

# ***Debate: 3 Reasons why TAVR is the Best Option for this Patient***

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## Ineligible Company

Medtronic, Boston Scientific, Abbott Medical, Edwards Life Sciences, Gore Medical

Medtronic, Boston Scientific, Abbott Medical, Edwards Life Sciences, Gore Medical

Transverse Medical

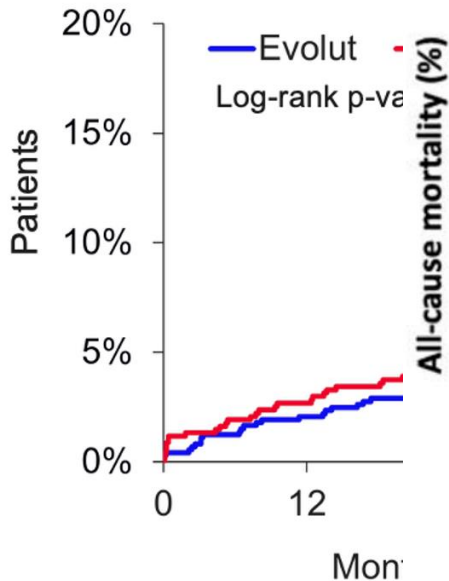
All-cause Death (%)



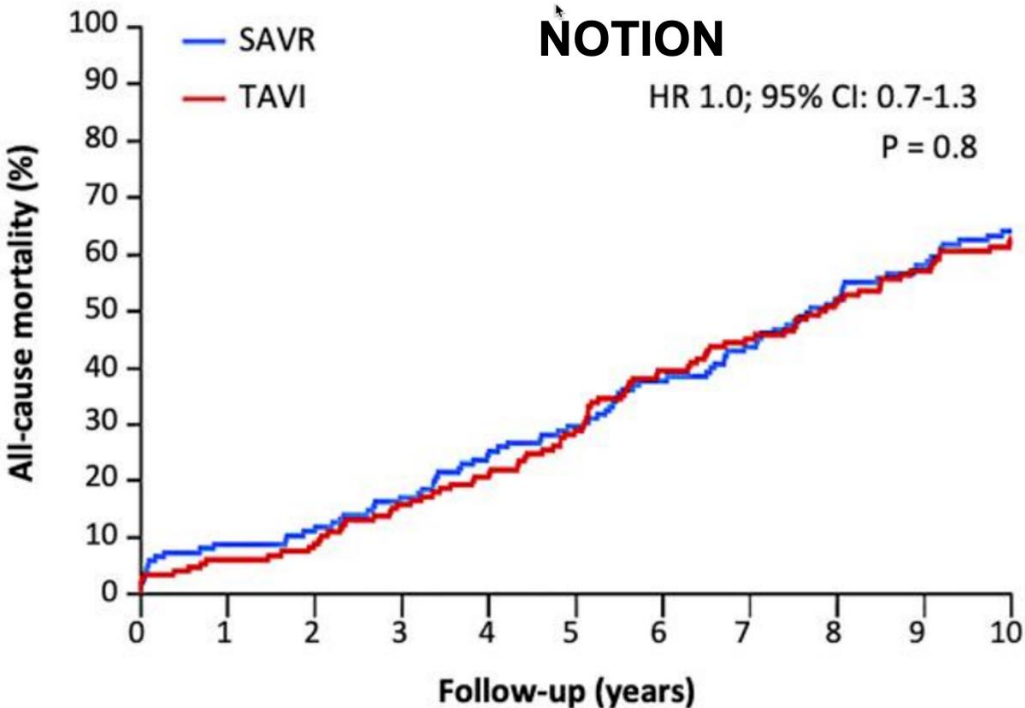
Number at risk:

TAVR 496  
Surgery 454

**Evolut Low-risk All.**



	730	718	709
Evolut	730	718	709
Surgery	684	656	636



Patients at risk

	145	136	132	122	115	101	86	78	69	61	53
TAVI	145	136	132	122	115	101	86	78	69	61	53
SAVR	135	123	120	112	102	95	83	75	64	56	48

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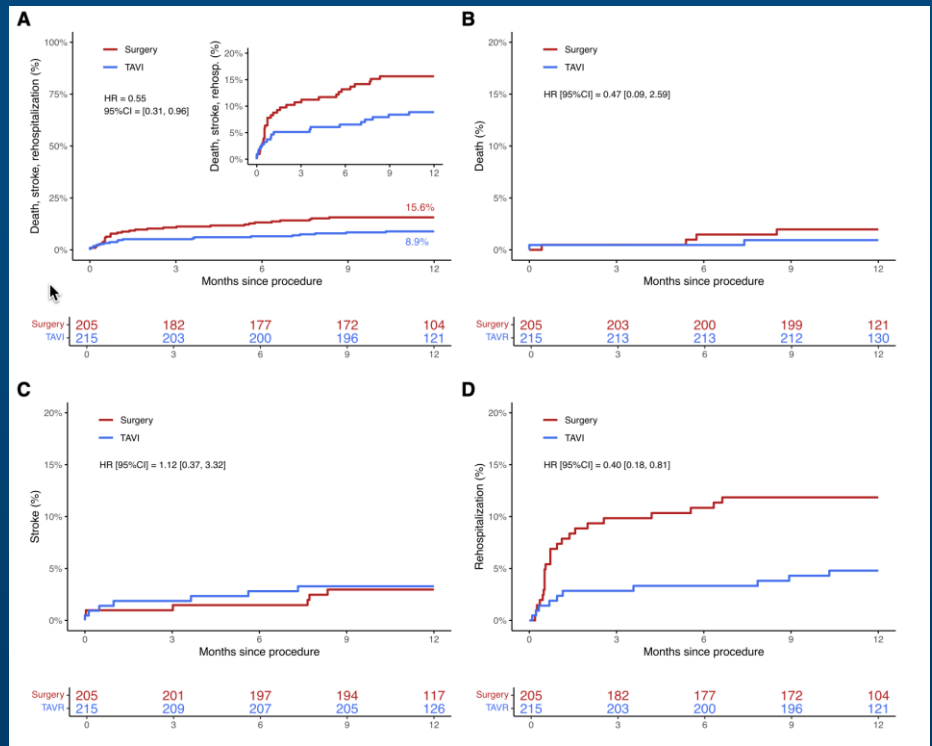
**CLINICAL RESEARCH**  
 Valvular heart disease

# Transcatheter vs. surgical aortic valve replacement in women: the RHEIA trial

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**Abstract**  
 Although women with severe symptomatic aortic stenosis have more complications than men when undergoing surgical valve replacement, they are under-represented in clinical trials. The Randomized research in women with aortic stenosis (RHEIA) trial investigated the balance of benefits and risks of transcatheter aortic valve replacement (TAVI) vs. surgery in women.  
**Methods**  
 Women were randomized 1:1 to transcatheter TAVI with a balloon-expandable valve or surgery. The primary composite endpoint was death, stroke, or valve failure related to aortic stenosis at 1 year. Secondary endpoints included rehospitalization, stroke, or valve failure related to aortic stenosis at 1 year. The trial was designed to be powered for a pre-specified 4% margin and superiority testing was performed in the as-treated population.



**Tchetché D, Pibarot P, Bax JJ, Bonaros N, Windecker S, Dumonteil N, Nietlispach F, Messika-Zeitoun D, Pocock SJ, Berthoumieu P, Swaans MJ, Timmers L, Rudolph TK, Bleiziffer S, Leroux L, Modine T, van der Kley F, Auffret V, Tomasi J, Stastny L, Hengstenberg C, Andreas M, Leclercq F, Gandet T, Mascherbauer J, Trescher K, Prendergast B, Vasa-Nicotera M, Chieffo A, Mares J, Wesseling W, Rakova R, Kurucova J, Bramlage P, Eltchaninoff H., Transcatheter vs. surgical aortic valve replacement in women: the RHEIA trial. Eur Heart J. 2025 Jun 9;46(22):2079-2088. doi: 10.1093/eurheartj/ehaf133.**

BVF Cumulative Incidence

20%  
15%  
10%  
5%  
0%

Bioprosthetic Valve Failure (%)

100  
90  
80  
70  
60  
50  
40  
30  
20  
10  
0

TAVI  
SAVR

**NOTION**

$p = 0.32$   
HR 0.72; 95% CI: 0.36 - 1.45

Follow-up (Years)

15.1%  
10.8%

TAVI	130	128	124	116	107	94	81	72	62	53	46
SAVR	120	118	115	107	99	90	78	69	57	49	42

# Life Expectancy After Surgical Aortic Valve Replacement

Andreas Martinsson, MD, PhD,<sup>1,2</sup> Susanne J. Nielsen, PhD,<sup>1,2</sup> Milan Milojevic, MD, PhD,<sup>1,2</sup> Björn Redfors, MD, PhD,<sup>1,2</sup> Elmir Omerovic, MD, PhD,<sup>1,2</sup> Thel Tønnessen, MD, PhD,<sup>1,2</sup> Thomas Gudbjartsson, MD, PhD,<sup>1,2</sup> Göran Dellgren, MD, PhD,<sup>1,2</sup> Anders Jeppsson, MD, PhD<sup>1,2</sup>

## ABSTRACT

**BACKGROUND** Surgical risk, age, perceived life expectancy, and valve durability influence the choice between surgical aortic valve replacement (SAVR) and transcatheter aortic valve implantation. The contemporaneous life expectancy after SAVR, in relation to surgical risk and age, is unknown.

**OBJECTIVES** The purpose of this study was to determine median survival time in relation to surgical risk and chronological age in SAVR patients.

**METHODS** Patients  $n=60$  years with aortic stenosis who underwent isolated SAVR with a bioprosthesis ( $n=8,353$ ) were risk-stratified before surgery into low, intermediate, or high surgical risk using the logistic EuroSCORE (2001-2011) or EuroSCORE II (2012-2017) and divided into age groups. Median survival time and cumulative 5-year mortality were estimated with Kaplan-Meier curves. Cox regression analysis was used to further determine the importance of age.

**RESULTS** There were 7,123 (85.1%) low-risk patients, 942 (11.3%) intermediate-risk patients, and 288 (3.5%) high-risk patients. Median survival time was 10.9 years (95% confidence interval, 10.6-11.2 years) in low-risk, 7.3 years (7.0-7.9 years) in intermediate-risk, and 5.8 years (5.4-6.5 years) in high-risk patients. The 5-year cumulative mortality was 16.5% (15.5%-17.4%), 30.7% (27.5%-33.7%), and 43.0% (36.4%-49.7%), respectively, in low-risk patients; median survival time ranged from 16.2 years in patients aged 60 to 64 years to 6.3 years in patients aged  $\geq 85$  years. Age was associated with 5-year mortality only in low-risk patients (interaction  $P < 0.001$ ).

**CONCLUSIONS** Eighty-five percent of SAVR patients receiving bioprostheses have low surgical risk. Estimated survival is substantial following SAVR, especially in younger, low-risk patients, which should be considered in Heart Team discussions. (J Am Coll Cardiol 2021;78(22):2147-2157) © 2021 The Authors. Published by Elsevier on behalf of the American College of Cardiology Foundation. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

European and North American guidelines on valvular heart disease recommend that age, surgical risk, and life expectancy be taken into consideration, together with clinical, anatomic, and procedural factors, when the Heart Team decides between surgical aortic valve replacement (SAVR) and transcatheter aortic valve implantation (TAVI) in patients with severe aortic stenosis (1,2). The

Patients > 60 years with aortic stenosis who underwent isolated SAVR with a bioprosthesis (n . 8,353) were risk-stratified before surgery using the logistic EuroSCORE (2001-2011) or EuroSCORE II (2012-2017) and divided into age groups.

Follow up 100%

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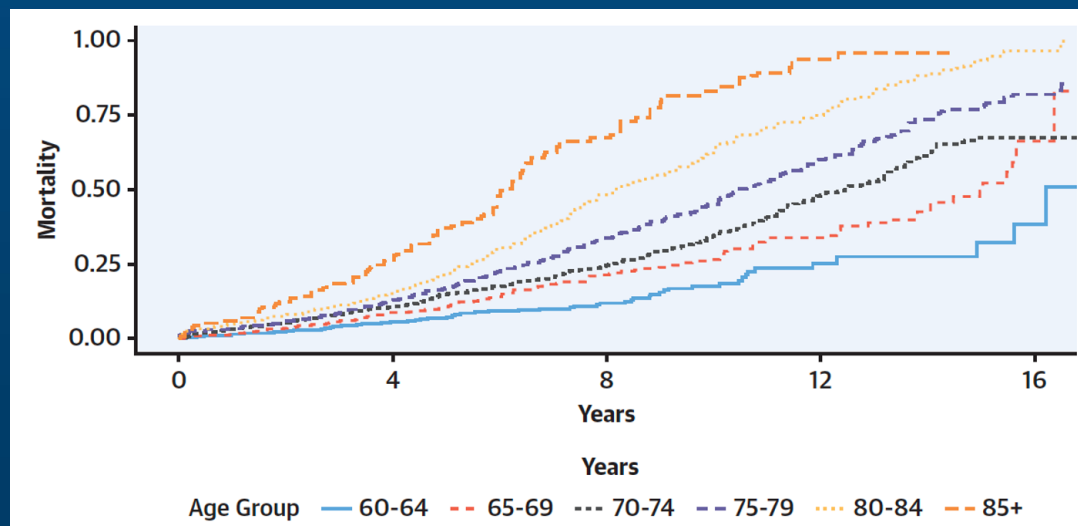
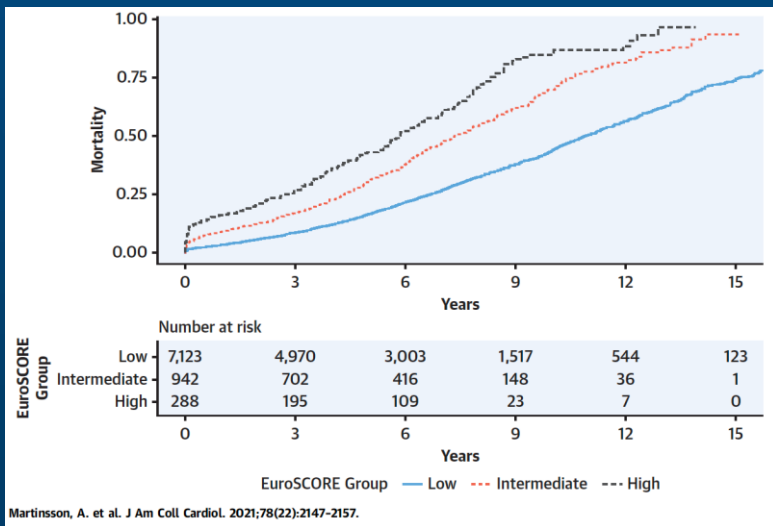
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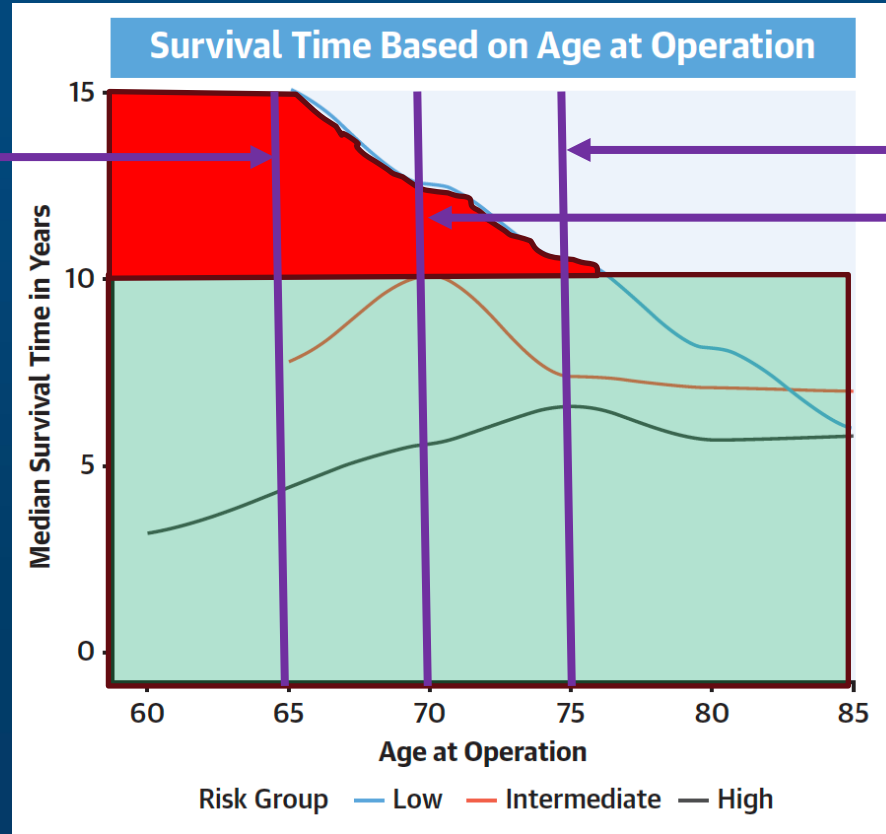
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I believe we  
have 10-year  
durability safety

US Guidelines

EU  
Guidelines



# Conclusion/Summary/Take-home Message

- 10-year survival and BVF appears similar
  - TAVR is less invasive and you recover faster
  - All patients want TAVR
- 
- These are only the first 3 reasons