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Centrum kardiovaskulární a transplantační chirurgie

SAVR u 70letého s nízkým rizikem - správná volba?

Petr Fila

Guidelines

ESC European Society of Cardiology
European Heart Journal (2025) **46**, 4635–4736
https://doi.org/10.1093/eurheartj/ehaf194

ESC GUIDELINES

2025 ESC/EACTS Guidelines for the management of valvular heart disease

TAVI is recommended in older patients (≥75 years), or in those who are high risk (STS-PROM/EuroSCORE II >8%) or unsuitable for surgery.	I	A	TAVI is recommended in patients ≥70 years of age with tricuspid AV stenosis, if the anatomy is suitable.	I	A

Transcatheter Aortic-Valve Replacement in Low-Risk Patients at Five Years

M.J. Mack, M.B. Leon, V.H. Thourani, P. Pibarot, R.T. Hahn, P. Genereux, S.K. Kodali, S.R. Kapadia, D.J. Cohen, S.J. Pocock, M. Lu, R. White, M. Szerlip, J. Ternacle, S.C. Malaisrie, H.C. Herrmann, W.Y. Szeto, M.J. Russo, V. Babaliaros, C.R. Smith, P. Blanke, J.G. Webb, and R. Makkar, for the PARTNER 3 Investigators*

5-Year Outcomes After Transcatheter or Surgical Aortic Valve Replacement in Low-Risk Patients With Aortic Stenosis

John K. Forrest, MD,[a] Steven J. Yakubov, MD,[b] G. Michael Deeb, MD,[c] Hemal Gada, MD,[d] Mubashir A. Mumtaz, MD,[d] Basel Ramlawi, MD,[e] Tanvir Bajwa, MD,[f] John Crouch, MD,[f] William Merhi, DO,[g] Stephane Leung Wai Sang, MD,[g] Neal S. Kleiman, MD,[h] George Petrossian, MD,[i] Newell B. Robinson, MD,[i] Paul Sorajja, MD,[j] Ayman Iskander, MD,[k] Pierre Berthoumieu, MD,[l] Didier Tchétché, MD,[l] Christopher Feindel, MD,[m] Eric M. Horlick, MD,[m] Shigeru Saito, MD,[n] Jae K. Oh, MD,[o] Yoojin Jung, PhD,[p] Michael J. Reardon, MD,[h] the Low Risk Trial Investigators*

Transcatheter or Surgical Treatment of Aortic-Valve Stenosis

S. Blankenberg, M. Seiffert, R. Vonthein, H. Baumgartner, S. Bleiziffer, M.A. Borger, Y.-H. Choi, P. Clemmensen, J. Cremer, M. Czerny, N. Diercks, I. Eitel, S. Ensminger, D. Frank, N. Frey, A. Hagendorff, C. Hagl, C. Hamm, U. Kappert, M. Karck, W.-K. Kim, I.R. König, M. Krane, U. Landmesser, A. Linke, L.S. Maier, S. Massberg, F.-J. Neumann, H. Reichenspurner, T.K. Rudolph, C. Schmid, H. Thiele, R. Twerenbold, T. Walther, D. Westermann, E. Xhepa, A. Ziegler, and V. Falk, for the DEDICATE-DZHK6 Trial Investigators*

Praz, European heart journal, 2025, 46: 4635-4736
Mack, NEJM, 2023, 389.21: 1949-1960
Forrest, JACC, 2025, 85.15: 1523-1532
Blankenberg, NEJM, 2024, 390.17: 1572-1583

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až 30 vylučovacích kritérií
až ve 26% SAVR+další konkomitantní výkon

kombinované endpointy

≥ mírný PVL: **20 % TAVR** vs. **2,5 - 3,2 % SAVR**
23,2% pacemaker (Evolut LR)
klinická/subklinická trombóza chlopně: **2,5 % TAVR** vs. **0,2 % SAVR**

Mack, NEJM, 2023, 389.21: 1949-1960
Forrest, JACC, 2025, 85.15: 1523-1532
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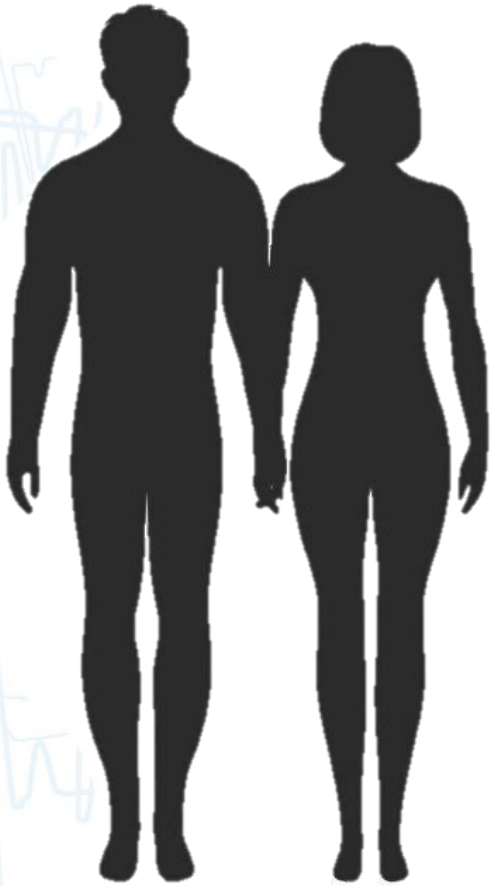
Předpokládaná délka života

RCT s 5 letými výsledky

X

střední délka života (2024)

muž 77,2 žena 83,1 let



předpokládané dožití

Věk	muži	ženy
65 let	17,0	20,7
70 let	13,5	16,6
75 let	10,5	12,9

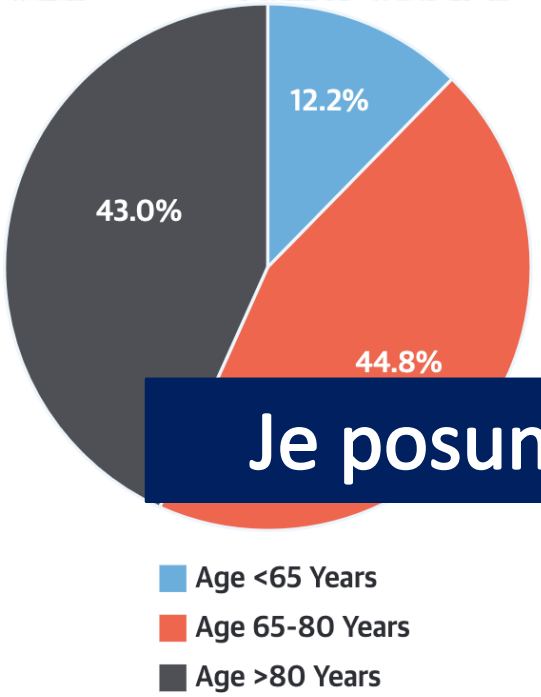
Věk	BAV
50 let	70 %
60 let	59 %
70 let	42 %
80 let	28 %

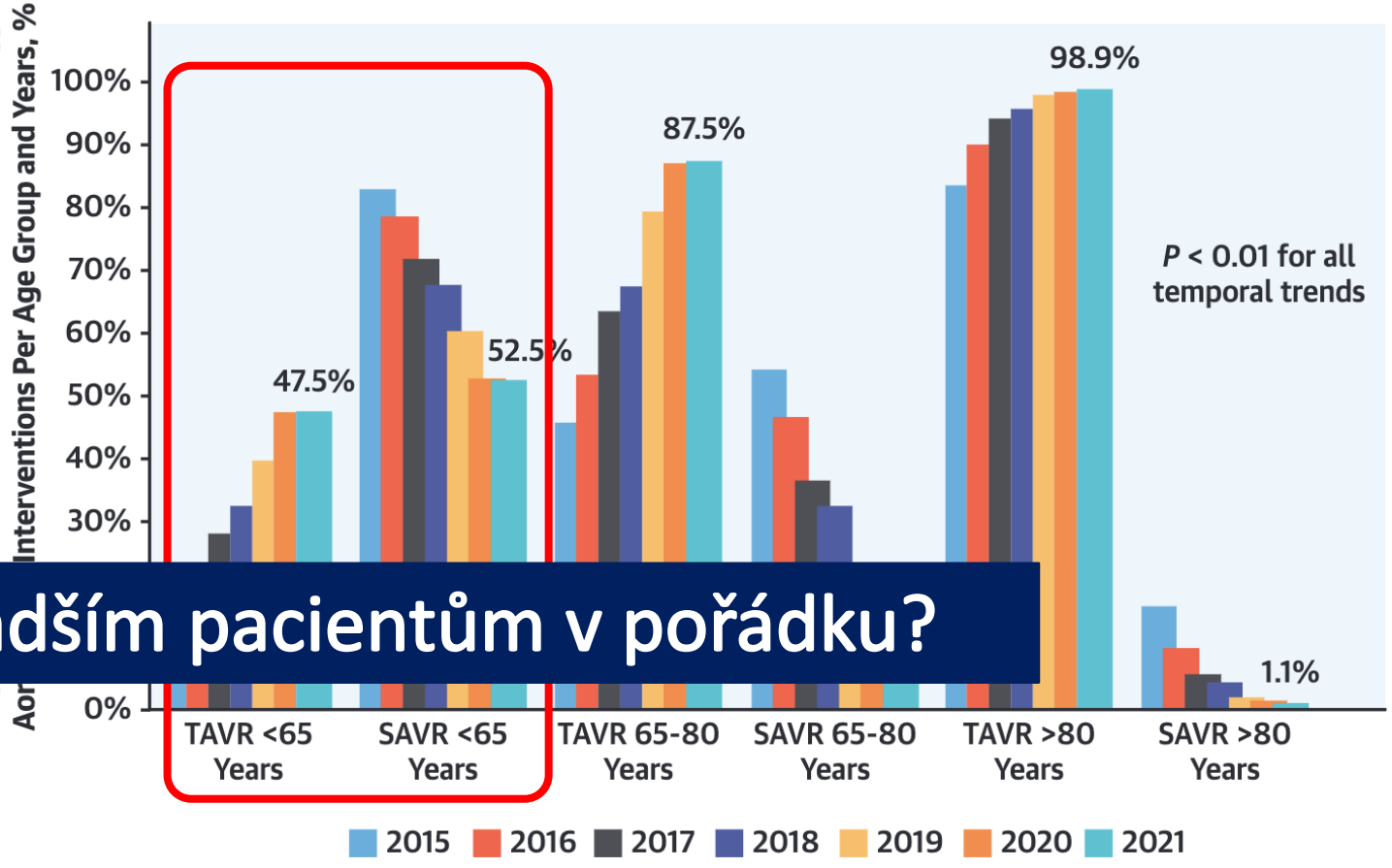
Český statistický úřad

Roberts. Am J Cardiol. 2007;100:489–498.

TAVI v US

National Trends in TAVR and SAVR for Patients With Severe Isolated Aortic Stenosis





Je posun k mladším pacientům v pořádku?

Sharma, JACC, 2022, 80.21: 2054-2056.

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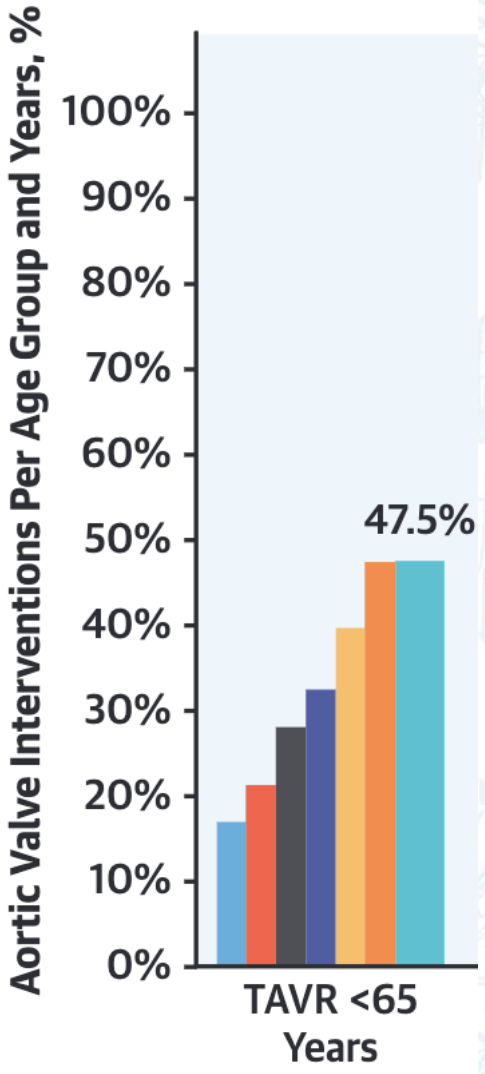
TAVI v US pod 65 let guidelines vs. praxe



Transcatheter versus surgical aortic valve replacement in patients younger than 65 years in the United States

Read at the 104th Annual Meeting of The American Association for Thoracic Surgery, Toronto, Ontario, Canada, April 27-30, 2024.

Sundos Alabbadi PharmD [a], Michael E. Bowdish MD, MS [b], Aminah Sallam MD [b c], Derrick Y. Tam MD, PhD [b], Irsa Hasan MD [b], Abirami Kumaresan MD [b], Anas H. Alzahrani MD [a], Alexander Iribarne MD [d], Natalia Egorova PhD [a], Joanna Chikwe MD [b]

9557 pts ≤ 65let - CA, NY, NJersey
PSM – 1994 TAVR vs. 1994 SAVR

- 30d mortalita (1.0% vs 1.5%, P = .33)
- **TAVI ↑ 6y mortalita (23.3% vs 10.5%, HR 2.27; 95% CI, 1.82-2.83; P < .001)**
- TAVI ↑ PM (10.7% vs 6.2%, P < .001)
- žádný rozdíl 6y stroke, HF hospitalizace, reoperace

TAVR vs. SAVR	Before matching	After matching
8-year Mortality	*HR: 4.75; CI: 4.05-5.58; P < .001*	*HR: 2.27; CI: 1.82-2.83; P < .001*
8-year Stroke	*ΔRMET: 0.16; CI: 0.09-0.22; P < .001*	*sHR: 1.30; CI: 0.74-2.29; P = .36*
8-year Reoperation	*sHR: 0.94; CI: 0.59-1.51; P = .80*	*sHR: 1.05; CI: 0.55-2.01; P = .88*
8-year Hospitalization for heart failure	sHR: 2.63; CI: 2.10-3.29; *P* < .001	sHR: 1.31; CI: 0.97-1.77; *P* = .08
30-day New permanent pacemakers	12% vs. 5.5%; *P* < .001	10.7% vs. 6.2%; *P* < .001

Alabbadi,. JTCS, 2025.

TAVI/SAVR – reálný svět/reální pacienti

Surgical vs Transcatheter Aortic Valve Replacement in Patients 65 Years of Age and Older

Stanley Wolfe MD, MPH [1], Vikrant Jagadeesan MD [2], Lawrence Wei MD [1], J.W. Hayanga MD [1], Dhaval Chauhan MD [1], R. Tyler Evans DO [3], Christopher Mascio MD [1], J. Scott Rankin MD [1], Ramesh Daggubati MD [2], Vinay Badhwar MD [1], J. Hunter Mehaffey MD, MSc [1]

US Centers for Medicare Services databáze
věk 65-85, 2018-2022
low-risk (<4%) n = 36,297 TAVR; n = 14,693 SAVR

celý soubor:
SAVR ↑ hospitalizační mortalita, AKI, krvácení ;↓ PM

5leté výsledky u low-risk i intermediate risk:
Lepší SAVR – mortalita, stroke, intervence na chlopních
[HR] 0,85, *P* = 0,044, and HR 0,86, *P* = 0,039

Wolfe, Annals of Thoracic Surgery. Feb. 25, 2025.

TAVI vs. SAVR u nízkorizikových

Ten-year outcomes after transcatheter or surgical aortic valve replacement in low-risk patients: The OBSERVANT study

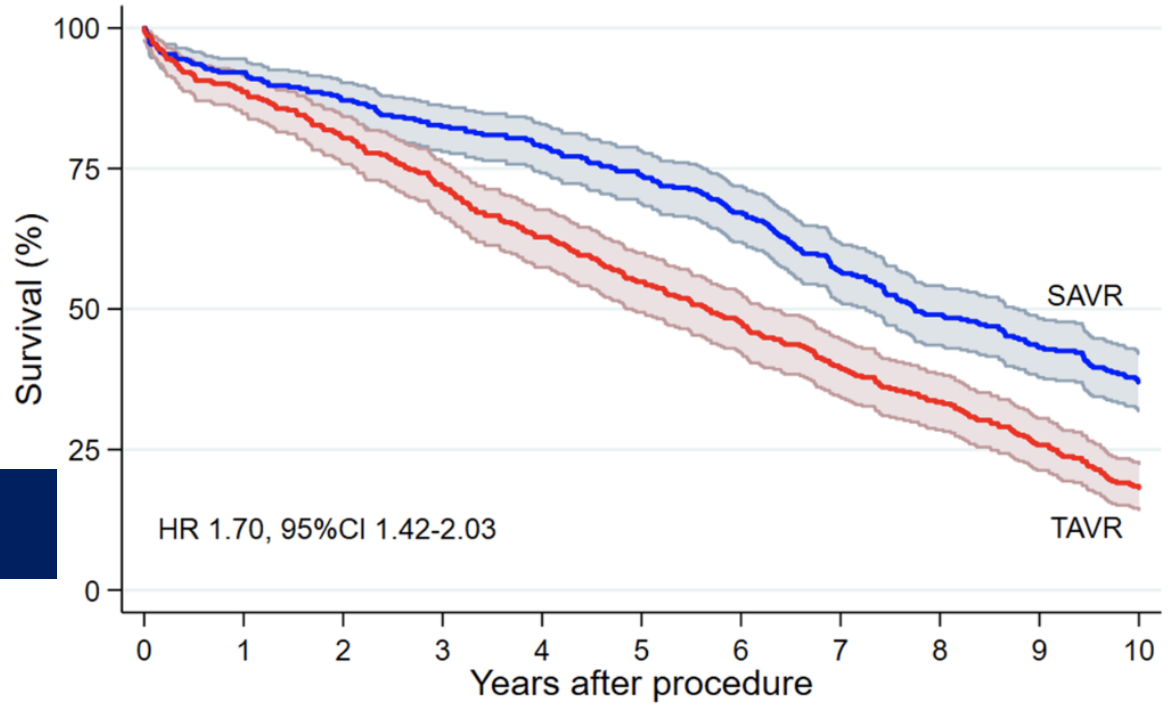
Fausto Biancari [a,*], Paola D'Errigo [b], Marco Barbanti [c,d], Gabriella Badoni [b], Corrado Tamburino [e], Gianluca Polvani [a,f], Giuliano Costa [e], Giovanni Baglio [g], Stefano Rosato [b]

PSM – 355 SAVR vs. 355 TAVI

Ø věk 80 let

signifikantní rozdíl přežívání od 3. roku

10leté přežívání 37.0 % vs 18.2 % p < 0.001;



limitem není věk, ale "rizikovost" pacienta

Biancari, Ten-year outcomes after transcatheter or surgical aortic valve replacement in low-risk patients: The OBSERVANT study. IJC Heart & Vasculature, 2024, 55: 101545

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TAVI vs. SAVR u nízkorizikových

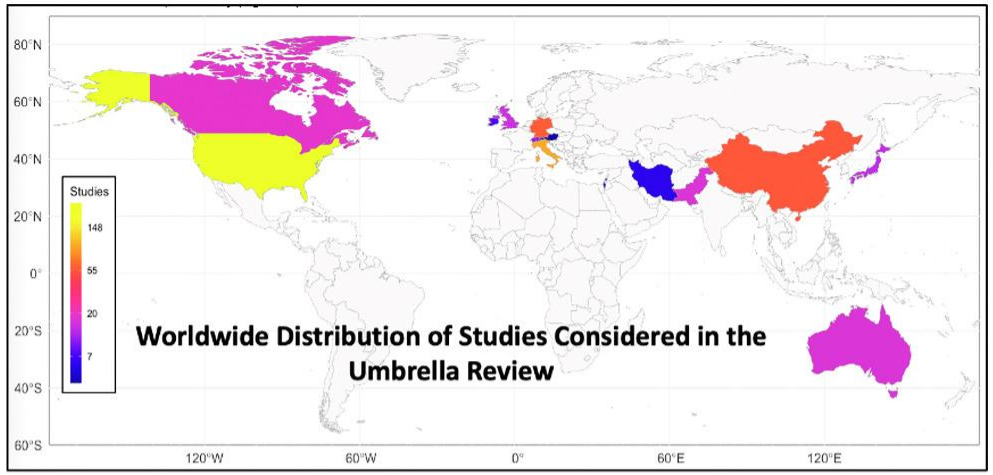
P87. The First Global Umbrella Review and Meta-Regression of Long-Term Outcomes in Low-Risk Patients Undergoing Transcatheter Versus Surgical Aortic Valve Replacement: Analysis of 526,189 Patients

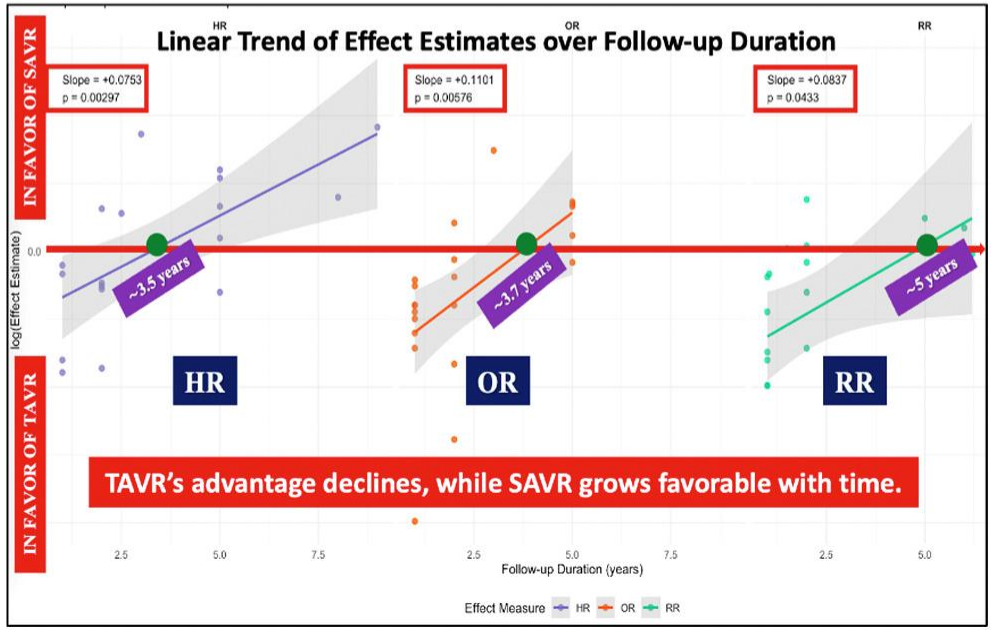
Wildor Samir Cubas Llalle [1] · Rodrigo Bagur [2] · Victor Dayan [3] · Michael W.A. Chu [1]

59 metaanalýz (71% nesponzorovaných), n=526 189

TAVI
- lepší časná KV mortalita, méně AKI, krvácení
- více PM (OR 2,5), valve related komplikací (OR 2,8), střední/závažný PVL (OR 3,7)

časný benefit TAVI mizí po třech letech
valve-related komplikace a durabilita
- ve prospěch SAVR





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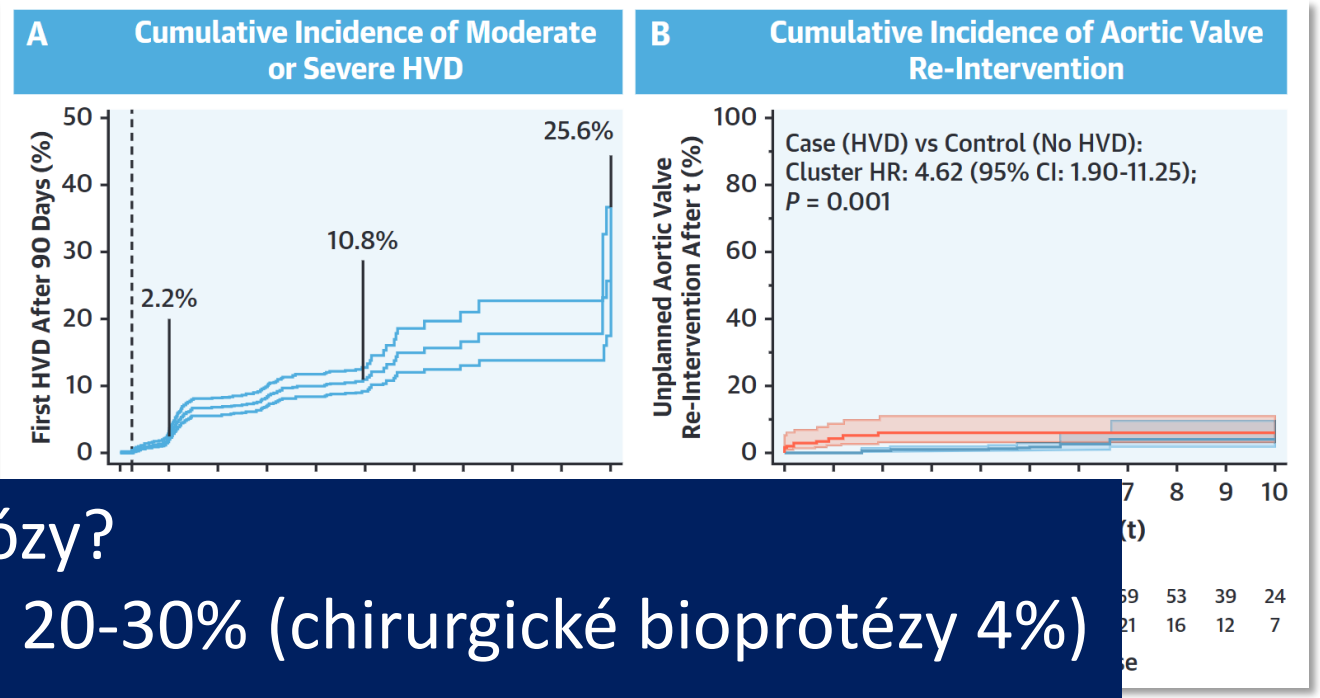
Trvanlivost TAVI biochlopní

Hemodynamic Valve Deterioration After Transcatheter Aortic Valve Replacement

Incidence, Predictors, and Clinical Outcomes

Bashir Alaour, MD, PhD,[a,*] Daijiro Tomii, MD,[a,*] Masaaki Nakase, MD,[a] Dik Heg, PhD,[b] Stefan Stortecky, MD, MPH,[a] Jonas Lanz, MD,[a] Daryoush Samim, MD,[a] David Reineke, MD,[c] Fabien Praz, MD,[a] Stephan Windecker, MD,[a] Thomas Pilgrim, MD, MSc[a]



N=2403, 2007-2022
median STS PROM 3,8%

po 10 letech:
25% střední/závažné SVD (>10/>20 mmHg)

5x ↑ A
bez asoc

- význam subklinické trombózy?
  po 30 dnech 14%, po roce 20-30% (chirurgické bioprotézy 4%)
- význam crimpování

Alaour, Cardiovascular Interventions, 2025, 18.1: 72-85
Kanjanauthai, 2018, 31.5: 640-647.

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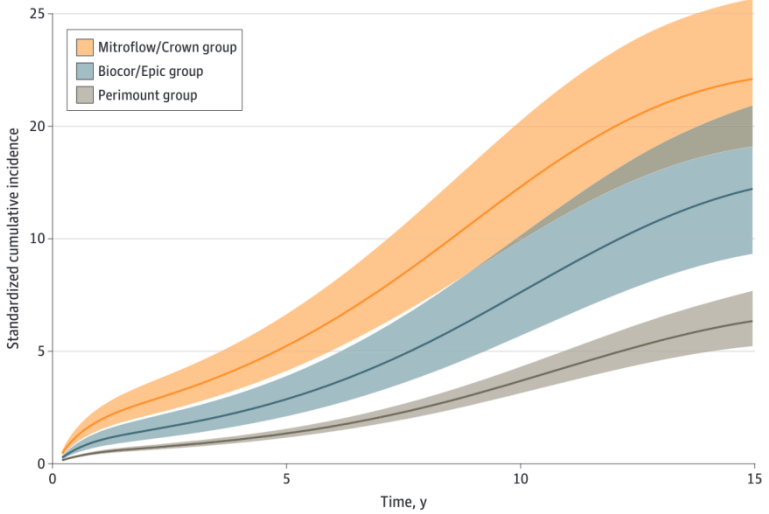
Dlouhodobá trvanlivost biochlopní

Original Investigation | Cardiology

Comparison of Long-term Performance of Bioprosthetic Aortic Valves in Sweden From 2003 to 2018

Michael Persson, MD; Natalie Glaser, MD, PhD; Johan Nilsson, MD, PhD; Örjan Friberg, MD, PhD; Anders Franco-Cereceda, MD, PhD; Ulrik Sartipy, MD, PhD

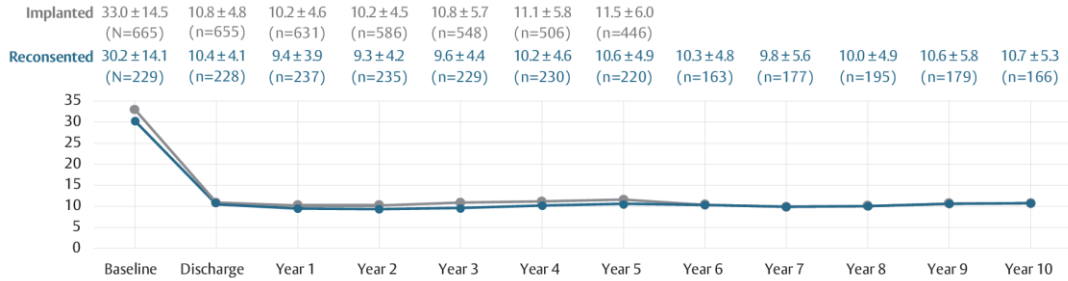
SWEDEHEART; 2003-2018, n=16 983 bioSAVR
věk 72,6 ± 8,5
Perimount
reintervence 3,6%/10 letech, 6,1%/15 letech



27. Long-Term Outcomes Following Aortic Valve Replacement with a Novel Tissue Bioprosthesis: 10-Year Results from the COMMENCE Trial

Lars Svensson [1], Eugene Blackstone [1], Joseph Bavaria [2], Bartley Griffith [3], Thomas Beaver [4], Nimesh Desai [5], Philippe Pibarot [6], Michael Borger [7], Vinod Thourani [8], John Puskas [9]

bioSAVR Inspiris Resilia, n = 102
věk 65,1 ± 10,9
SVD
reintervence 2,2%/10 letech



Persson, 8. JAMA Network Open, 2022, 5.3: e220962-e220962.
Svensson, JTCS, 171, 4,, 2026, S18-S19,

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Shrnutí

- **SAVR u 70letého, nízkorizikového pacienta - SPRÁVNÁ VOLBA, BEZPEČNÁ**

- zvažovat parametry validní z dlouhodobého hlediska (přežívání, reintervence, stroke...)
- nově implantovaný PM i malý PVL zhoršují přežívání
- nezapomínat na zbytek srdce (ICHS, FiSi, ostatní chlopně...)
- myslet na perspektivu/dožití... nejen na „rozsah invazivity“

- **TAVI je metoda volby - rizikoví, starší**
- **SAVR pro nízkorizikové a mladší pacienty**

Jakou zvolit cestu?

Jakou zvolit cestu?

RYCHLÉ, ZISKOVÉ

SVATO MARTINSKÉ

KVALITA, DLOUHODOBOST