

Valvular Heart Disease The Revolution of Data

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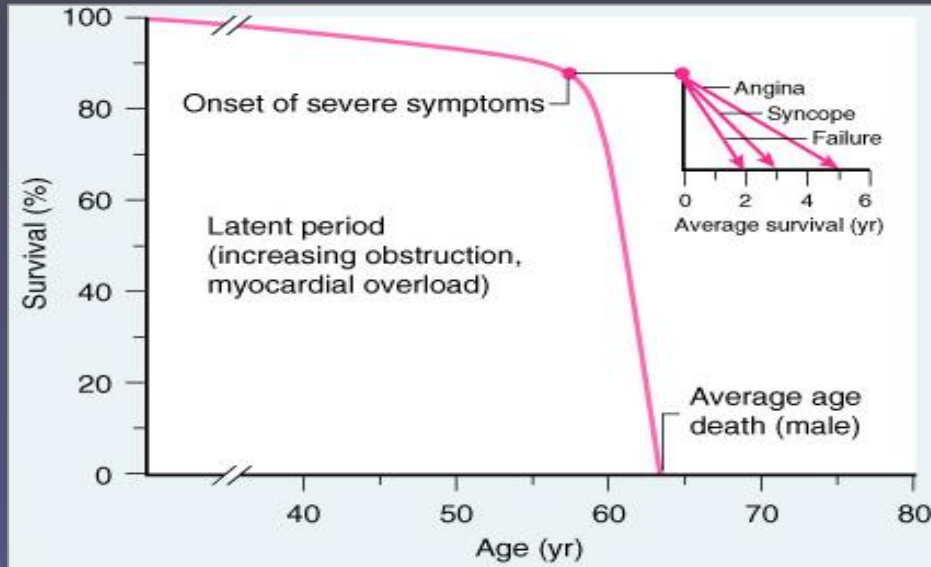


**THE 11TH HEART VALVE SUMMIT
OF THE ISRAEL HEART SOCIETY**

Under the auspices of the Israel Cardiology Association
In collaboration with the Israel Society of Cardiothoracic Surgery

8.2.2023 | Dan Panorama Hotel, Tel Aviv

Symptomatic Severe Aortic Stenosis



“Surgical intervention should be performed promptly once even... minor symptoms occur”

Ross J Jr, Braunwald E. Aortic stenosis. Circulation. 1968

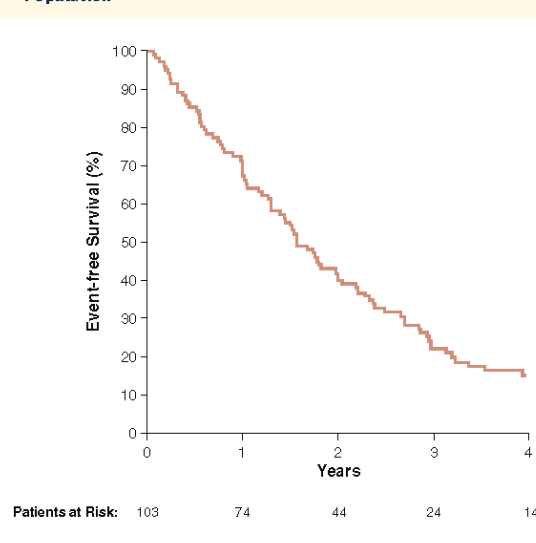
The prognosis of aortic stenosis has not significantly changed since the 60's?

Asymptomatic Severe Aortic Stenosis in the Elderly



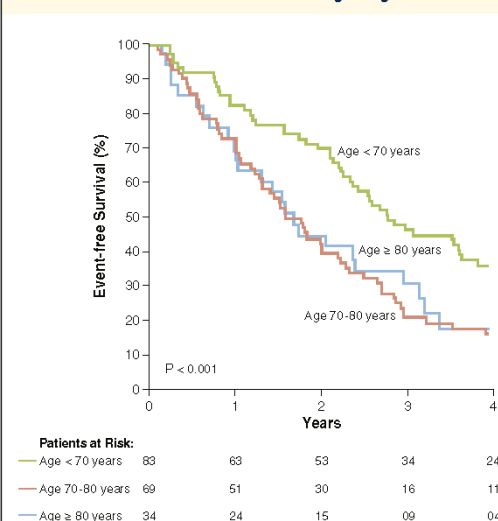
Robert Zilberszac, MD,^a Harald Gabriel, MD,^a Michael Schemper, PhD,^b Günther Laufer, MD,^c Gerald Maurer, MD,^a
Raphael Rosenhek, MD^a

FIGURE 1 Event-Free Survival for the Entire Patient Population



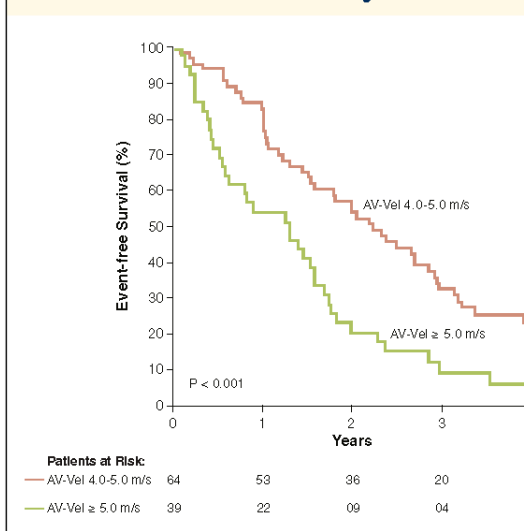
Kaplan-Meier event-free survival for the entire patient population.

FIGURE 2 Event-Free Survival According to Age



Kaplan-Meier event-free survival for patients 70 to 80 years of age (pink line), patients ≥ 80 years (blue line), and patients < 70 years (green line).

FIGURE 3 Event-Free Survival According to AV-Vel

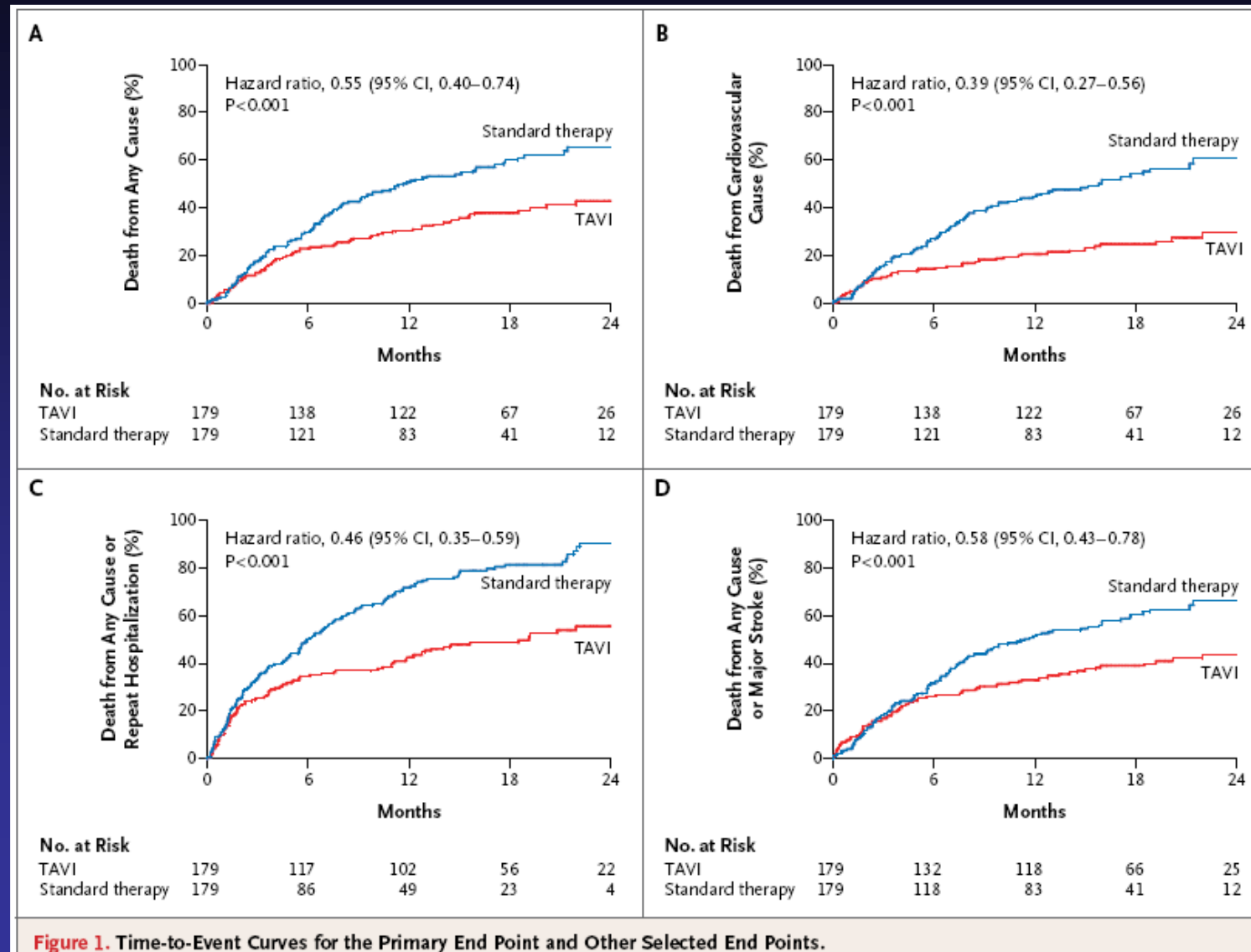


Kaplan-Meier event-free survival for patients with an AV-Vel of 4.0 to 5.0 m/s (pink line) and patients with an AV-Vel ≥ 5 m/s (green line). AV-Vel = peak aortic jet velocity.

Randomized TAVI Studies



Natural history of medically treated severe AS



Aortic Regurgitation Index Defines Severity of Peri-Prosthetic Regurgitation and Predicts Outcome in Patients After Transcatheter Aortic Valve Implantation

Jan-Malte Sinning, MD, Christoph Hammerstingl, MD, Mariuca Vasa-Nicotera, MD, Viktoria Adenauer, MD, Sisa Josefina Lema Cachiguango, MD, Anne-Cathérine Schée Sven Hausen, MD, Alexander Sedaghat, MD, Alexander Ghanem, MD, Cornelius Mü Eberhard Grube, MD, Georg Nickenig, MD, Nikos Werner, MD

Bonn, Germany

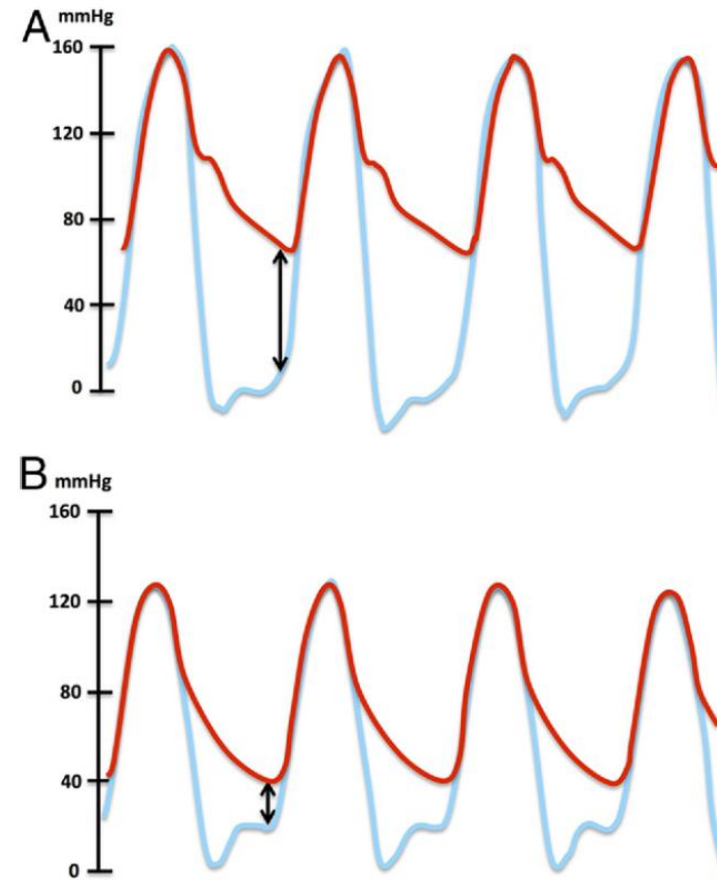


Figure 1 Calculation of the AR Index

Simultaneous determination of left ventricular end-diastolic pressure (LVEDP) (blue line) and diastolic blood pressure (DBP) in the aorta (red line) in a patient without peri-prosthetic aortic regurgitation (periAR) (A) and in a patient with moderate periAR (B) for the calculation of the aortic regurgitation (AR) index: $[(\text{DBP} - \text{LVEDP})/\text{SBP}] \times 100$. (A) AR index = $[(65 - 10)/160] \times 100 = 34.4$. (B) AR index = $[(40 - 20)/130] \times 100 = 15.4$.

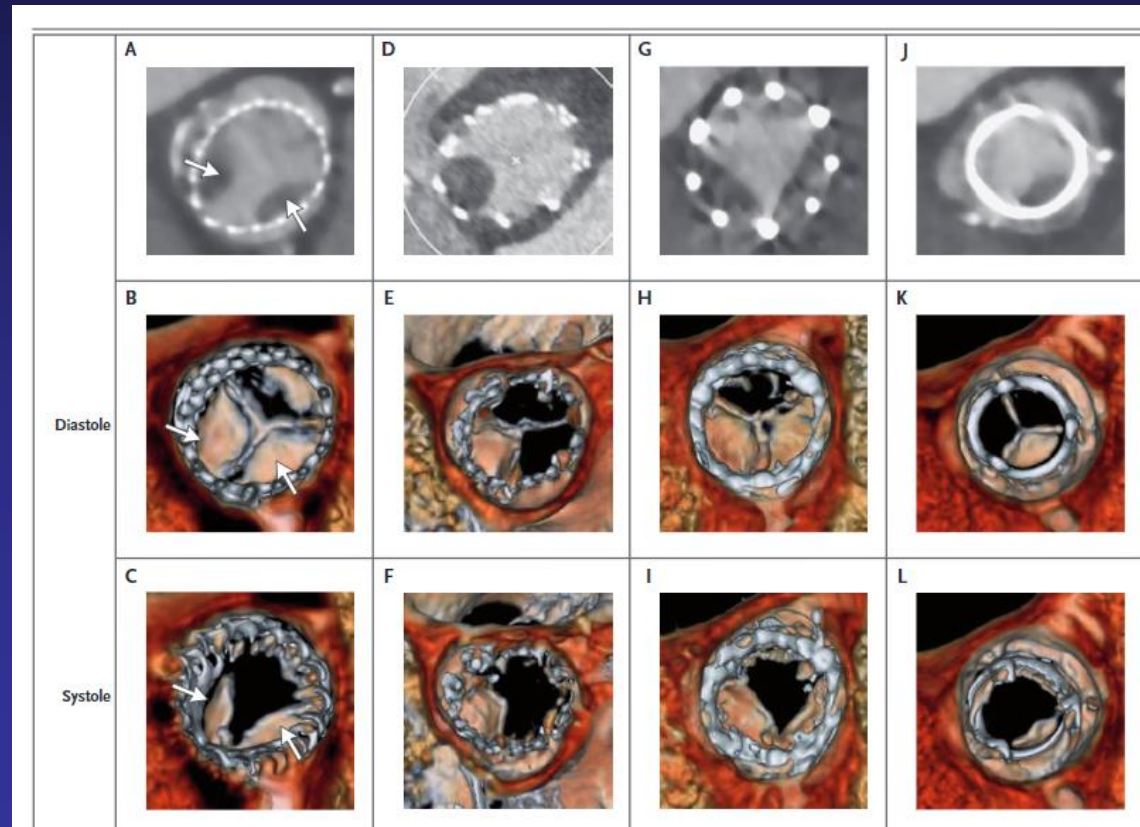
High degree AV block requiring PPM

- PARTNER (Sapient) – 2y
 - TAVI – 7.2%
 - SAVR – 6.4%
- France Registry – 1y
 - Sapient – 11.5%
 - CoreValve – 24.2%
- CoreValve US randomized trial – 1y
 - TAVI – 22.3%
 - SAVR – 11.3%

ORIGINAL ARTICLE

Possible Subclinical Leaflet Thrombosis in Bioprosthetic Aortic Valves

R.R. Makkar, G. Fontana, H. Jilaihawi, T. Chakravarty, K.F. Kofoed, O. De Backer, F.M. Asch, C.E. Ruiz, N.T. Olsen, A. Trento, J. Friedman, D. Berman, W. Cheng, M. Kashif, V. Jelnin, C.A. Kliger, H. Guo, A.D. Pichard, N.J. Weissman, S. Kapadia, E. Manasse, D.L. Bhatt, M.B. Leon, and L. Søndergaard



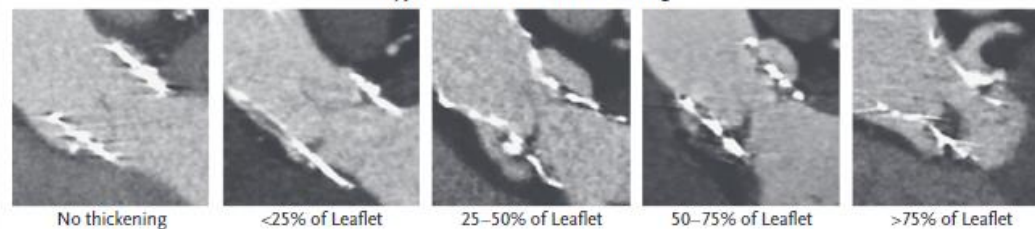
ORIGINAL ARTICLE

Reduced Leaflet Motion after Transcatheter Aortic-Valve Replacement

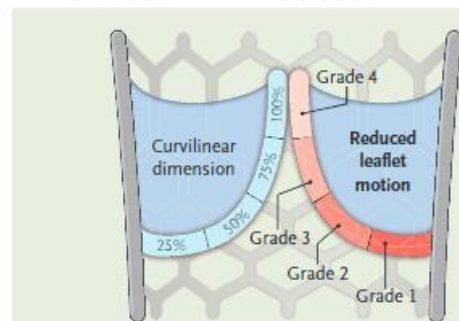
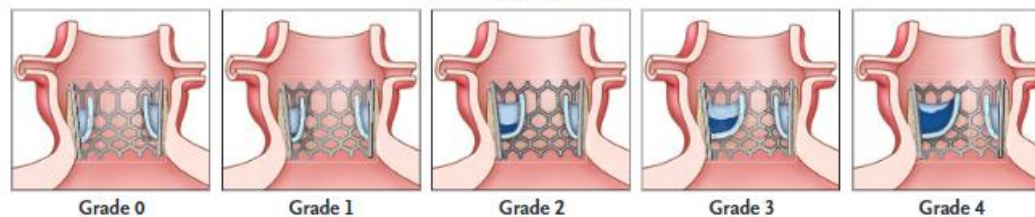
Ole De Backer, M.D., Ph.D., George D. Dangas, M.D., Hasan Jilaihaw, M.D., Jonathon A. Leipsic, M.D., Christian J. Terkelsen, M.D., D.M.Sc., Ph.D., Raj Makkar, M.D., Annapoorna S. Kini, M.D., Karsten T. Veien, M.D., Mohamed Abdel-Wahab, M.D., Ph.D., Won-Keun Kim, M.D., Prakash Balan, M.D., Nicolas Van Mieghem, M.D., Ph.D., Ole N. Mathiassen, M.D., Ph.D., Raban V. Jeger, M.D., Martin Arnold, M.D., Roxana Mehran, M.D., Ana H.C. Guimarães, Ph.D., Bjarne L. Nørgaard, M.D., Ph.D., Klaus F. Kofoed, M.D., D.M.Sc., Philipp Blanke, M.D., Stephan Windecker, M.D., and Lars Søndergaard, M.D., D.M.Sc., for the GALILEO-4D Investigators*

A Cardiac Four-Dimensional CT Assessment

Hypoattenuated Leaflet Thickening



Reduced Leaflet Motion

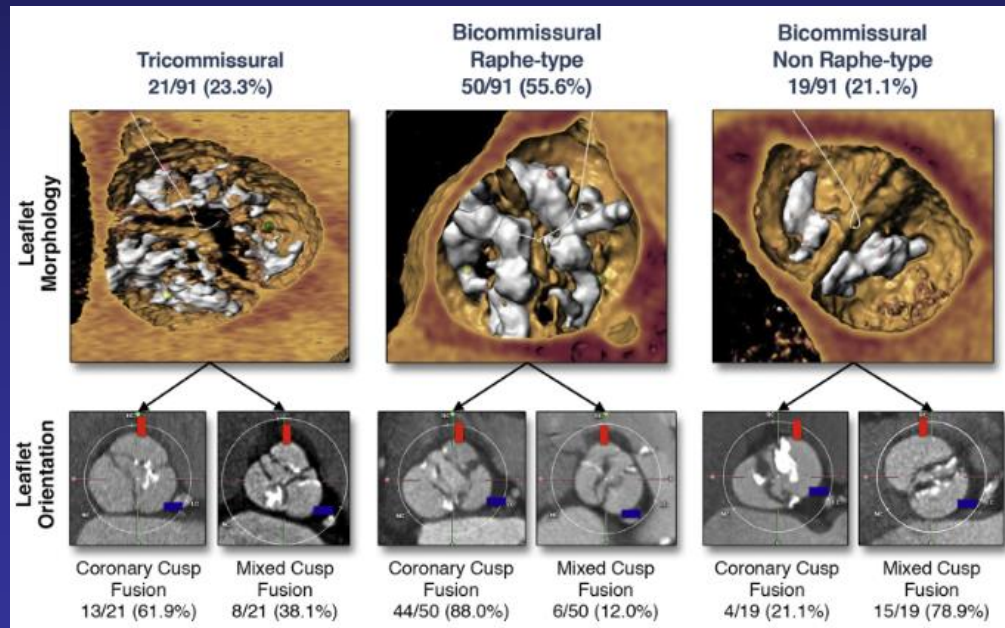


- Reduced leaflet motion was defined as
- Grade 0: normal or unrestricted
 - Grade 1: minimally restricted — limited to base
 - Grade 2: mildly restricted — involving more than the base but <50% of the leaflet along curvilinear dimension
 - Grade 3: moderately restricted — involving >50% but <75% of the leaflet along curvilinear dimension
 - Grade 4: largely immobile

A Bicuspid Aortic Valve Imaging Classification for the TAVR Era

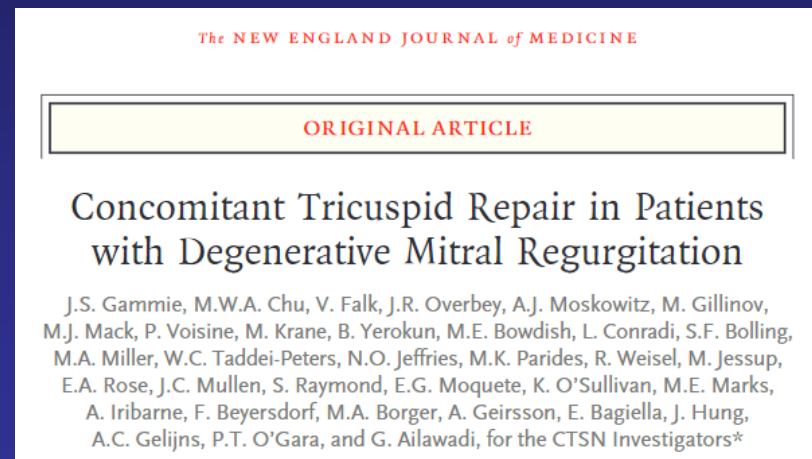
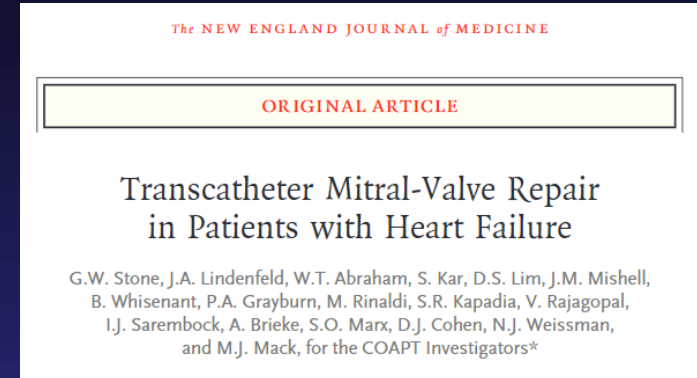
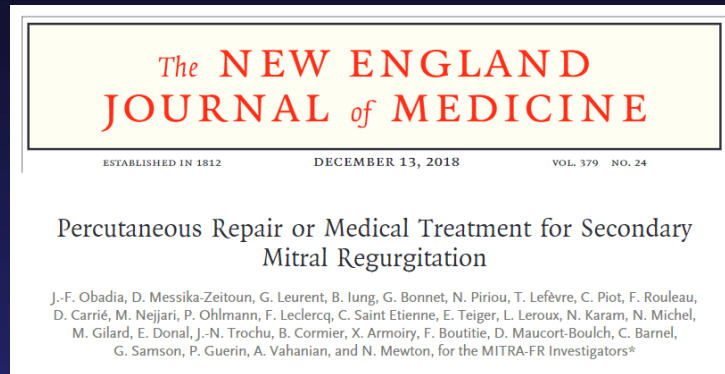


Hasan Jilaihawi, MD,^a Mao Chen, MD,^b John Webb, MD,^c Dominique Himbert, MD,^d Carlos E. Ruiz, MD,^e Josep Rodés-Cabau, MD,^f Gregor Pache, MD,^g Antonio Colombo, MD,^h Georg Nickenig, MD,ⁱ Michael Lee, MD,^j Corrado Tamburino, MD,^k Horst Sievert, MD,^l Yigal Abramowitz, MD,^m Giuseppe Tarantini, MD,ⁿ Faisal Alqoofi, MD,^o Tarun Chakravarty, MD,^m Mohammad Kashif, MD,^m Nobuyuki Takahashi, MD,^m Yoshio Kazuno, MD,^m Yoshio Maeno, MD,^m Hiroyuki Kawamori, MD,^m Alaide Chieffo, MD,^h Philipp Blanke, MD,^{c,g} Danny Dvir, MD,^c Henrique Barbosa Ribeiro, MD,^f Yuan Feng, MD,^b Zhen-Gang Zhao, MD,^b Jan-Malte Sinning, MD,ⁱ Chad Kliger, MD,^e Gennaro Giustino, MD,^h Basia Pajerski, MD,^c Sebastiano Imme, MD,^k Eberhard Grube, MD,ⁱ Jonathon Leipsic, MD,^c Alec Vahanian, MD,^d Iassen Michev, MD,^h Vladimir Jeltnin, MD,^e Azeem Latib, MD,^h Wen Cheng, MD,^m Raj Makkar, MD,^m

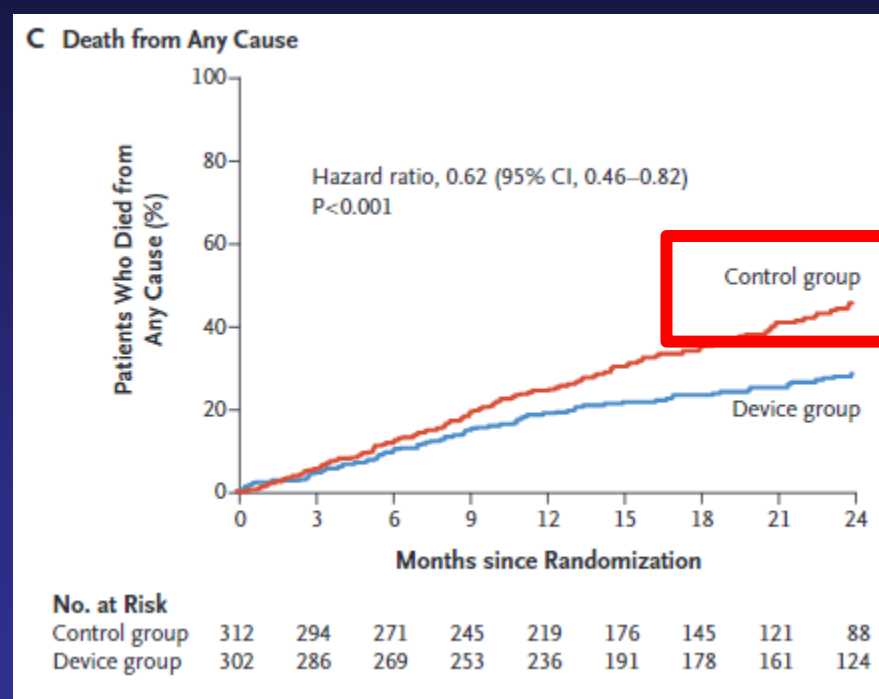
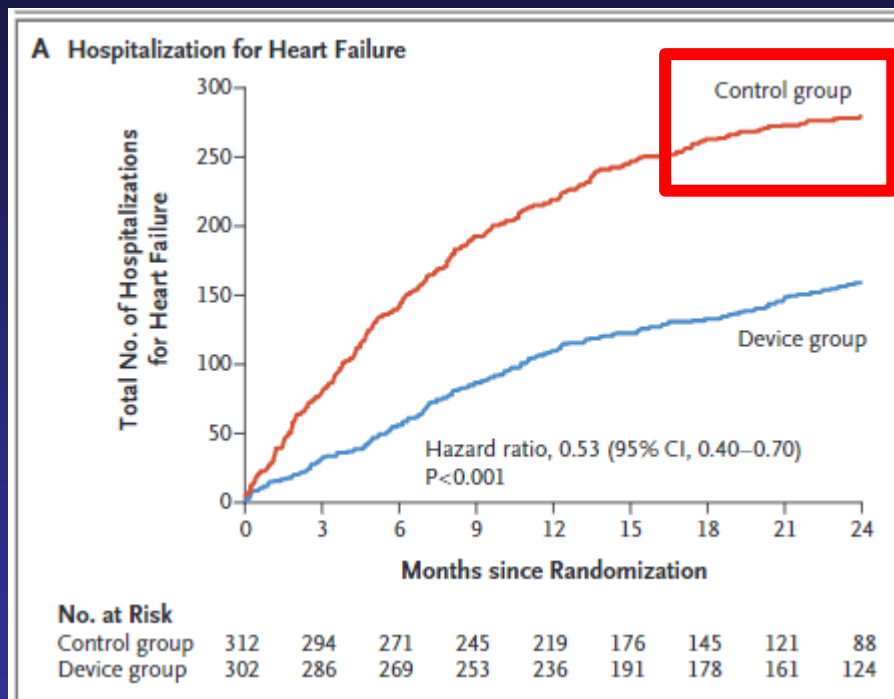


Commonly used terms		quadricuspid	tricuspid	bicuspid	
Scheme of morphological appearance					
functional characteristics	No of cusps	4	3	2	2
	No of raphe	0	0	0	1
morphological characteristics	No of cusps	4	3	2	3
	Size of cusps	non-equal	equal	equal	non-equal
	No of commissures	4	3	2	1
	No of raphe	0	0	0	1

Randomized Mitral Studies

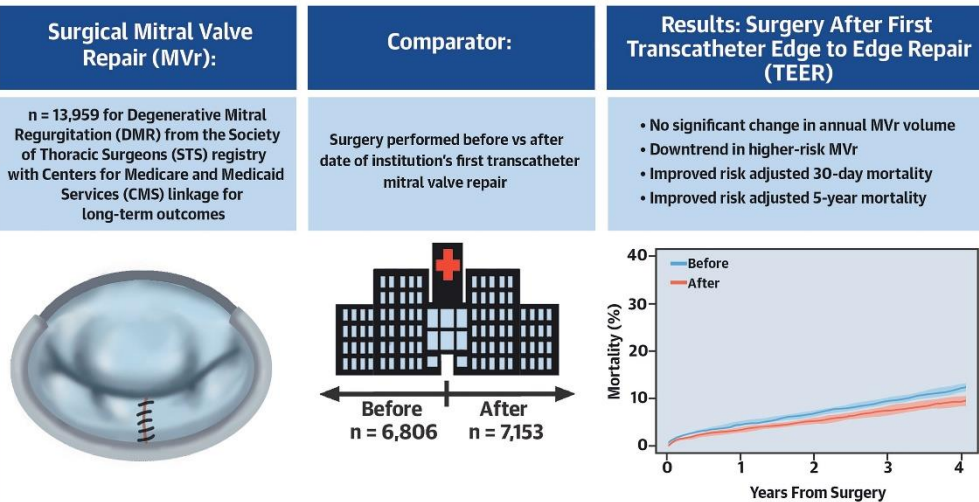


Faith of Untreated Severe MR



Impact of Transcatheter Mitral Valve Repair Availability on Volume and Outcomes of Surgical Repair GET ACCESS

CENTRAL ILLUSTRATION: Assessing the Impact of Transcatheter Edge-to-Edge Mitral Valve Repair on Surgical Mitral Valve Repair Volume and Outcomes



Lowenstern AM, et al. J Am Coll Cardiol. 2023;81(6):521-532.

OR

30d mortality=0.73 (0.54-0.99)

5y mortality=0.75 (0.66-0.86)

תודה רבה כנס מוצלח

האיגוד הקרדיולוגי בישראל
ISRAEL HEART SOCIETY

