LIFETIME MANAGEMENT

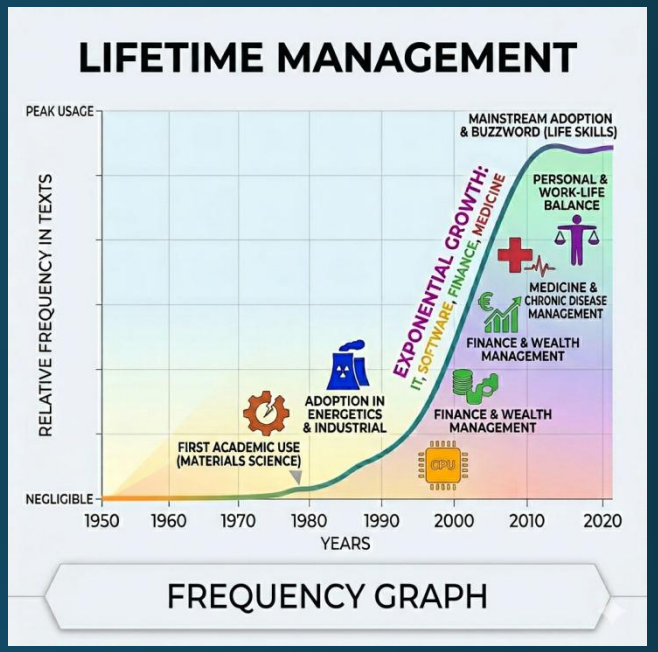
Budoucnost péče o pacienty s chlopenní vadou

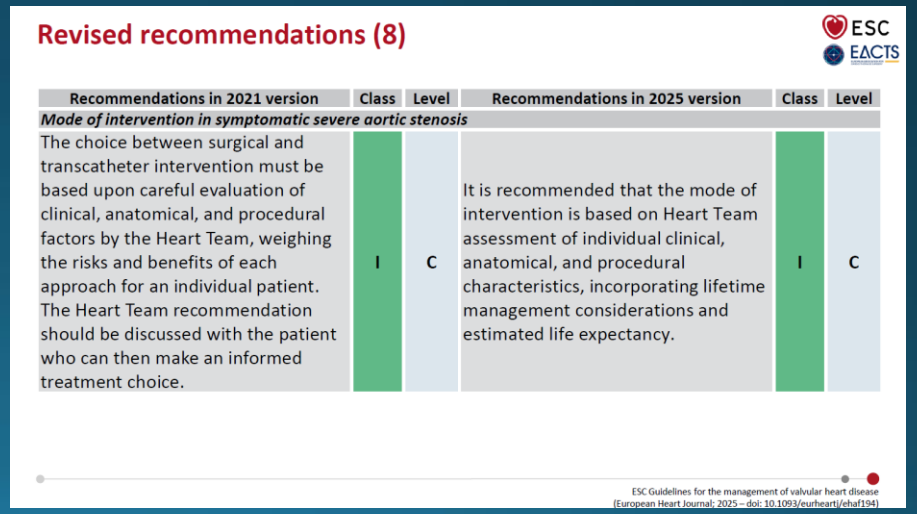
MUDr. Jiří Sikora

CKTCH | Centrum kardiovaskulární a transplantační chirurgie

Lifetime management

- **Energetika a kritická infrastruktura**
  - Původní význam termínu. Soubor opatření, aby technologie mohla bezpečně fungovat 60 místo původních 40 let.
- **Moderní IT a polovodiče**
  - U SSD/USB disků s omezeným počtem zápisů existuje algoritmus zápisů do různých částí pamětí, aby se disk opotřebovával rovnoměrně.
- **Bankovnictví a finance**
  - Plánování dlouhodobé investiční strategie podle věku klienta. V mládí agresivní investice, před důchodem konzervativní ochrana.
- **Personalistika a psychologie (Soft Skills)**
  - Řešení rovnováhy mezi prací a rodinou v různých fázích života (mládí, rodičovství, stáří).
- **Medicína a farmacie**
  - Přístup, kdy se nesoustředíme jen na vyléčení akutního problému, ale na udržení zdraví pacienta po zbytek jeho života – **dlouhodobá strategie.**





Revised recommendations (8)

ESC EACTS

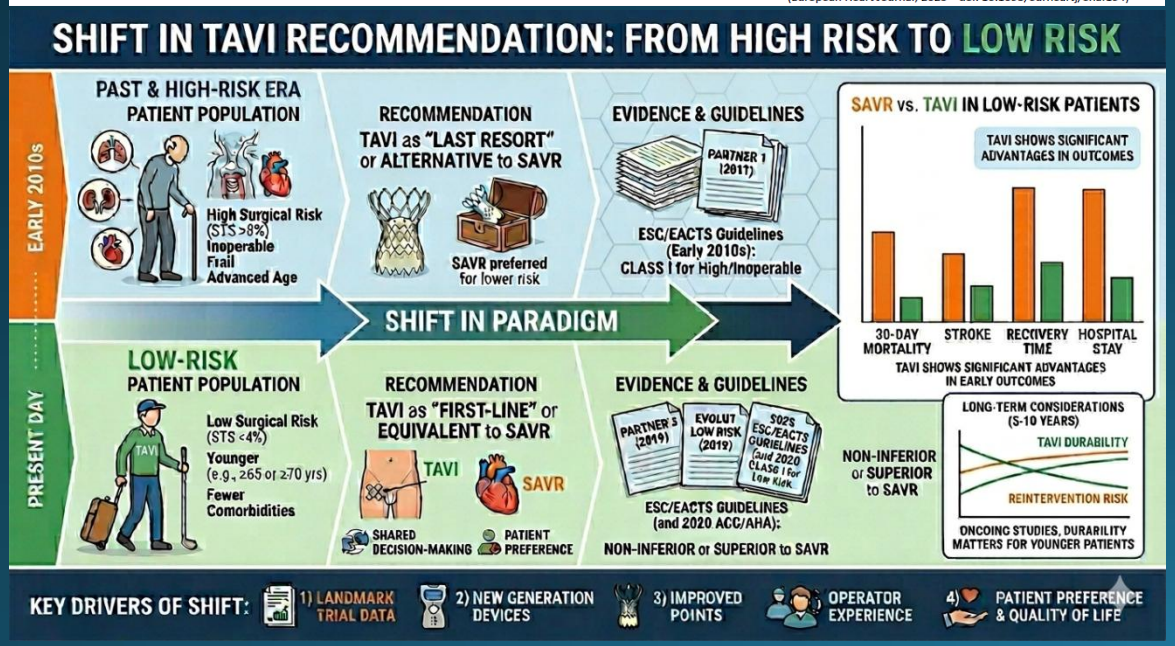
Recommendations in 2021 version	Class	Level	Recommendations in 2025 version	Class	Level
Mode of intervention in symptomatic severe aortic stenosis					
The choice between surgical and transcatheter intervention must be based upon careful evaluation of clinical, anatomical, and procedural factors by the Heart Team, weighing the risks and benefits of each approach for an individual patient. The Heart Team recommendation should be discussed with the patient who can then make an informed treatment choice.	I	C	It is recommended that the mode of intervention is based on Heart Team assessment of individual clinical, anatomical, and procedural characteristics, incorporating lifetime management considerations and estimated life expectancy.	I	C

ESC Guidelines for the management of valvular heart disease (European Heart Journal; 2025 – doi: 10.1093/eurheartj/ehaf194)

Revised recommendations (9)

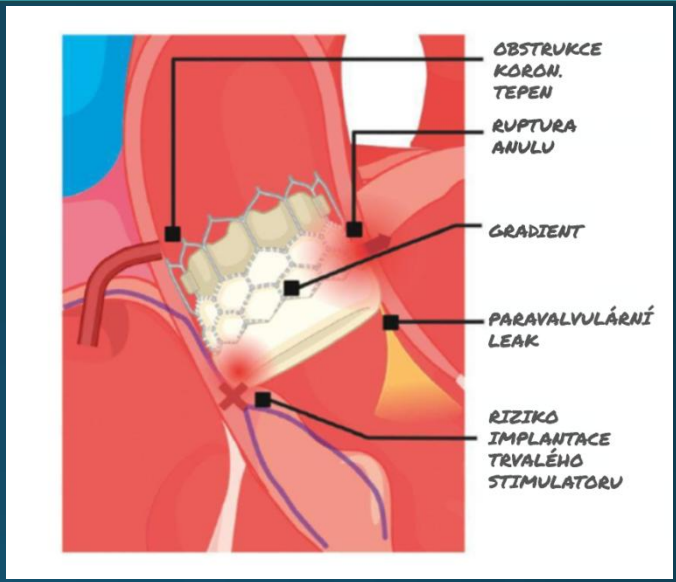
Recommendations in 2021 version	Class	Level	Recommendations in 2025 version	Class	Level
Mode of intervention in aortic stenosis					
TAVI is recommended in older patients (≥75 years), or in those who are high risk (STS-PROM/EuroSCORE II >8%) or unsuitable for surgery.	I	A	TAVI is recommended in patients ≥70 years of age with tricuspid AV stenosis, if the anatomy is suitable.	I	A
SAVR is recommended in younger patients who are low risk for surgery (<75 years and STS-PROM/EuroSCORE II <4%), or in patients who are operable and unsuitable for transfemoral TAVI.	I	B	SAVR is recommended in patients <70 years of age, if the surgical risk is low.	I	B
SAVR or TAVI are recommended for remaining patients according to individual clinical, anatomical, and procedural characteristics.	I	B	SAVR or TAVI are recommended for all remaining candidates for an aortic BHV according to Heart Team assessment	I	B
Non-transfemoral TAVI may be considered in patients who are inoperable and unsuitable for transfemoral TAVI.	IIb	C	Non-transfemoral TAVI should be considered in patients who are unsuitable for surgery and transfemoral access.	IIa	B

ESC Guidelines for the management of valvular heart disease
(European Heart Journal; 2025 – doi: 10.1093/eurheartj/ehaf194)



Lifetime management

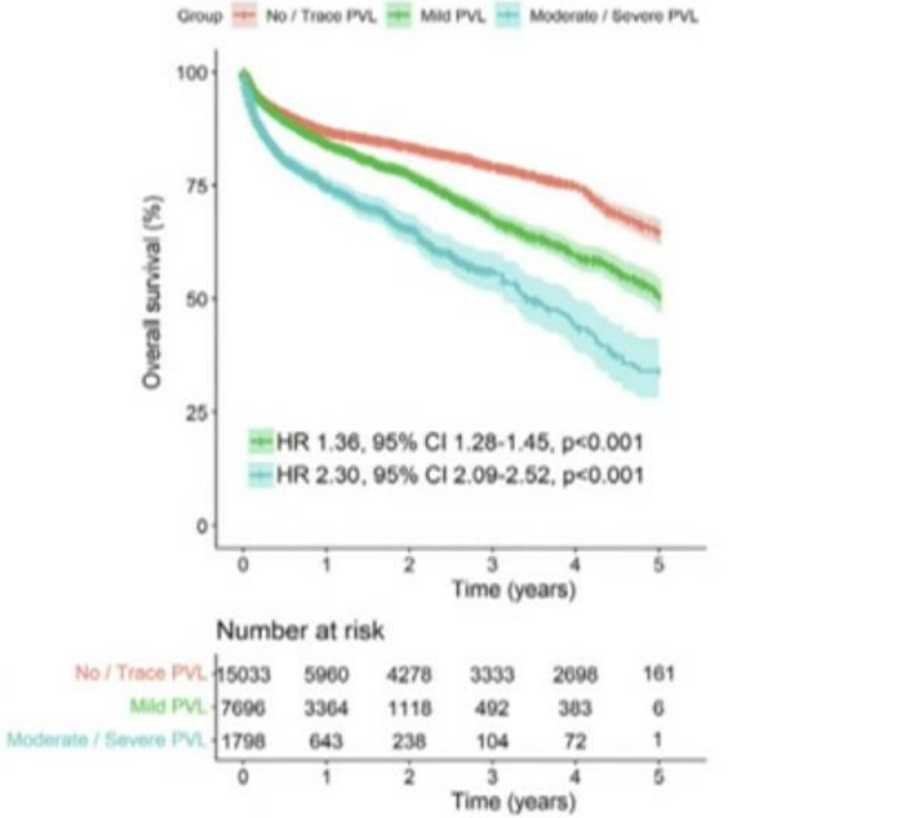
Bezprostřední optimální výsledek



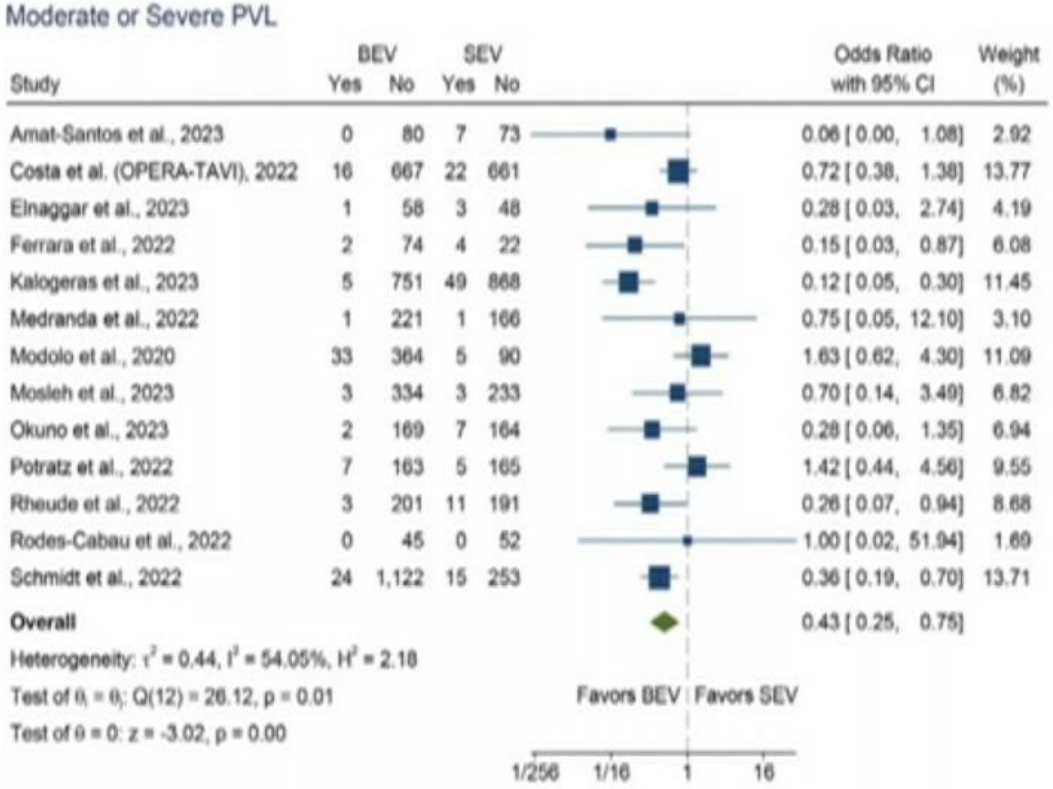
Karan Rao, et al:Lifetime management considerations to optimise transcatheter aortic valve implantation: a practical guide; EuroIntervention DOI: 10.4244/EIJ-D-24-00332

Dlouhodobý efekt intervence

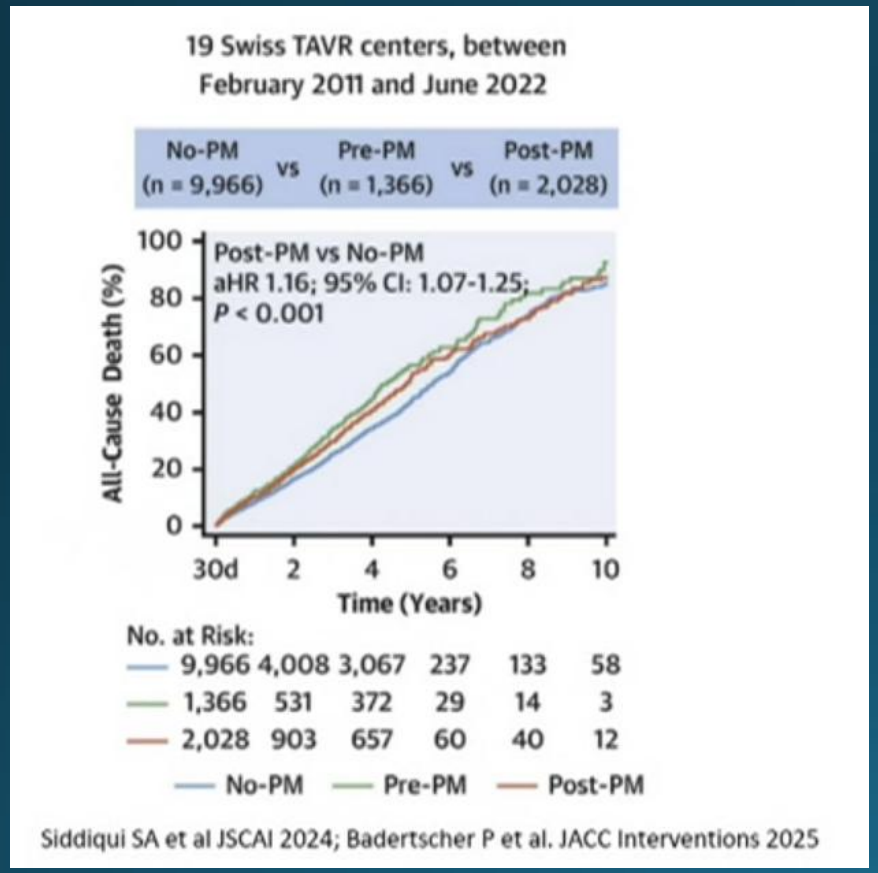
Paravalvární regurgitace a mortalita

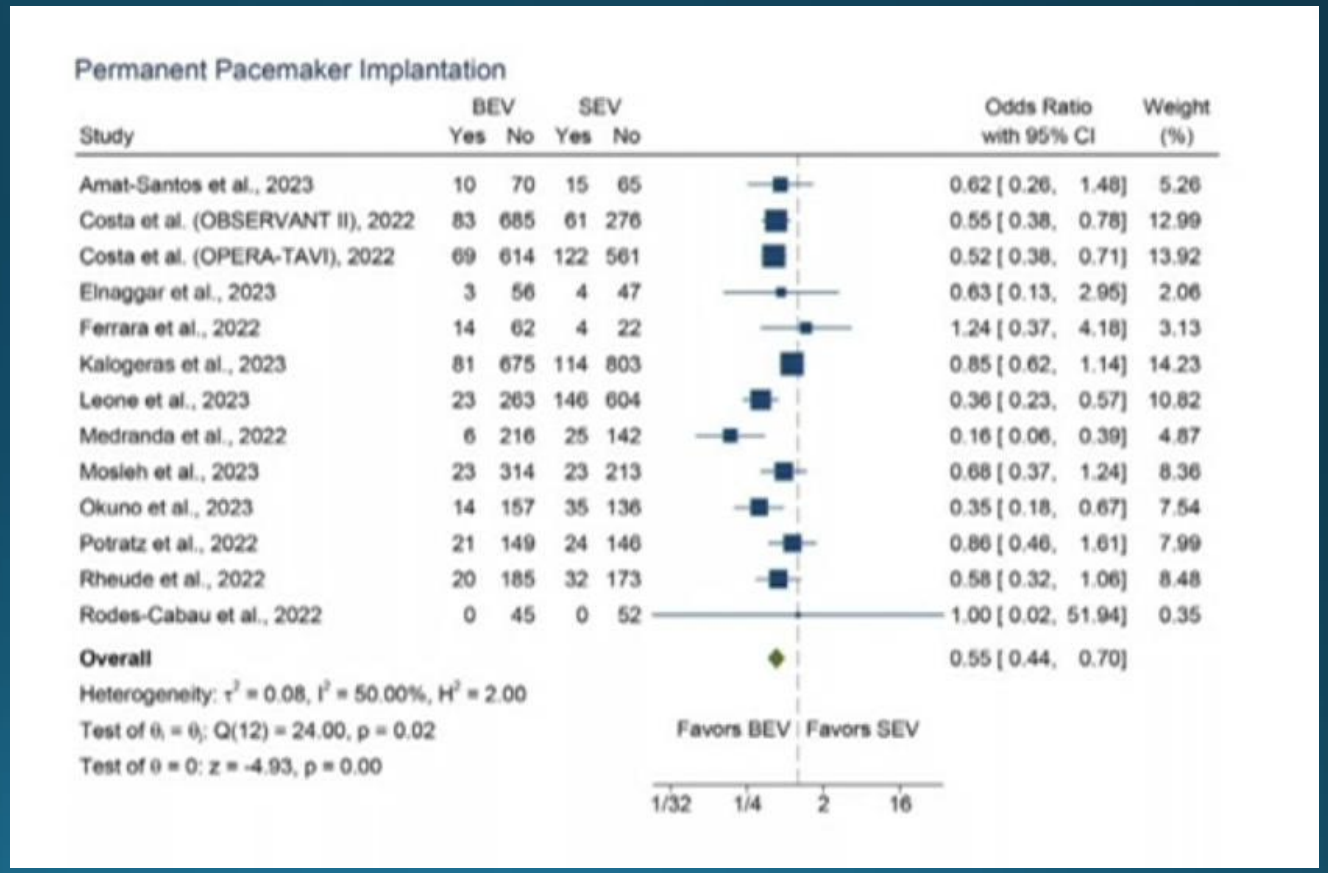


Pompeu Sa M et al. Structural Heart 2024; Siddiqui SA et al JSCAI 2024



Implantace trvalého kardiostimulátoru a mortalita





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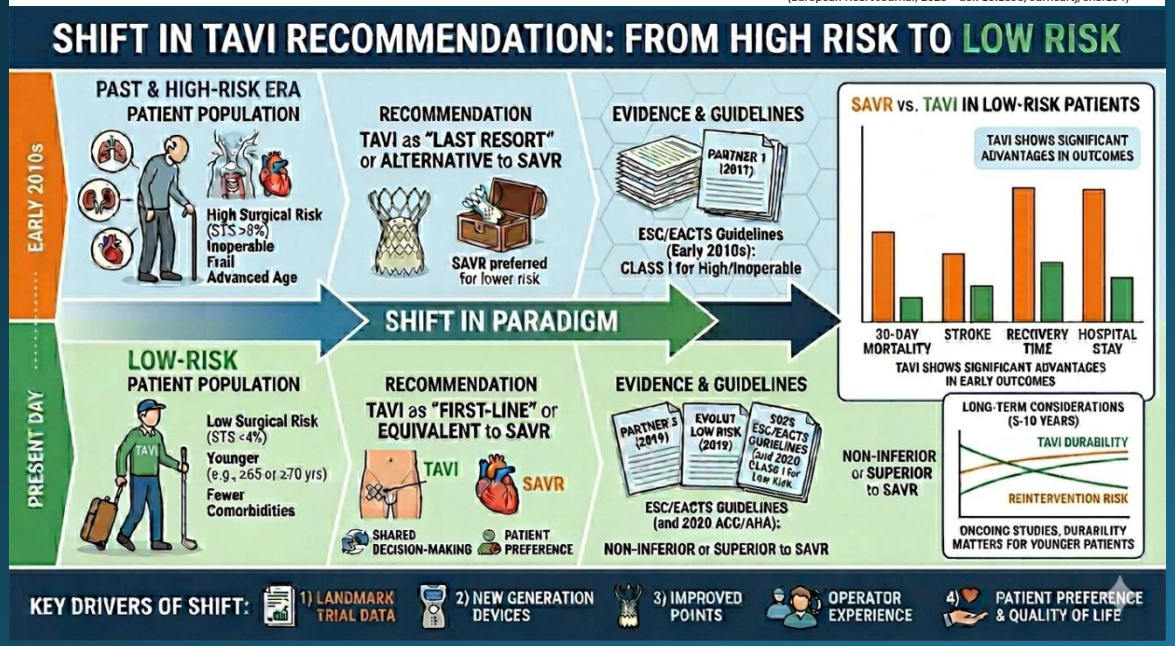

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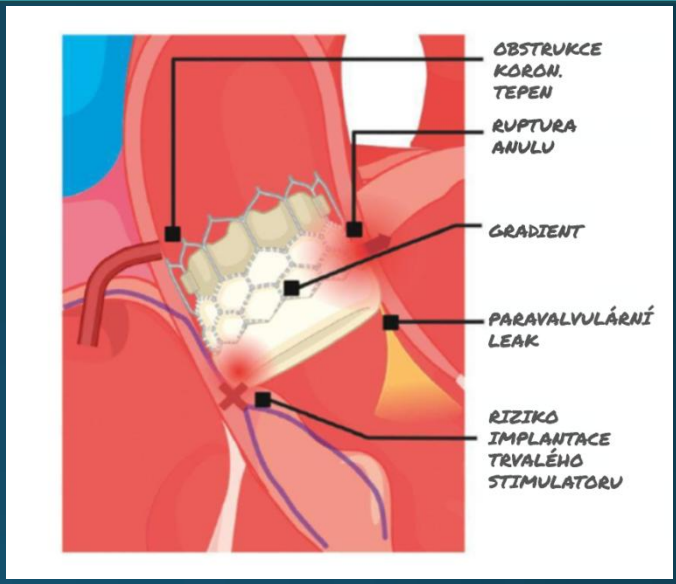


Karan Rao, et al:Lifetime management considerations to optimise transcatheter aortic valve implantation: a practical guide; EuroIntervention DOI: 10.4244/EIJ-D-24-00332

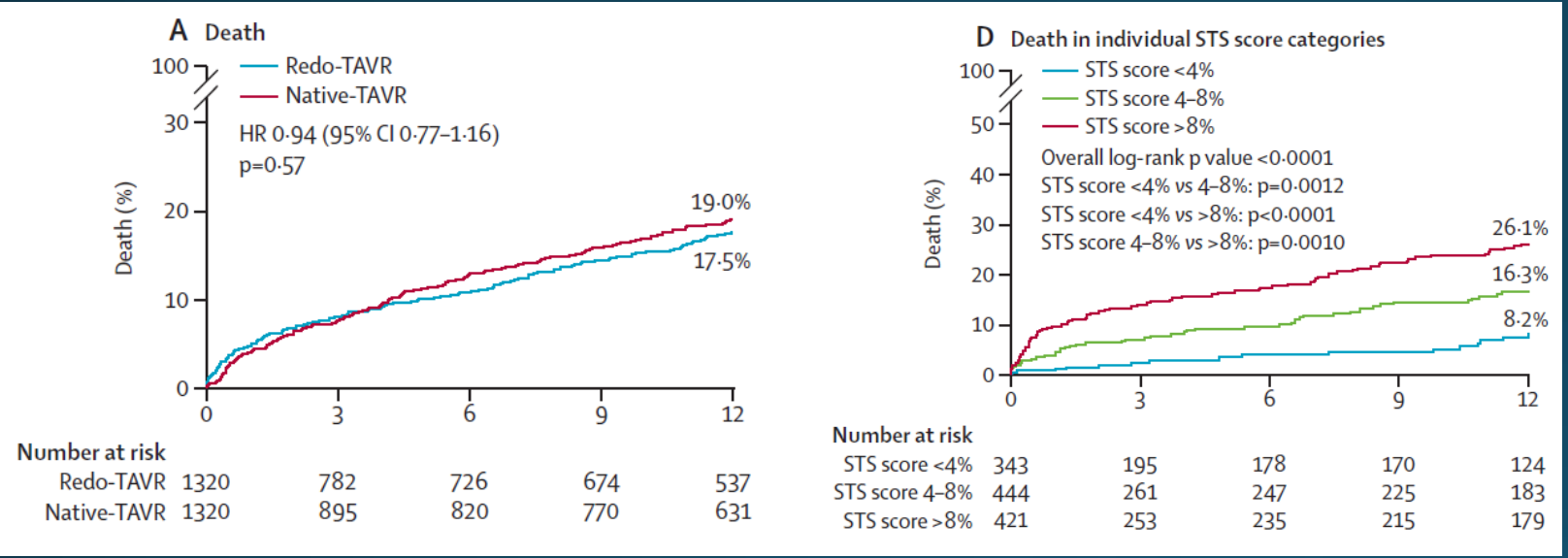
Dlouhodobý efekt intervence

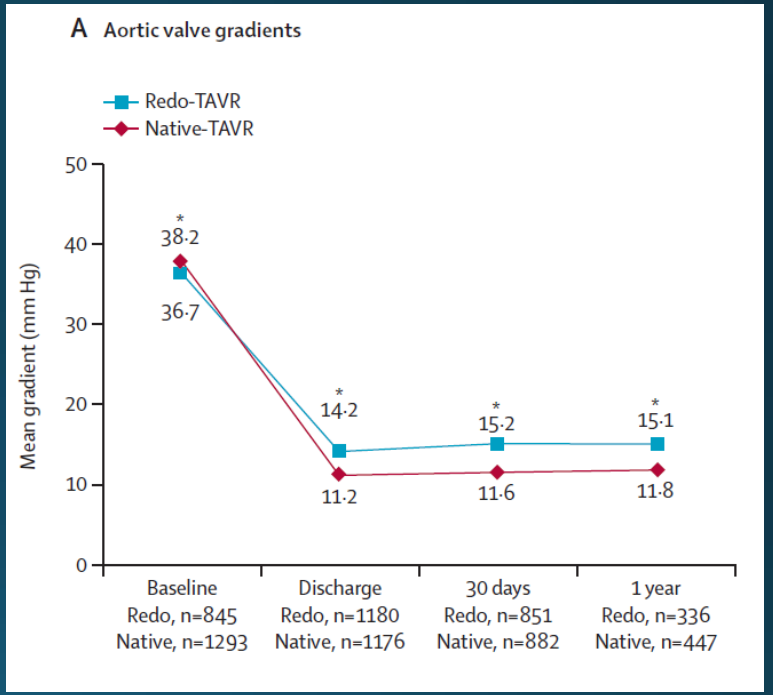
- Durabilita TAVI chlopní
- Koronární přístup

Proč je durabilita TAVI chlopní tak zásadní ?

- Při rostoucím počtu TAVI u mladších pac. s delší očekávanou délkou dožití je dlouhodobá funkčnost chlopně důležitější než kdykokoliv dříve
- Durabilita chlopně je rozhodující pro to, jestli i přes bezprostředně optimální výsledek intervence nedojde časem k selhání chlopně
- Má vliv na riziko následných komplikací- trombóza chlopně, regurgitace, SVD vč. nutnosti reintervence (TAVI→ TAVI, TAVI→ SAVR)

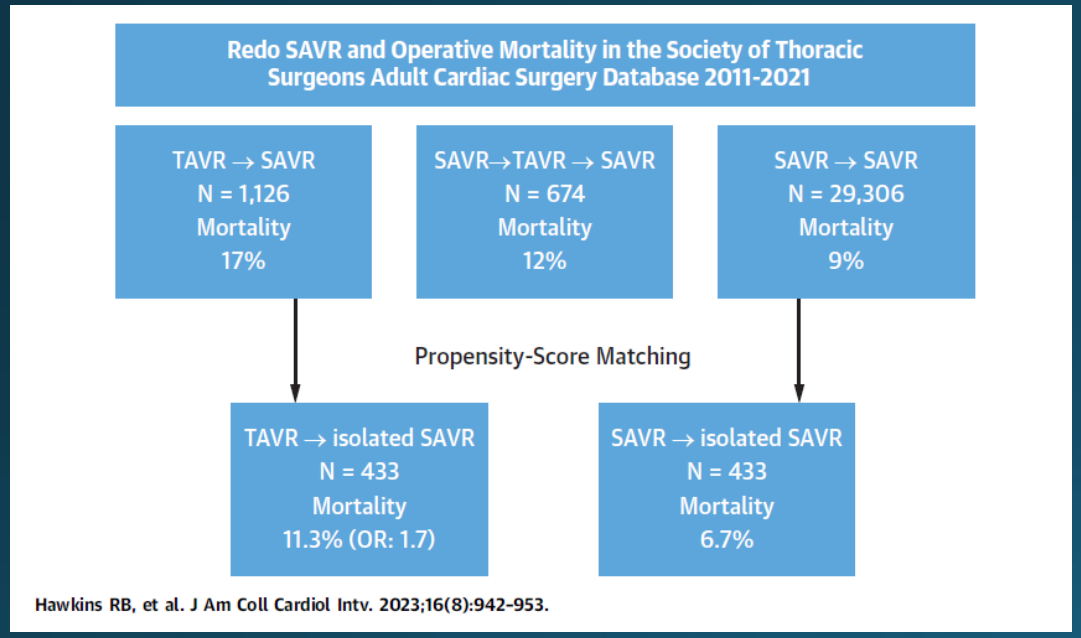
TAVI → TAVI

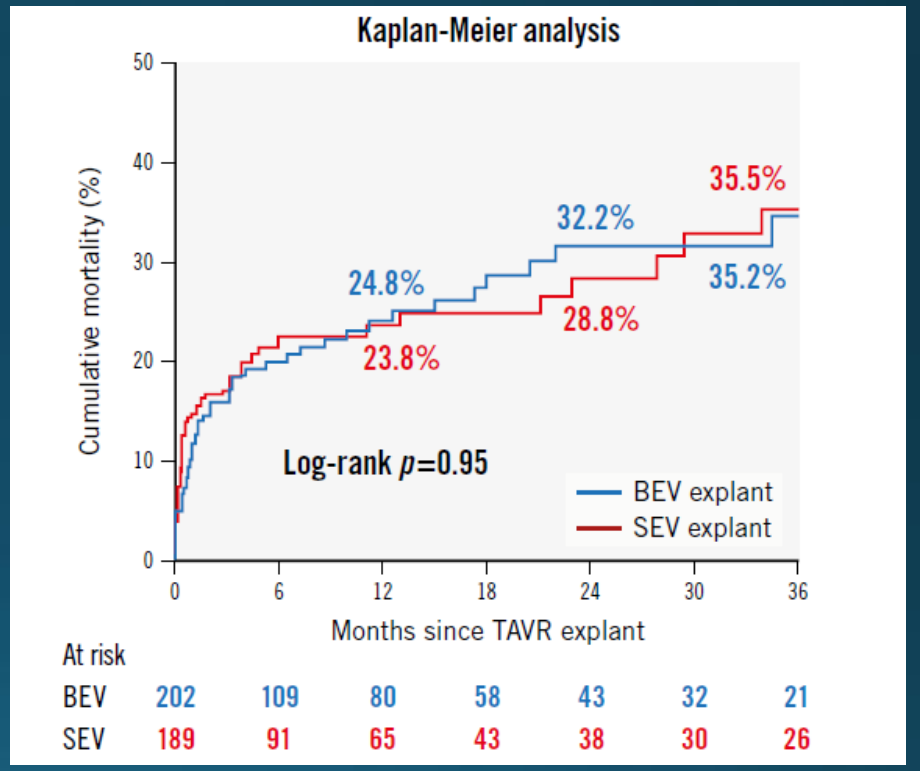




Raj R Makkar et al:Outcomes of repeat transcatheter aortic valve replacement with balloon-expandable valves: a registry study; The Lancet; Published online August 31, 2023 https://doi.org/10.1016 S0140-6736(23)01636-7

TAVI → SAVR





Syed Zaid, et al: Impact of transcatheter heart valve type on outcomes of surgical explantation after failed transcatheter aortic valve replacement: the EXPLANT-TAVR international registry. EuroIntervention 2024;20:e146-e157

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- Má vliv na riziko následných komplikací- trombóza chlopně, regurgitace, SVD vč. nutnosti reintervence (TAVI→ TAVI, TAVI→ SAVR)
- Durabilita TAVI je klíčová pro výběr dlouhodobé strategie léčby aortální stenózy s ohledem na potenciální následné koronární intervence – SKG/PCI

- ***The First Cut Is the Deepest (Cat Stevens) –***

- takže kdo by stál o nějaký další ?

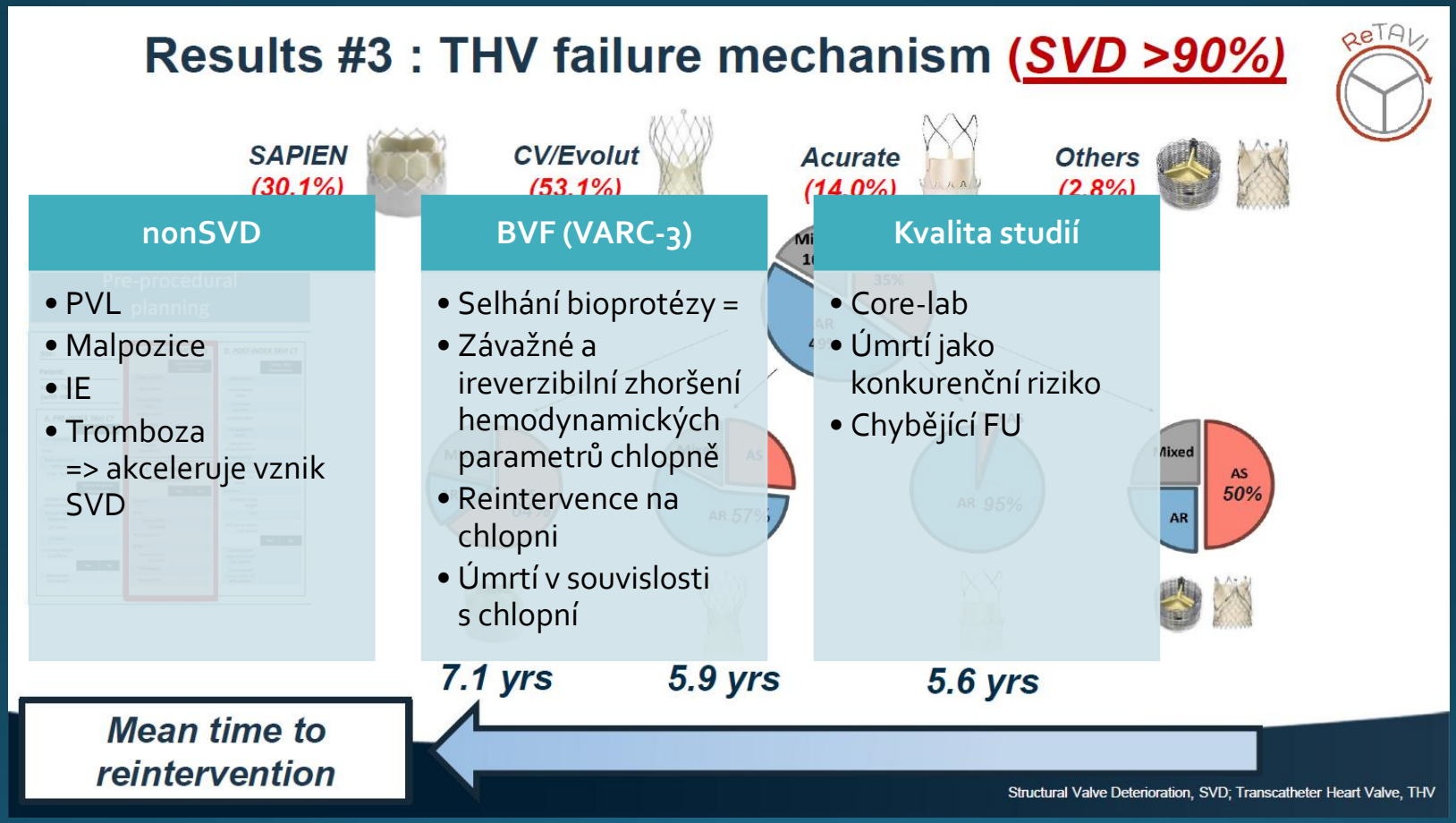
Jak durabilitu definovat a hodnotit?

Not all valves were created equal

Jak durabilitu definovat a hodnotit?

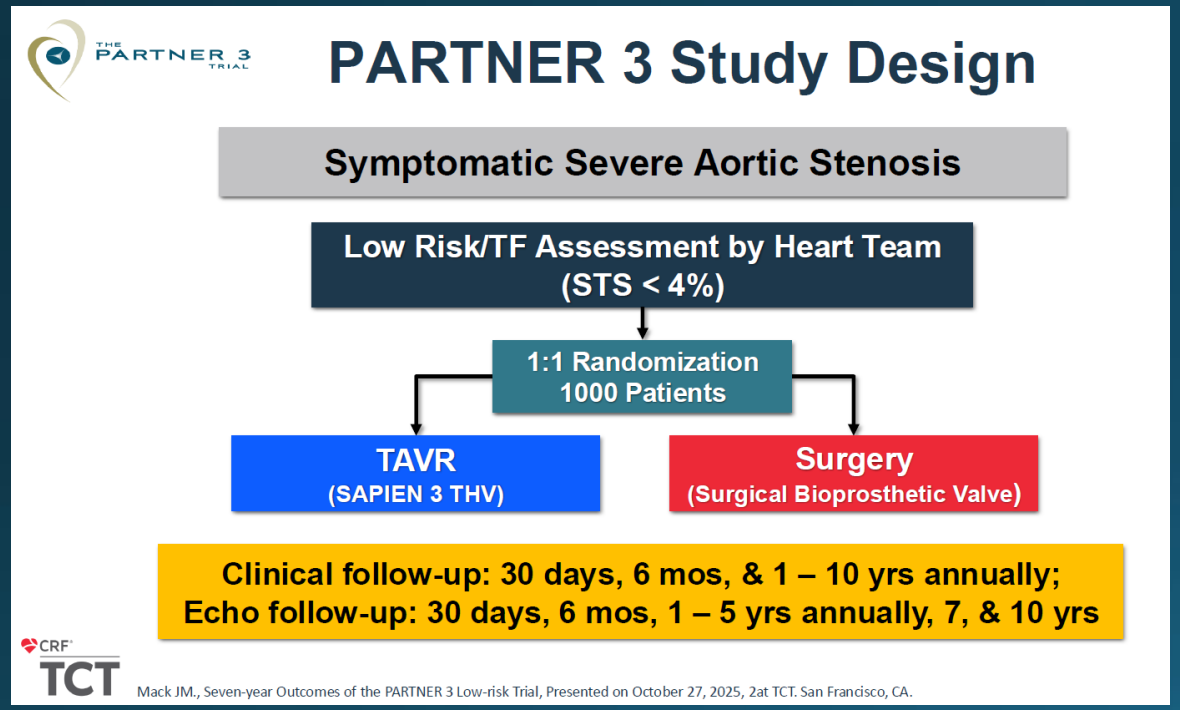
SVD

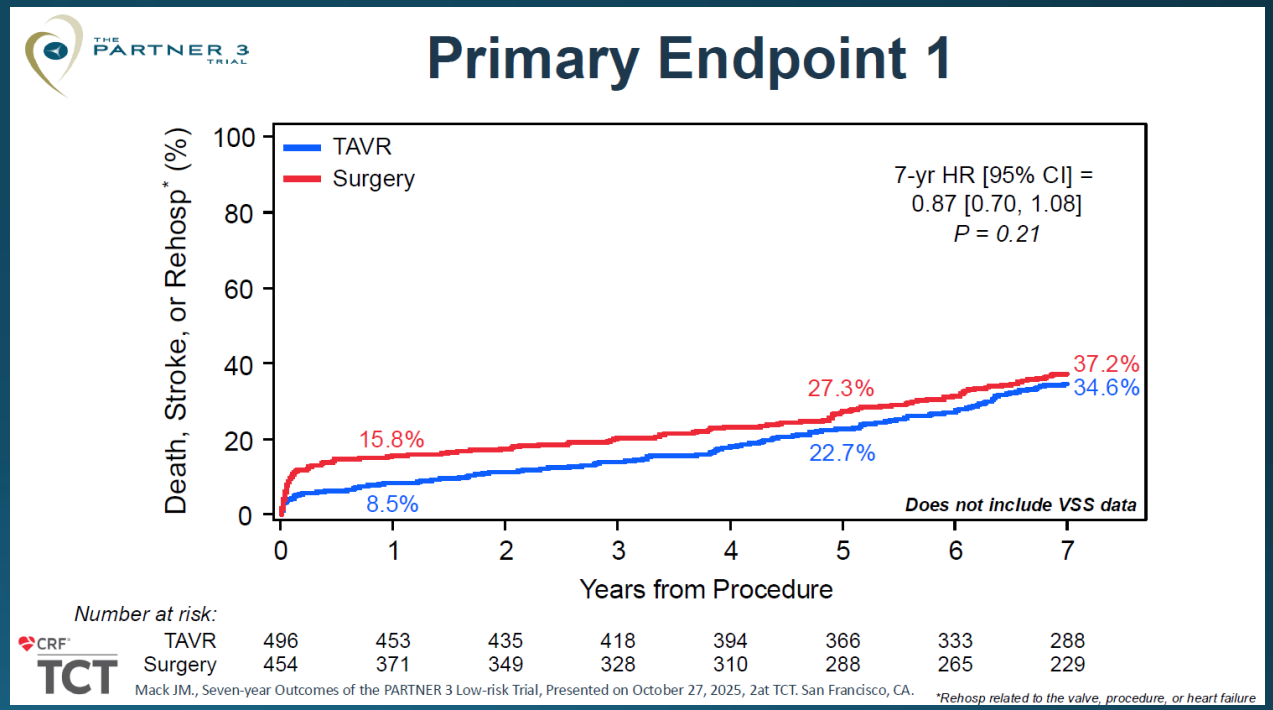
- Ireverzibilní deteriorace/ degenerace cípů nebo framu chlopně => stenóza/regurgitace



G. Tarantini, R. Parma - Evaluation of Clinical Outcomes of Patients Undergoing a Redo-TAVI Procedure; a Multicenter Prospective Observational Registry. Presented at TCT 25th of October 2025, San Francisco, USA.

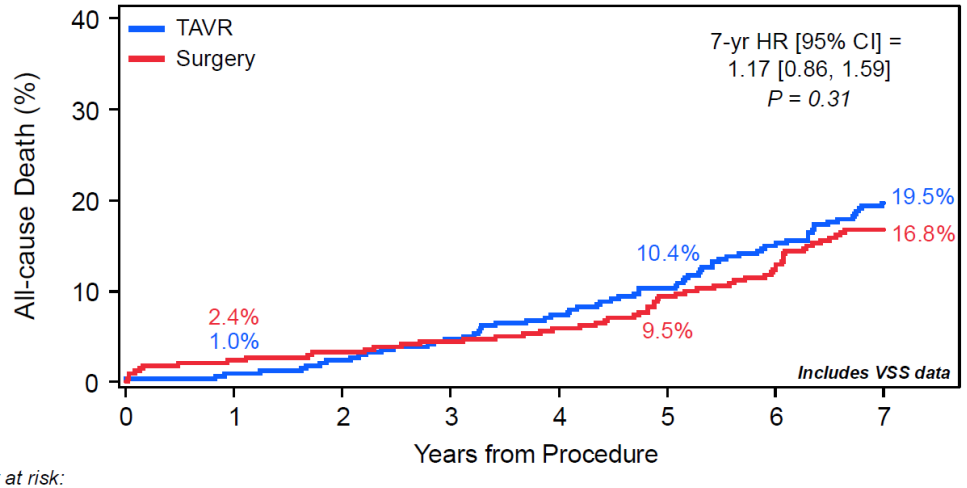
PARTNER 3: transcatheter or surgical aortic-valve replacement in low-risk patients at 7 years





N Engl J Med. 2025 Oct 27

All-cause Death

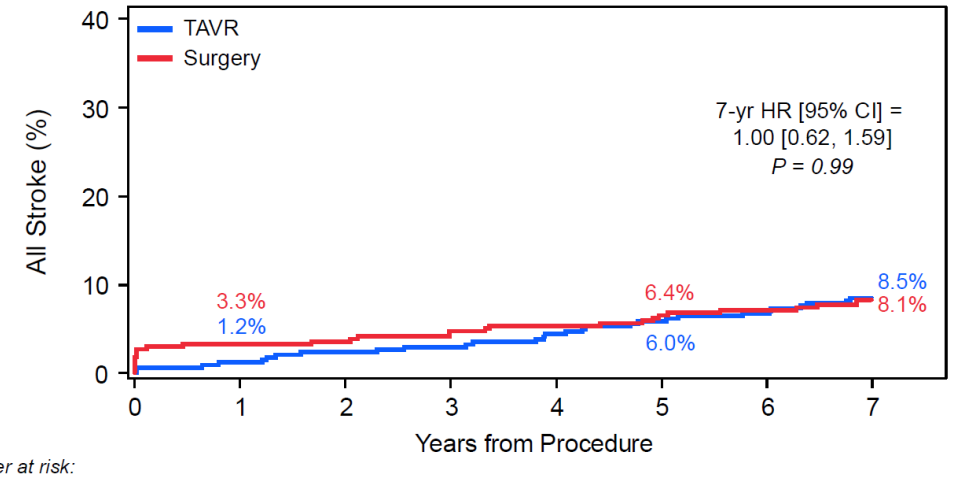


Number at risk:

TAVR	496	490	481	468	449	433	405	377
Surgery	454	441	430	418	407	390	375	353

Mack JM., Seven-year Outcomes of the PARTNER 3 Low-risk Trial, Presented on October 27, 2025, 2at TCT. San Francisco, CA.

All Stroke

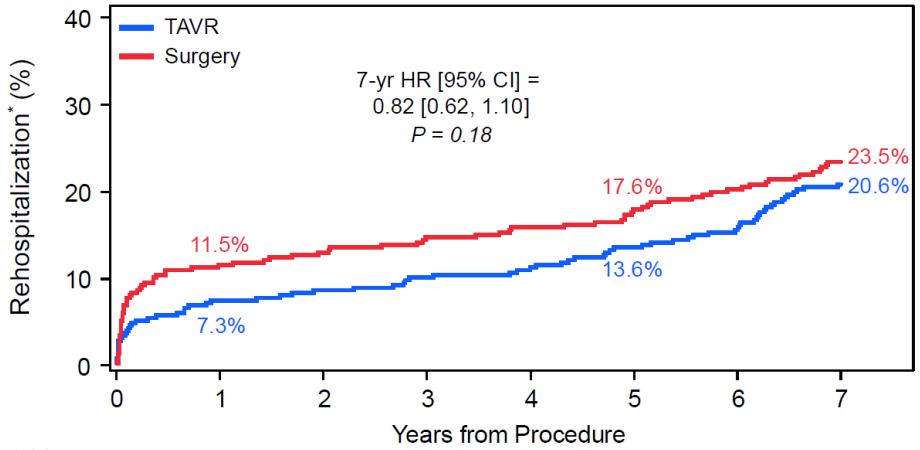


Number at risk:

TAVR	496	486	470	454	432	407	372	333
Surgery	454	416	398	379	363	344	326	291

Mack JM., Seven-year Outcomes of the PARTNER 3 Low-risk Trial, Presented on October 27, 2025, 2at TCT. San Francisco, CA.

Rehospitalization

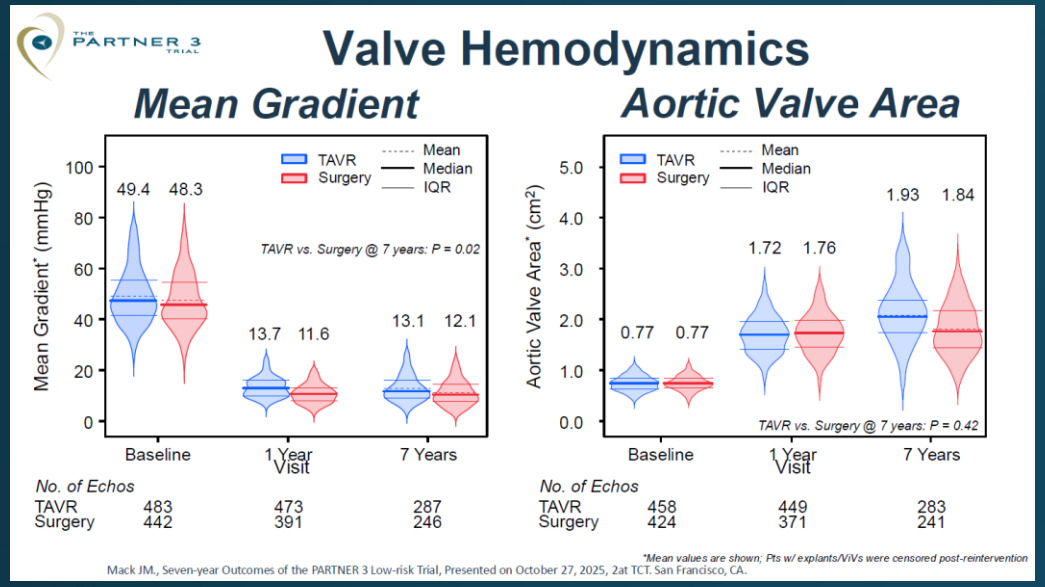


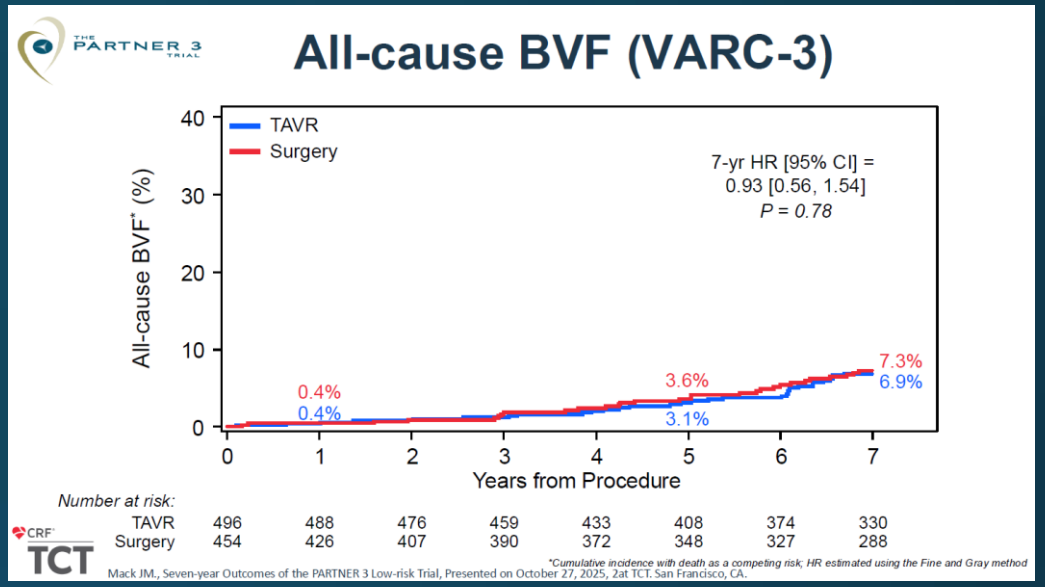
Number at risk:

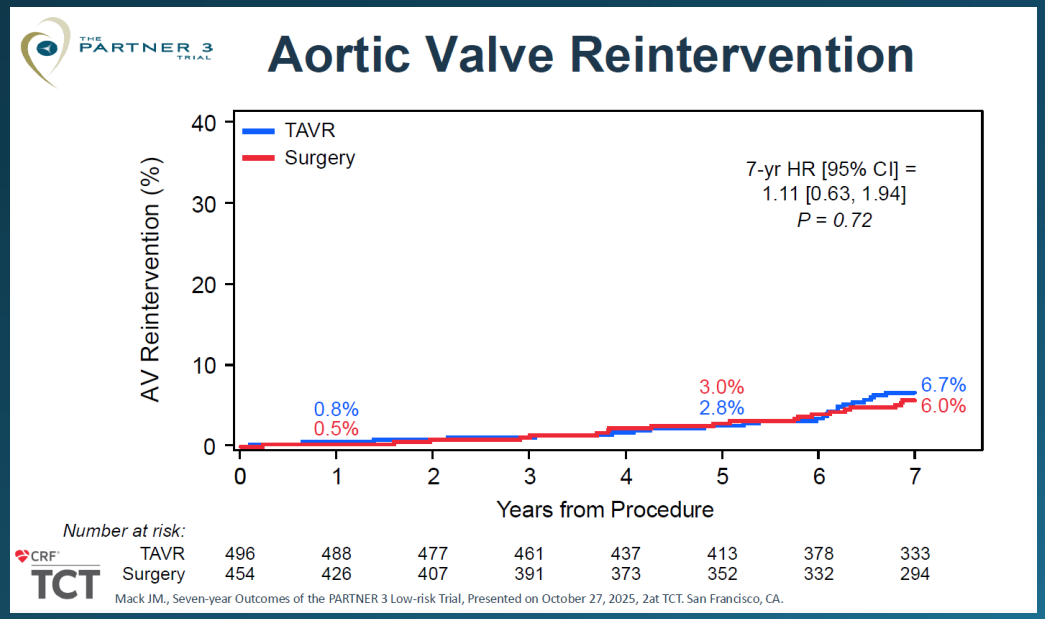
TAVR	496	455	440	422	399	375	342	298
Surgery	454	380	359	339	322	301	277	240

Mack JM., Seven-year Outcomes of the PARTNER 3 Low-risk Trial, Presented on October 27, 2025, 2at TCT. San Francisco, CA.

*Related to the valve, procedure, or heart failure

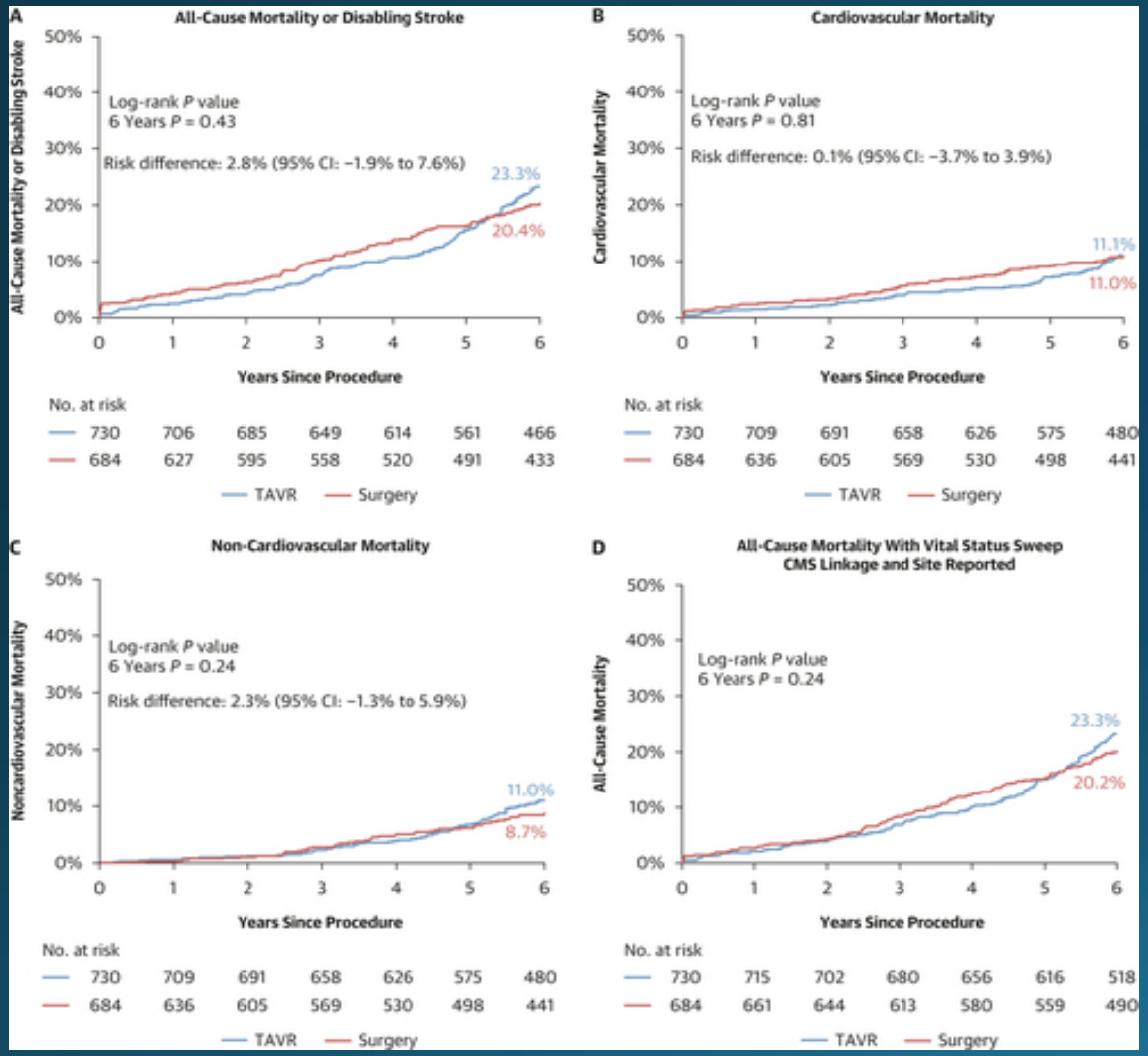






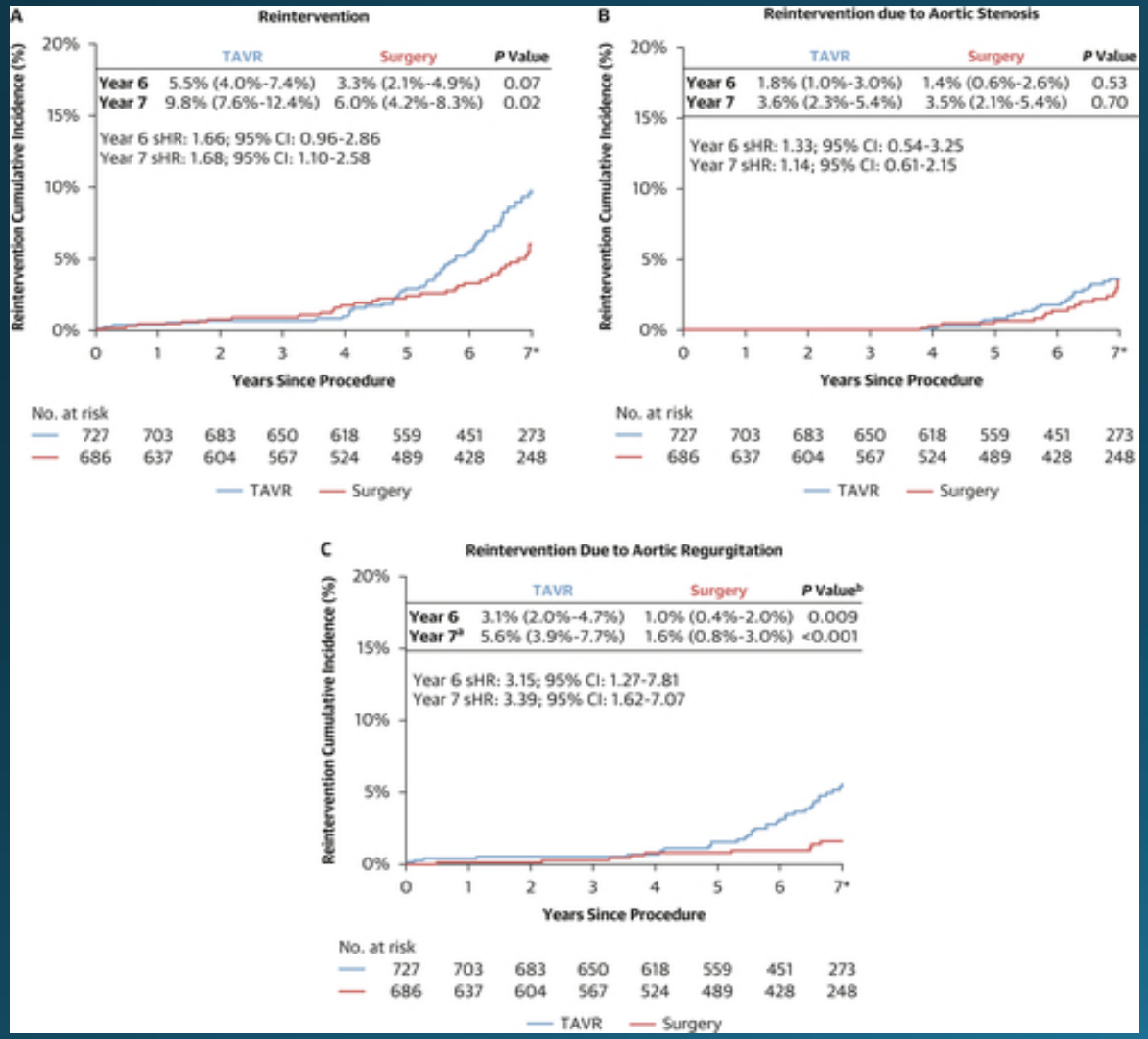
- SAVR chlopně:
- - 80% Perimount
- - 8% Trifecta

Six-Year Outcomes After Transcatheter vs Surgical Aortic Valve Replacement in Low-Risk Patients With Aortic Stenosis



Evolut Low-Risk Trial, John K. Forrest et al. *JACC* 2026

Reintervence

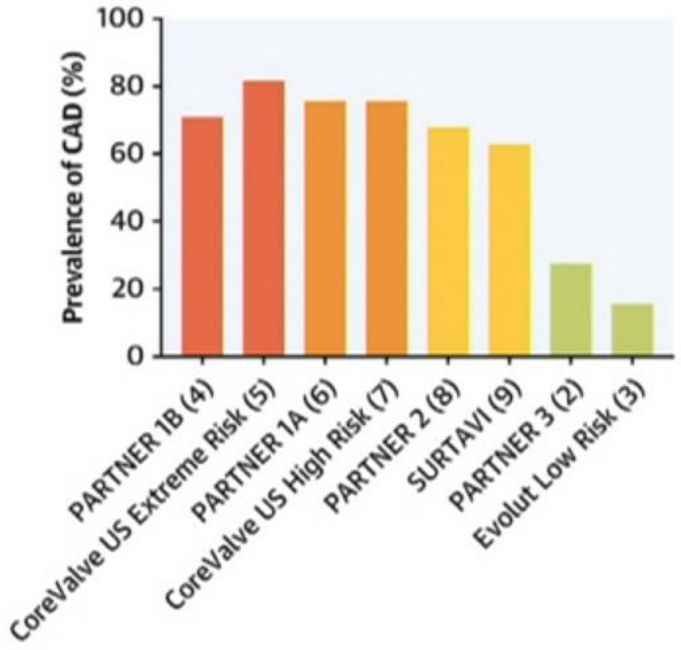


	Iniciální strategie	
Reintervence	TAVI	SAVR
→ SAVR	39/60 (**65 %**)	15/32 (**47 %**)
→ TAVI	21/60 (**35 %**)	17/32 (**53 %**)
30-D mortalita	2/60 (**3,3%**)	4/32 (**12,5%**)

SAVR chlopně:

- 17,7% Trifecta
- od 2024 vyřazeny

ICHS jako častá komorbidita

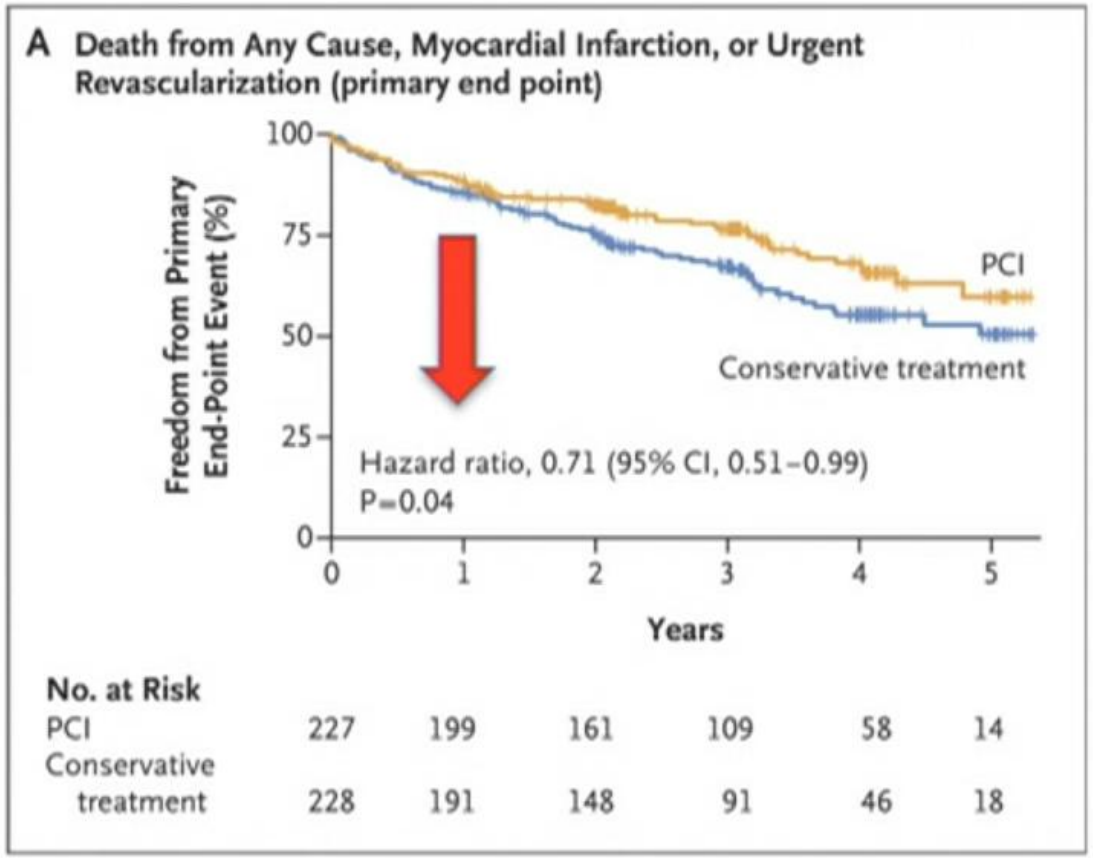


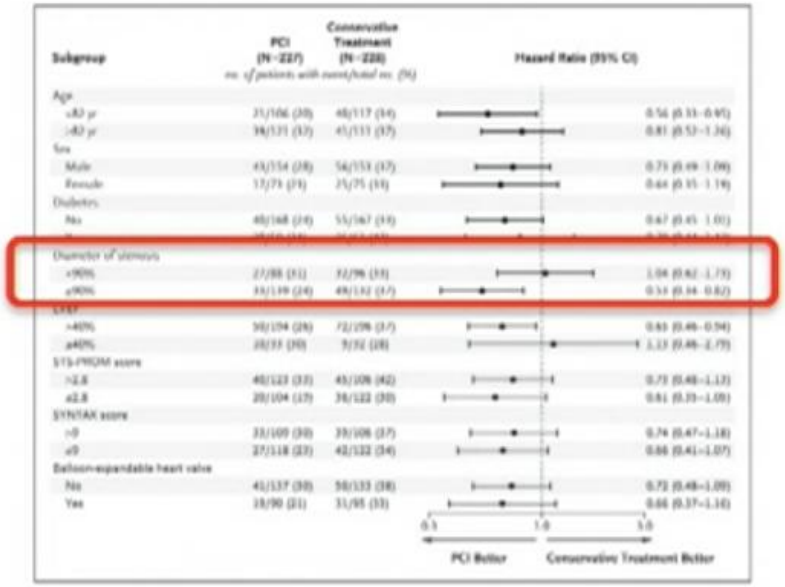
- prevalence v rozmezí 15-80%
- 50% pac. MVD
- komplexní anatomie s těžkými kalcifikacemi

→ Dopad na strategii léčby aortální stenozy, volbu THV, timing intervence

Faroux et al. JACC. 2019 Jul, 74 (3) 362–372.

Notion-3… PCI u stenozy > 90% před TAVI



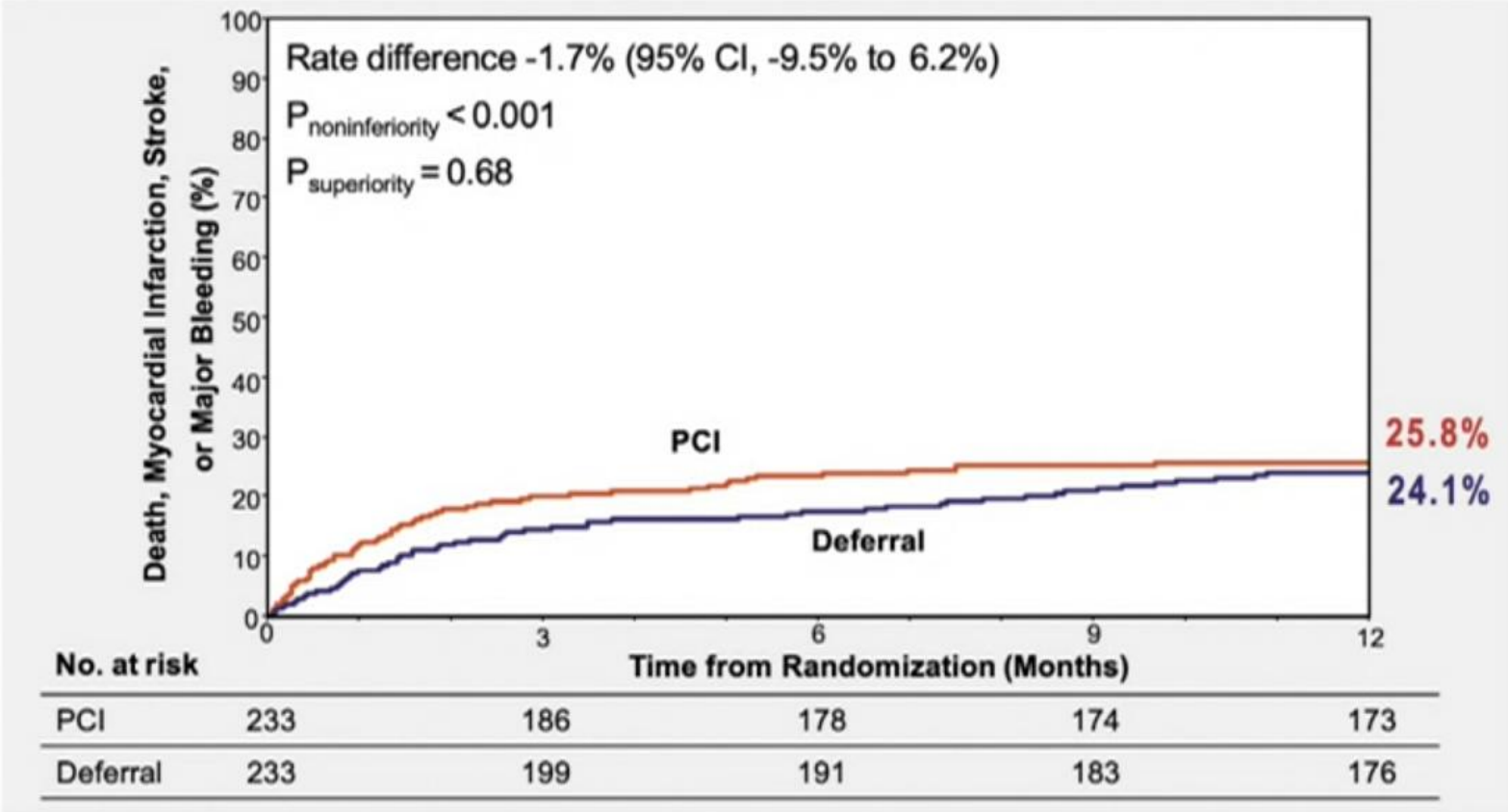


PCI should be considered in patients with a primary indication to undergo TAVI and ≥90% coronary artery stenosis in segments with a reference diameter ≥2.5 mm.[134]

IIa | B

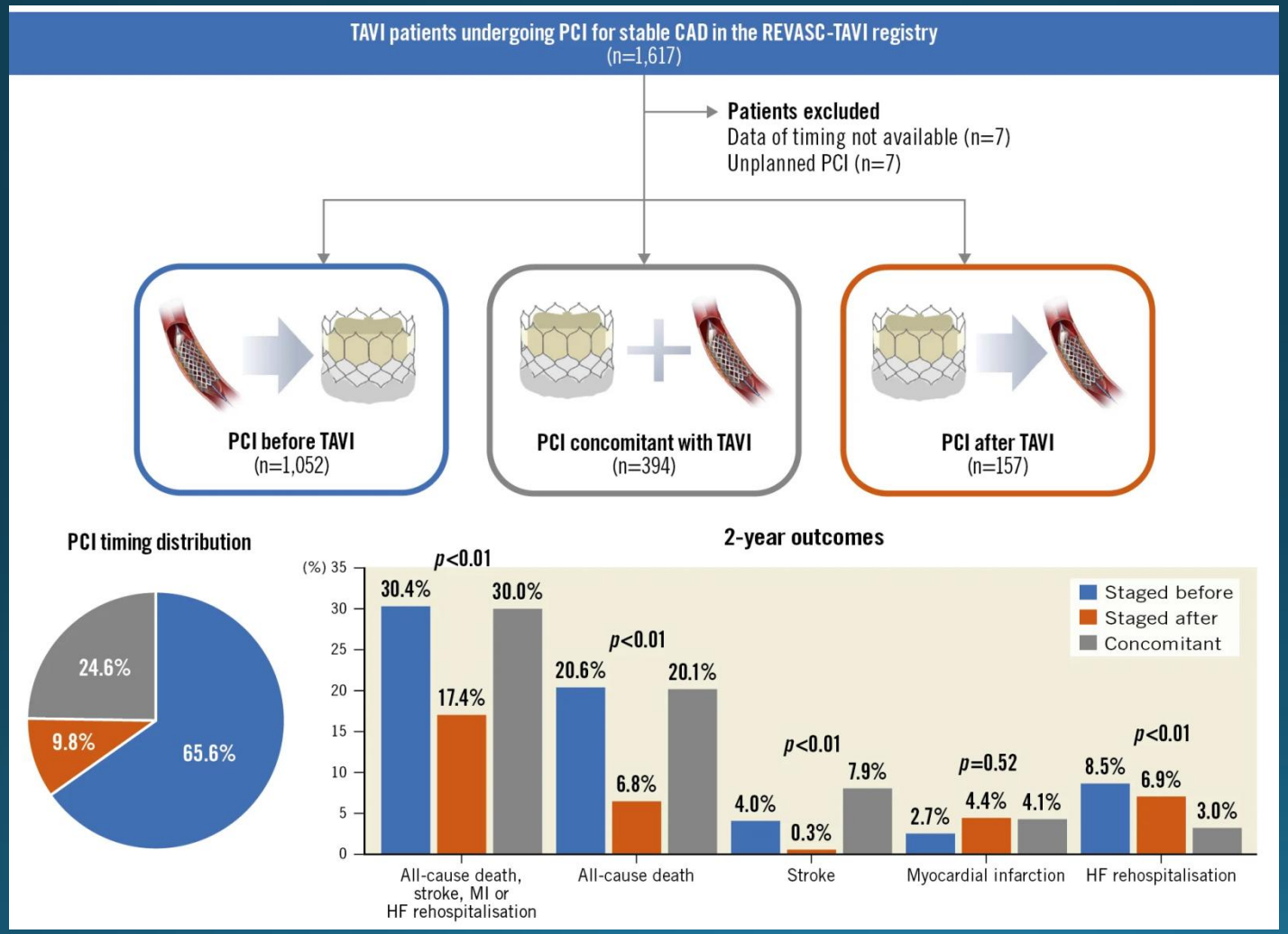
Lønborg et al. N Engl J Med 2024;391:2189-2200

PRO-TAVI… méně je více

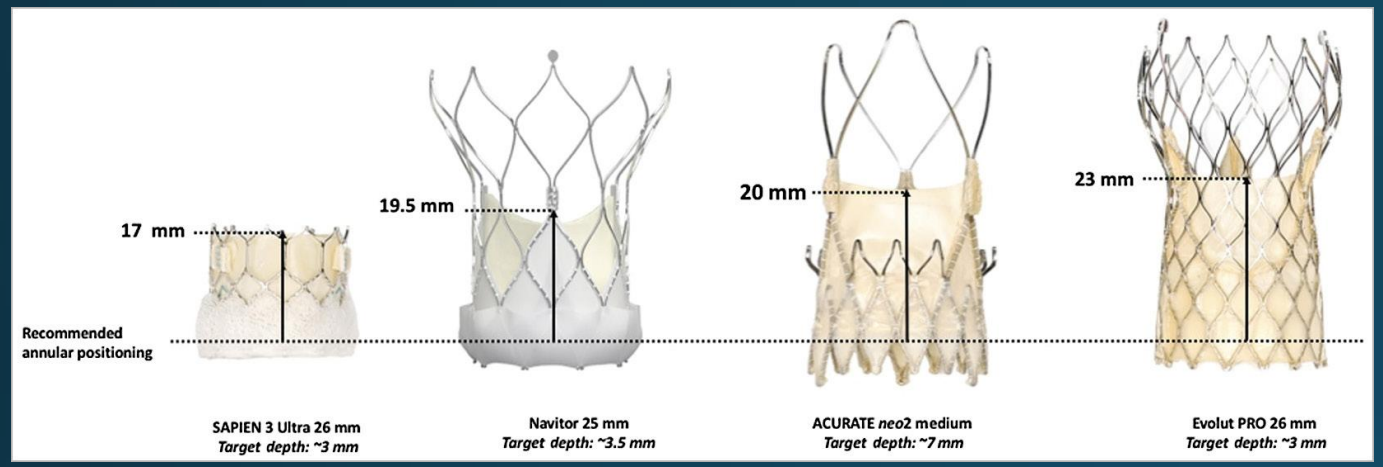


Delewi et al. The Lancet, 2026; 0

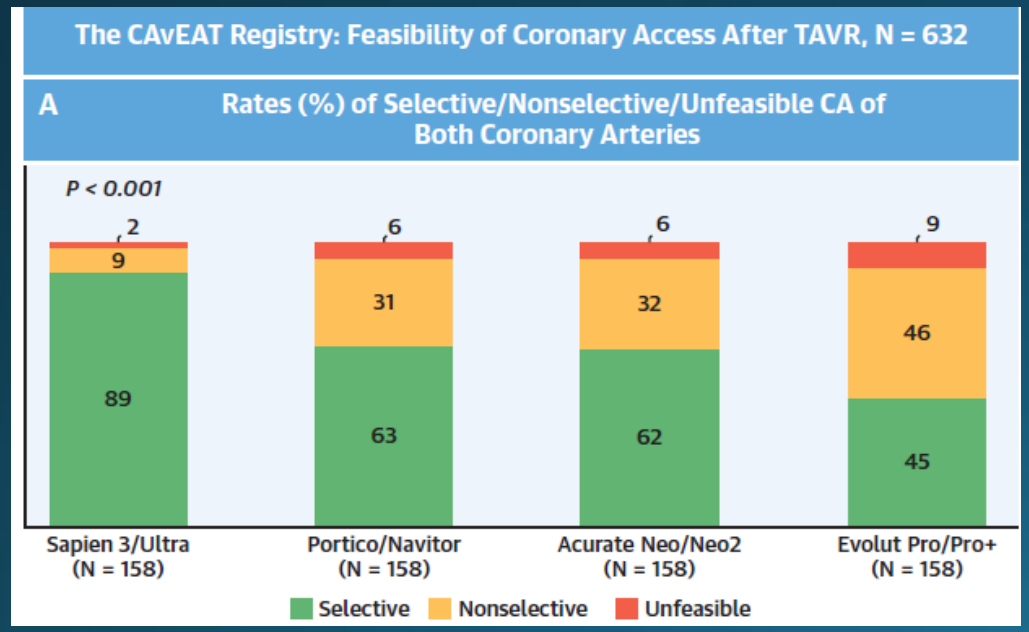
REVASC-TAVI … TAVI first

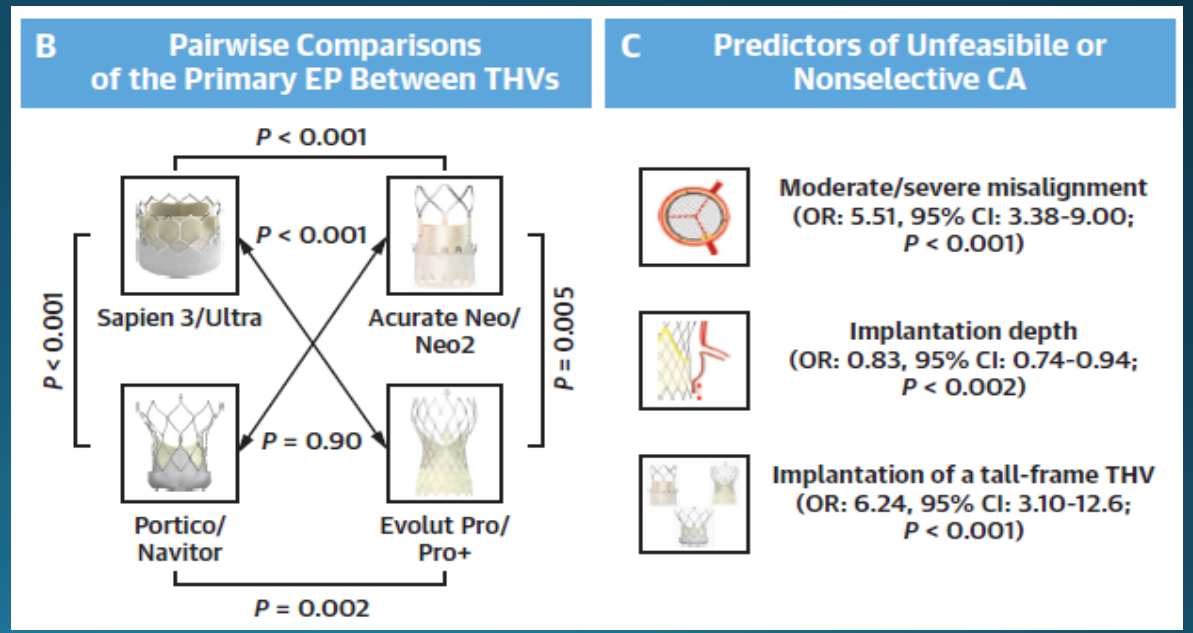


Koronární přístup po TAVI

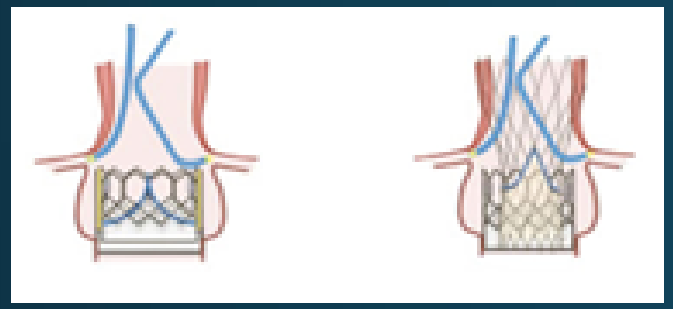


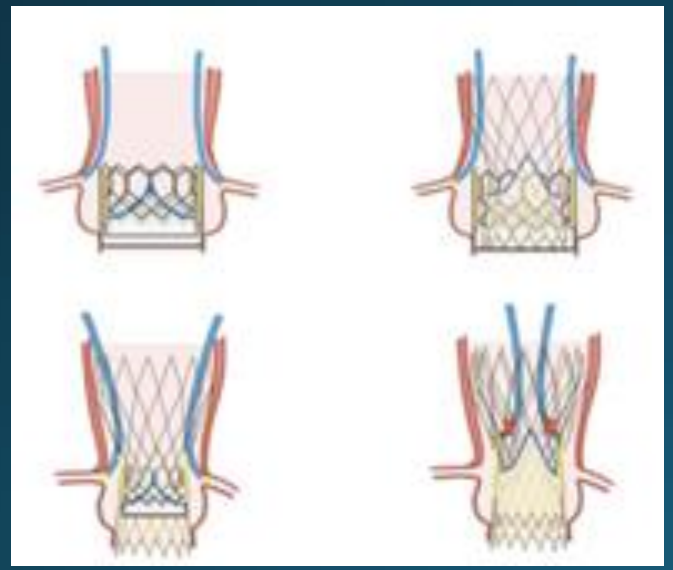
1, EuroIntervention 2023;19:37-52 Expert Consensus: Management of coronary artery disease in patients undergoing transcatheter aortic valve implantation. A clinical consensus statement from the European Association of Percutaneous Cardiovascular Interventions in collaboration with the ESC Working Group on Cardiovascular Surgery
2, Tarantini et al. JACC Cardiovasc Interv. 2025;18(12):1571–1583.

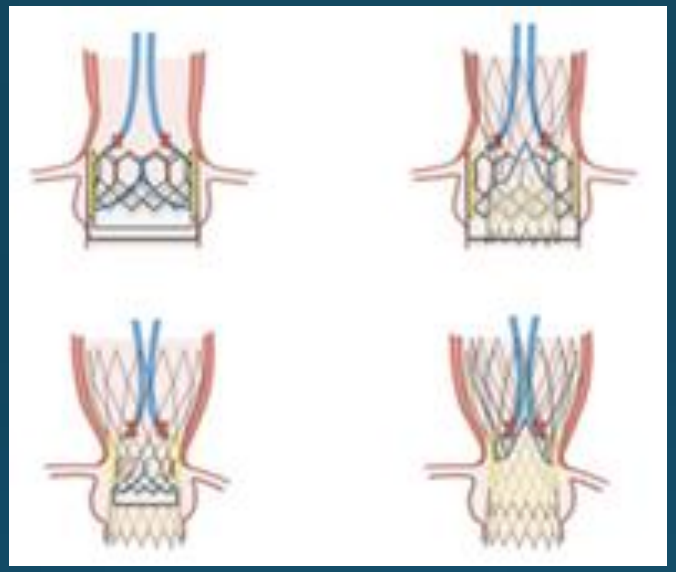




Koronární přístup po TAV-in-TAV



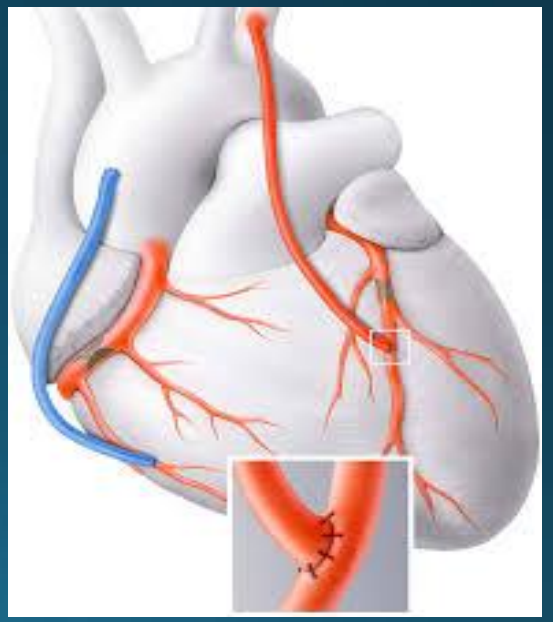




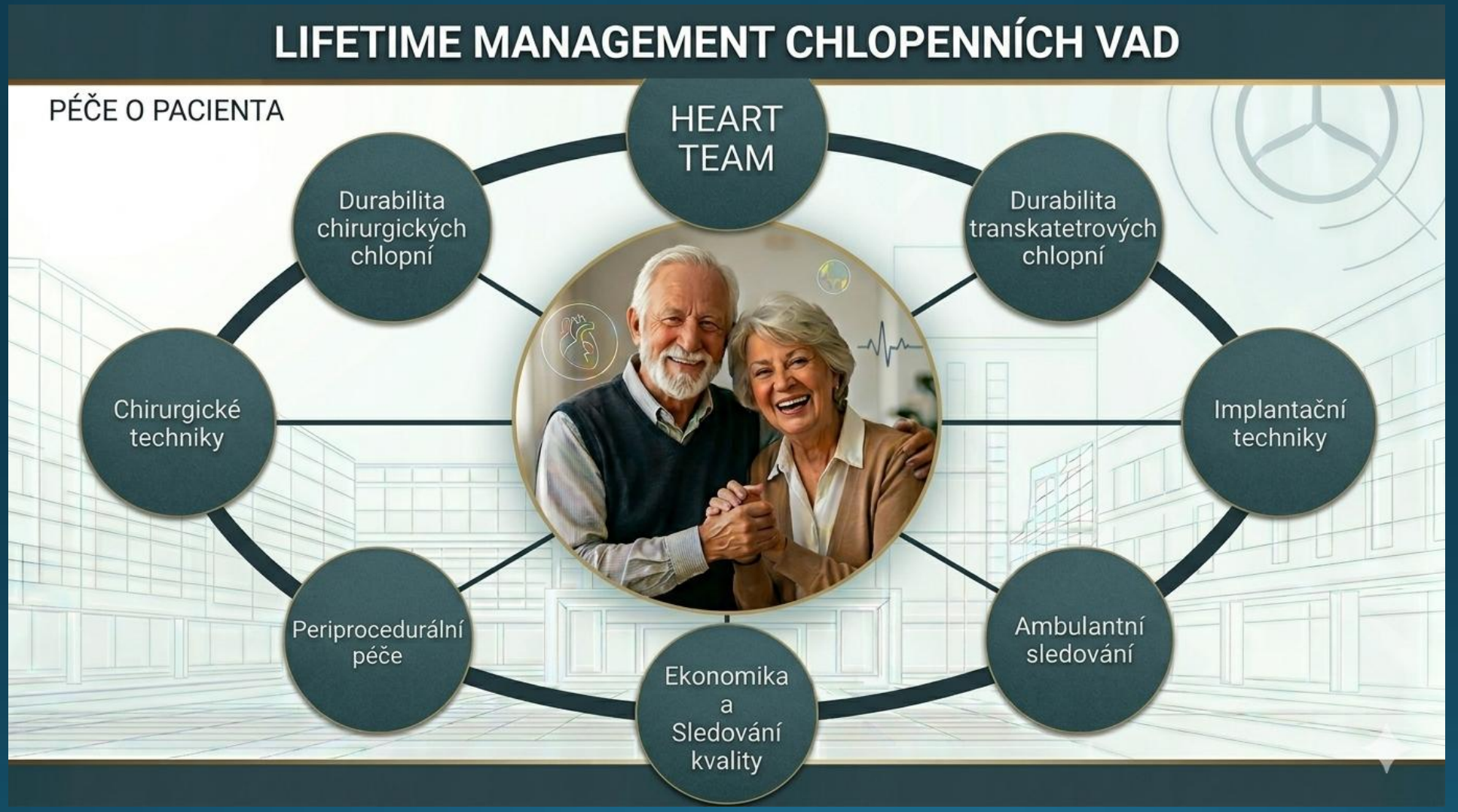
↓

BASILICA
UNICORN

TAVI →
SAVR +CABG



LIFETIME MANAGEMENT CHLOPENNÍCH VAD



God dwells in the details …
Mies van der Rohe