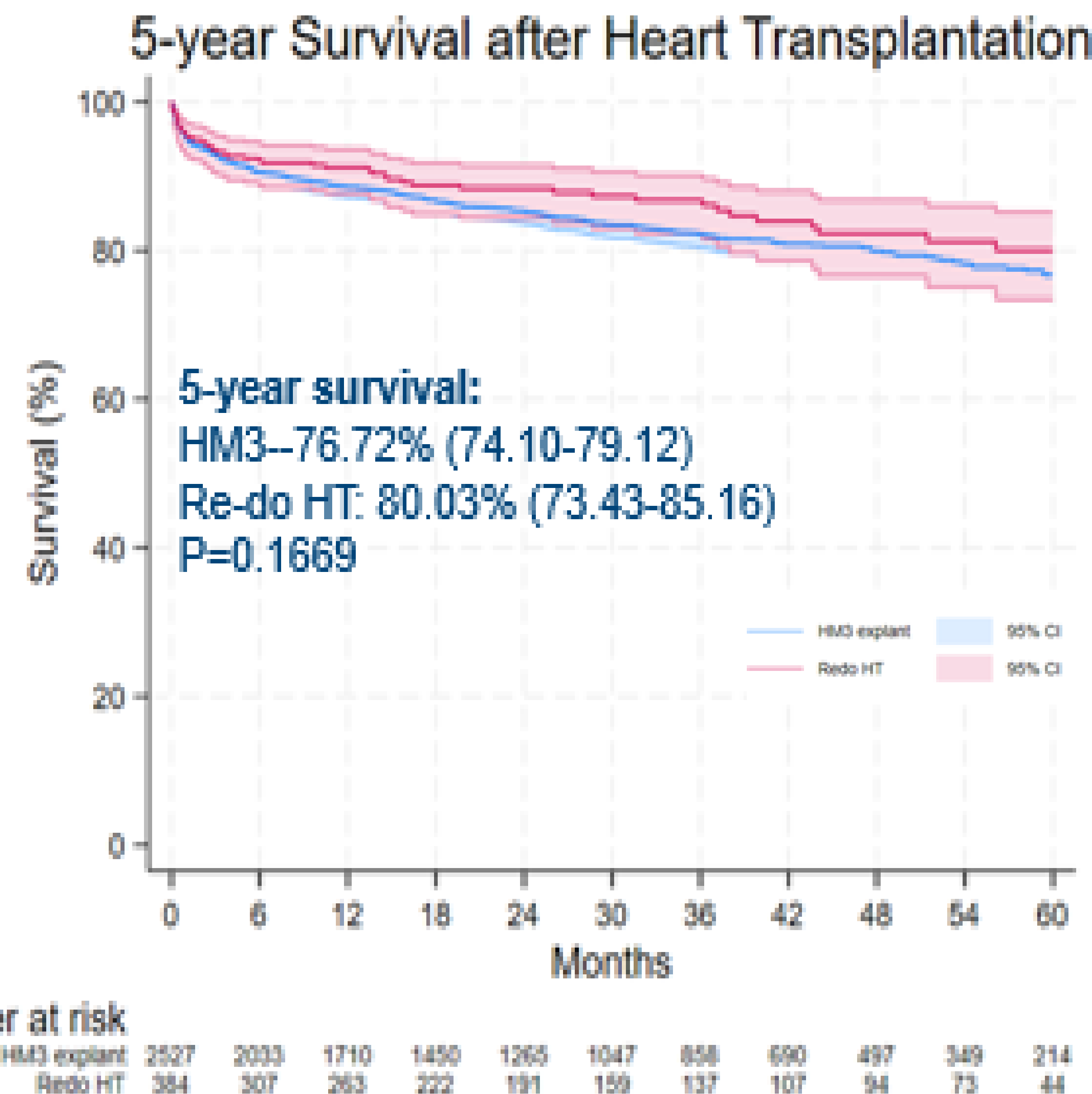
Table 1. Baseline characteristics

Variable	Re-do HT	HM3	P value
N	384	2527	—
Age	42.6 (15.3)	54.2 (11.6)	<0.001
Male	62.5%	77.8%	<0.001
Race (White / Black / Hispanic / Other)	61 / 17 / 17 / 5%	58 / 28 / 10 / 4%	<0.001
BMI	27.4 (5.0)	29.6 (5.0)	<0.001
Diabetes	28.9%	35.0%	0.019
Inotropes	26.6%	8.4%	<0.001
Mechanical ventilator	2.1%	0.2%	<0.001
Creatinine	1.46 (0.72)	1.28 (0.57)	<0.001
Days on waitlist	48.5	132	<0.001

Table 2. Multivariable-risk adjustment for 1-year mortality

Variable	HR (95% CI)	P value
Re-do HT vs HM3	0.82 (0.55–1.23)	0.341
Age	1.32 (1.19–1.48)	<0.001
Female sex	1.69 (1.28–2.23)	<0.001
Diabetes	1.27 (1.00–1.61)	0.041
Pre-op inotropes	1.70 (1.25–1.79)	<0.001
Creatinine	1.50 (1.26–1.79)	<0.001
Total bilirubin	1.29 (1.10–1.51)	0.002
Donor BMI	0.79 (0.63–0.98)	0.034
Ischemic time	1.07 (1.00–1.15)	0.049

Figure 1. Kaplan-Meier survival out to 5 years in re-do HT vs HM3 explant



RESULTS

Table 3: Secondary outcomes for Re-do HT vs HM3 explant

Variable	Re-do HT	HM3	P value
Renal Failure-N%	84 (21.88)	448 (17.78)	0.054
Stroke-N%	19 (4.96)	117 (4.65)	0.791
Pacemaker-N%	3 (0.78)	46 (1.83)	0.094
Rejection-%	55 (14.32)	407 (16.13)	0.368
LOS- median (IQR)	17 (12, 26)	18 (13, 28)	0.0422

CONCLUSIONS

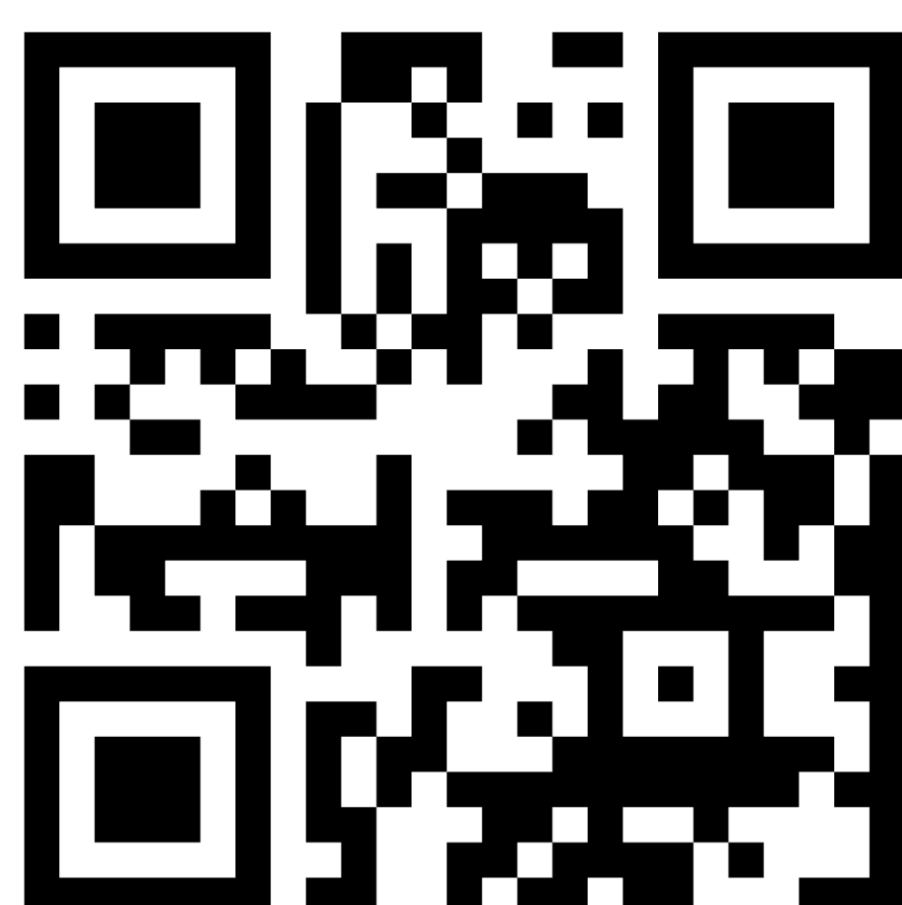
- 5-year survival was similar between both groups
- Morbidity outcomes were comparable
- Supports HM3 as a viable bridge to transplant strategy
- This is a key consideration when determining the appropriate pathway for lifetime surgical management of advanced heart failure
- Further research is required to inform the appropriate selection for initial operation

REFERENCES

1. Meyer DM, Nayak A, Wood KL, Blumer V, Schettle S, Salerno C, Koehl D, Cantor R, Kirklin JK, Jacobs JP, Cascino T, Pagani FD, Kanwar MK. The Society of Thoracic Surgeons Intermacs 2024 Annual Report: Focus on Outcomes in Younger Patients. Ann Thorac Surg. 2025 Jan;119(1):34-58. doi: 10.1016/j.athoracsur.2024.10.003. Epub 2024 Oct 21. PMID: 39442906.
2. Hess NR, Hickey GW, Sultan I, Kilic A. Redo orthotopic heart transplantation in the current era. J Thorac Cardiovasc Surg. 2023 Aug;166(2):583-594.e3. doi: 10.1016/j.jtcvs.2021.09.061. Epub 2021 Oct 30. PMID: 34442906.

DISCLOSURES

Arman Kilic is a speaker and consultant for Abiomed, Abbott, 3ive, and LivaNova. Additionally, A.K. is the founder and owner of QImatrix. All additional authors have no financial relationships to disclose.



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