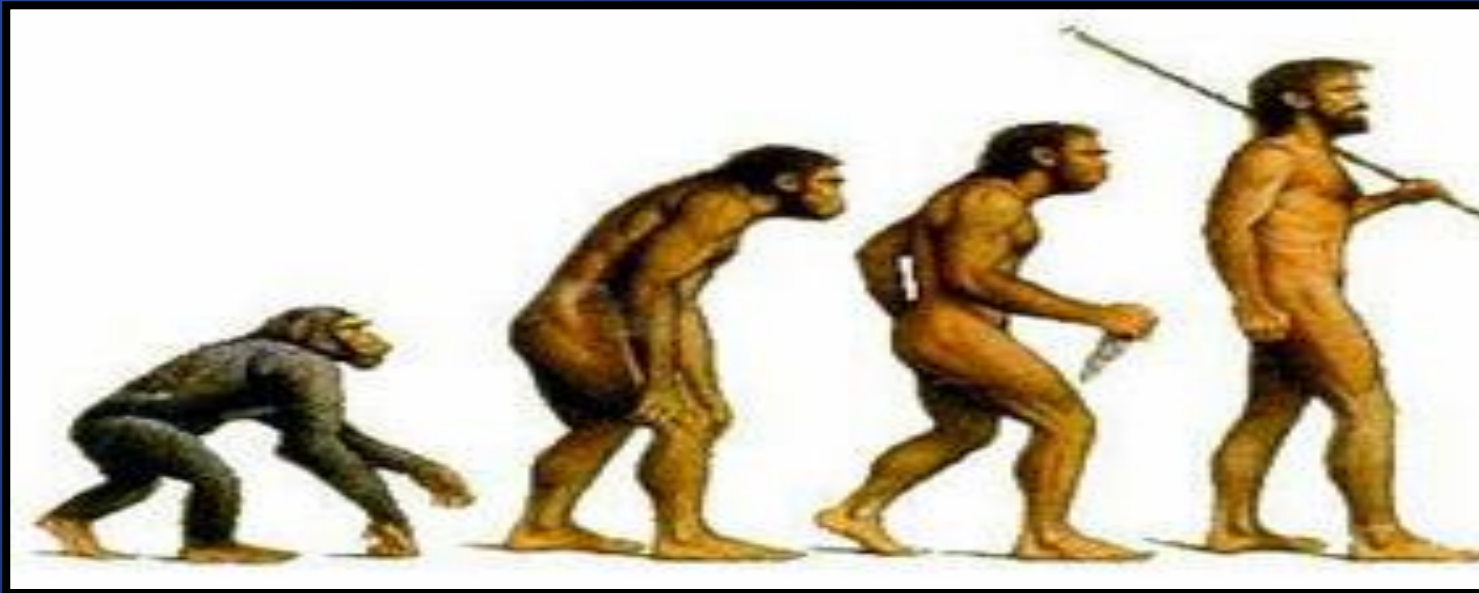


Expansion of TAVR to lower risk populations

Dharam J. Kumbhani, MD, SM, MRCP, FACC, FAHA, FSCAI

Assistant Professor of Medicine, Interventional Cardiology

UT Southwestern Medical Center, Dallas, TX



Inoperable

High

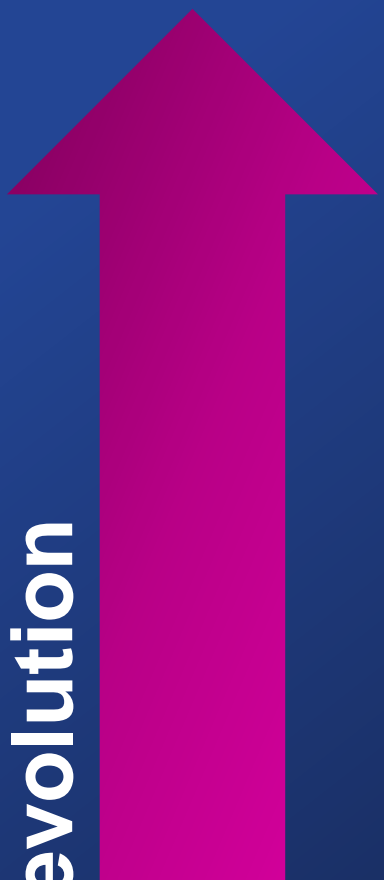
Intermediate

Low

Considerations

- Short and long-term efficacy
- Complications and safety
- Durability
- Cost and cost-effectiveness
- Patient preference

**Technological
evolution**



Valve
Access/sheath

Numerical scores (STS,
EuroSCORE)
Other factors (frailty)

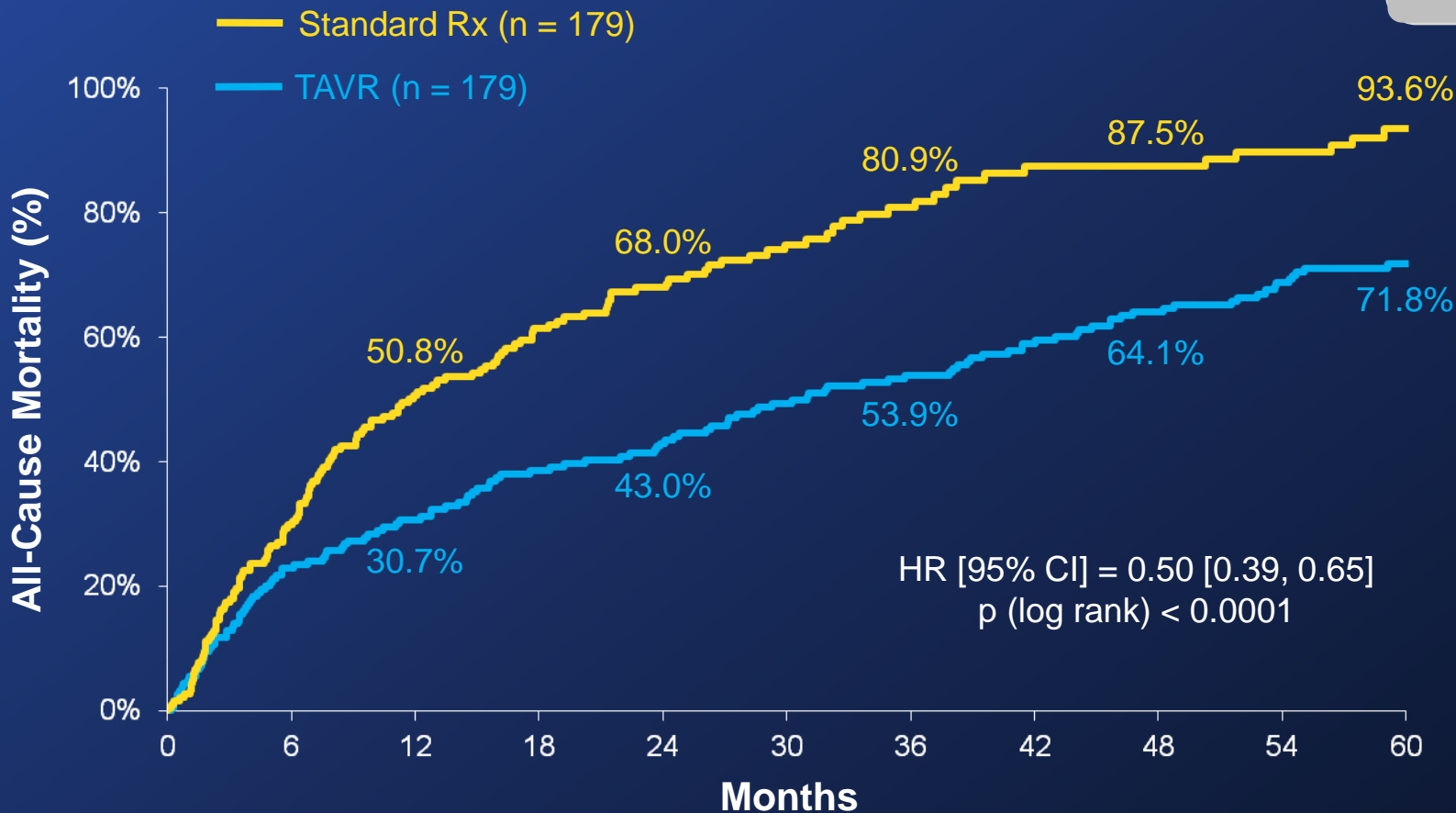


Inoperable High Intermediate Low

Risk

Inoperable patients

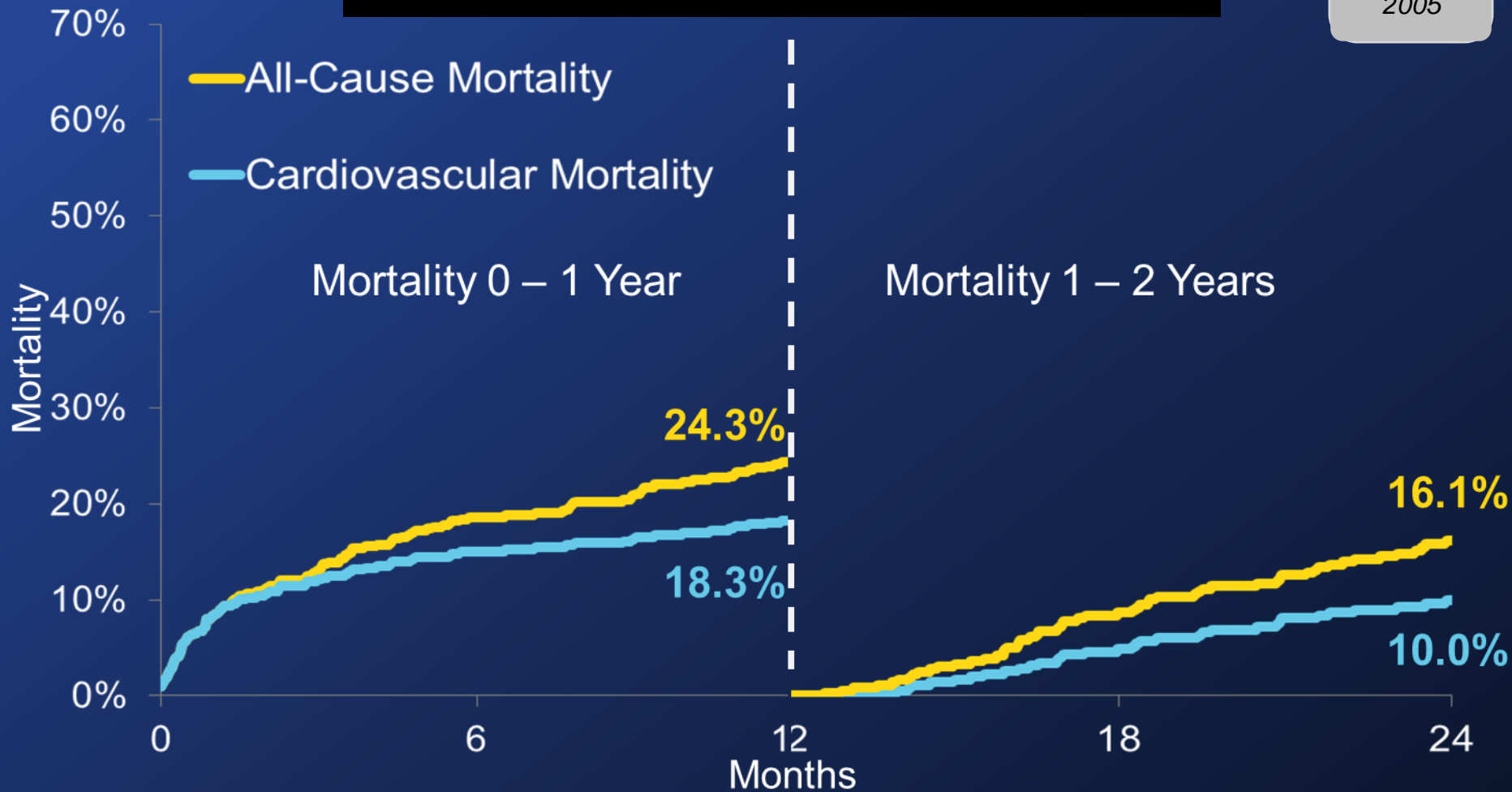
PARTNER 1B



* In an age and gender matched US population without comorbidities, the mortality at 5 years is 40.5%.

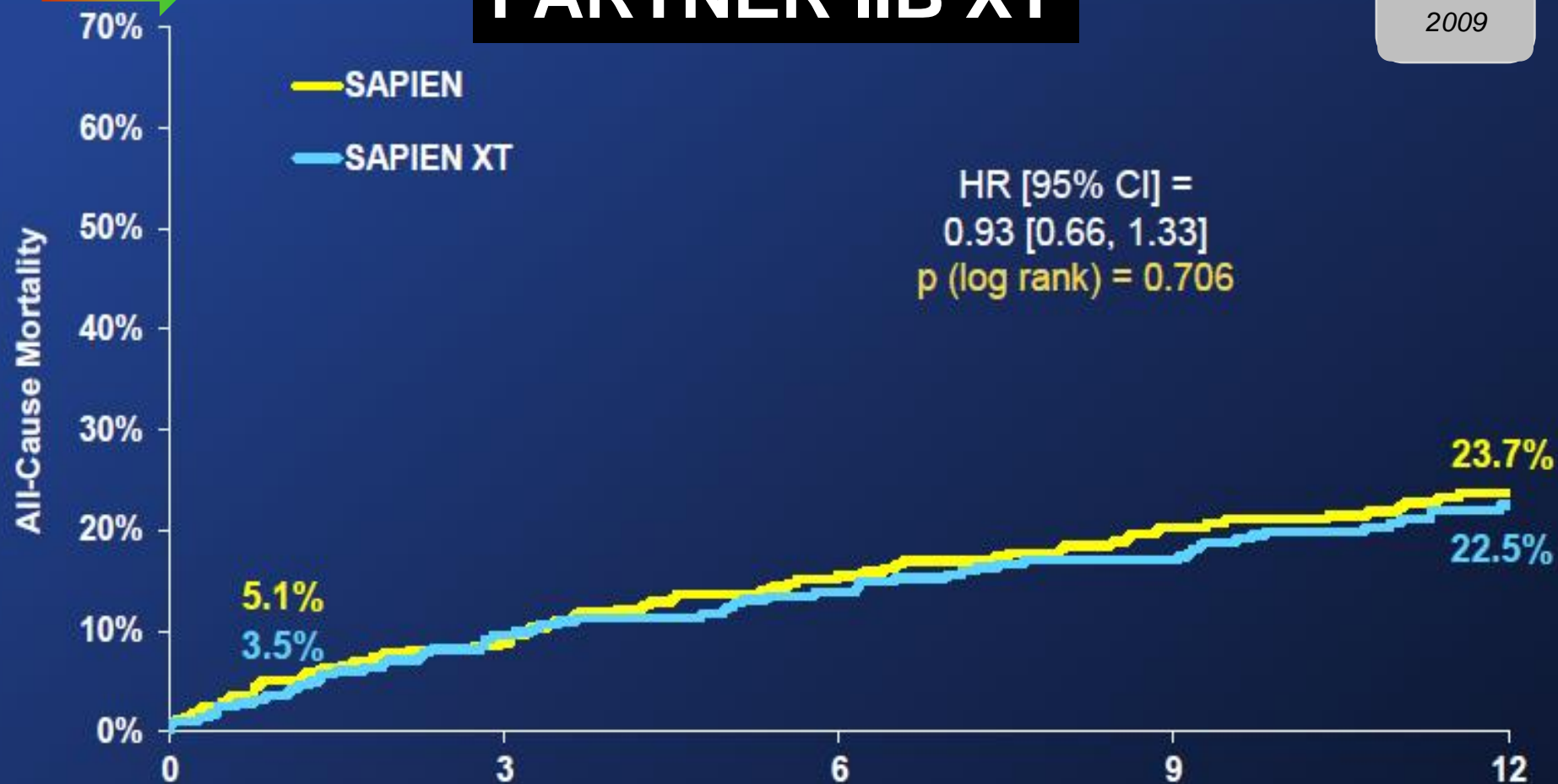
Inoperable patients

CoreValve: Extreme Risk



Inoperable patients

PARTNER IIB XT



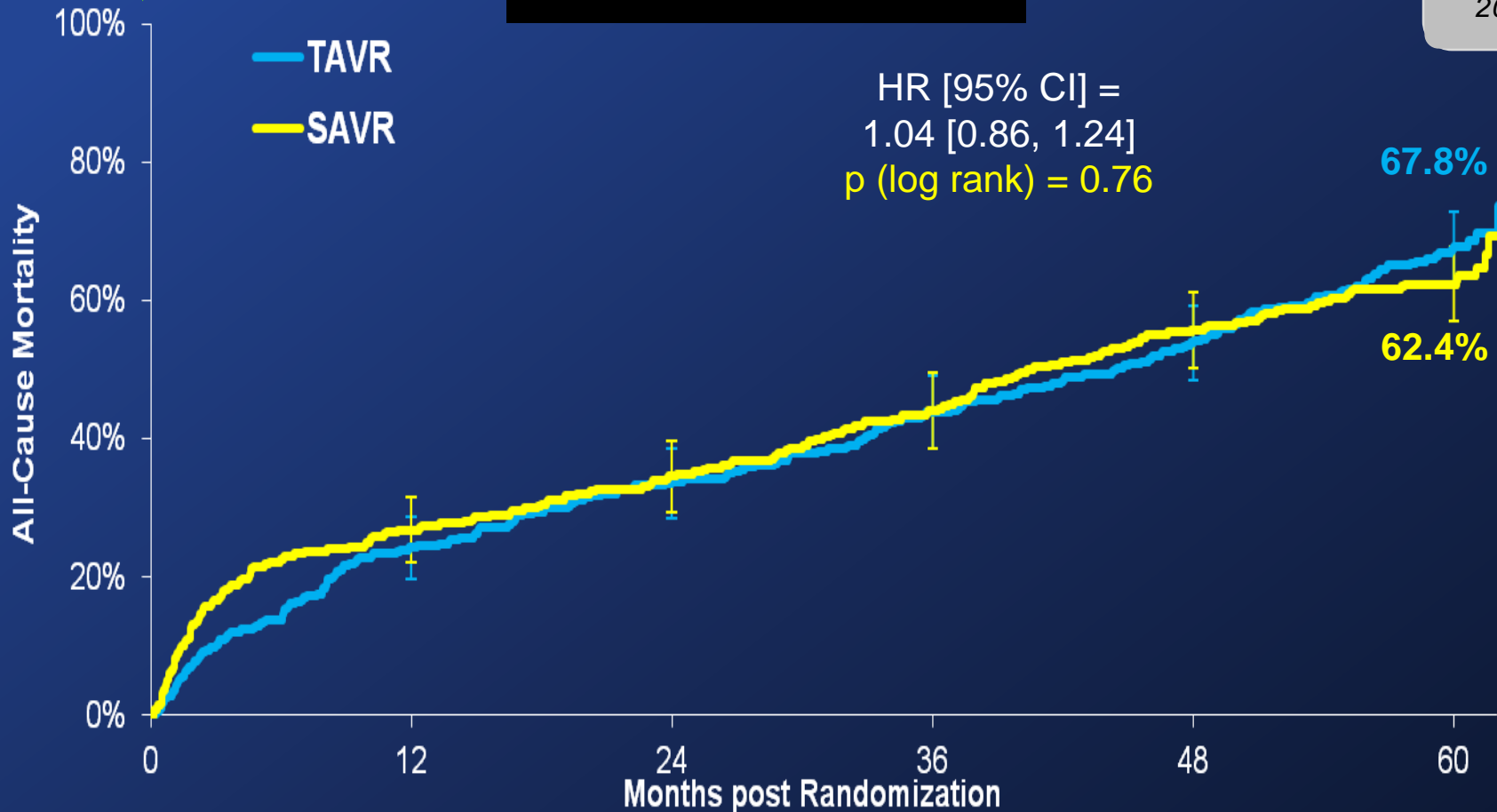
No. at Risk

Months post Randomization

SAPIEN	276	246	227	213	137
SAPIEN XT	284	255	242	232	147

High-risk patients

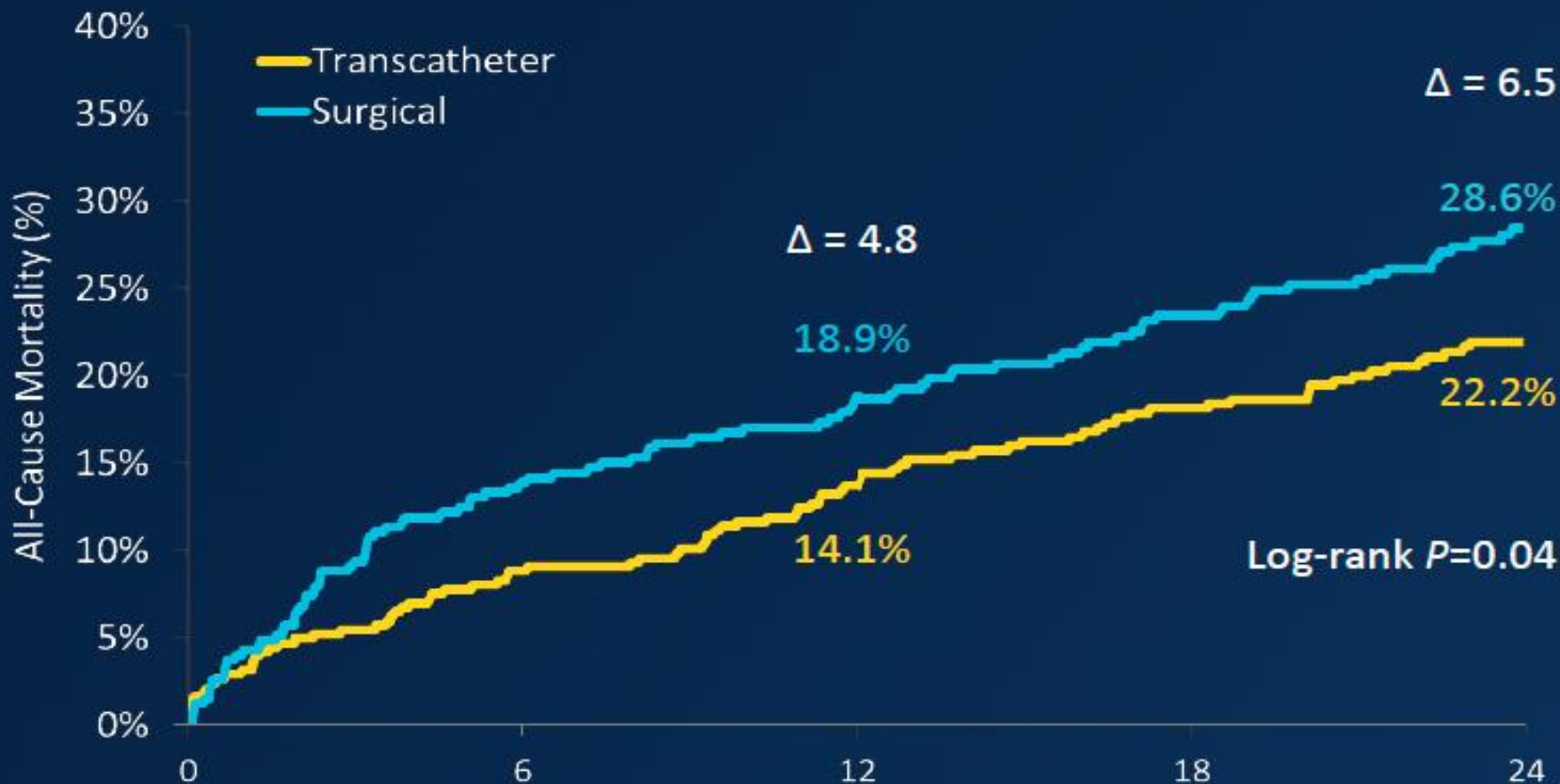
PARTNER 1A



Time Point	TAVR	SAVR
0	348	351
12	262	236
24	228	210
36	191	174
48	154	131
60	61	64

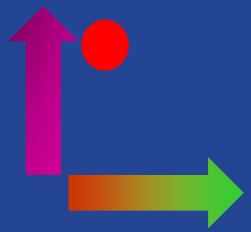
High-risk patients

CoreValve: High Risk



No. at Risk	0	6	12	18	24
Transcatheter	391	378	354	334	219
Surgical	359	343	304	282	191

ACC 2015

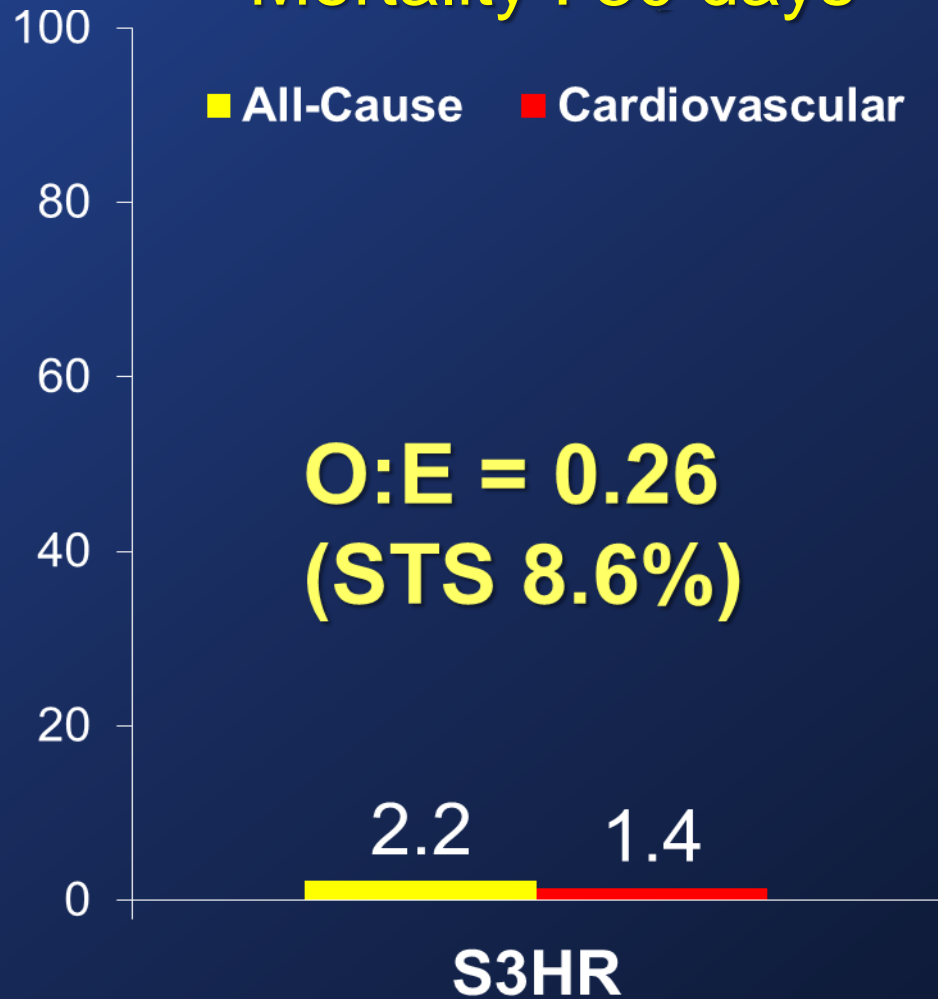


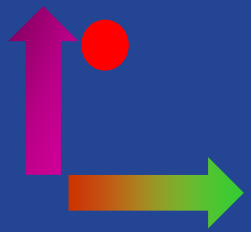
High-risk patients

PARTNER II S3HR



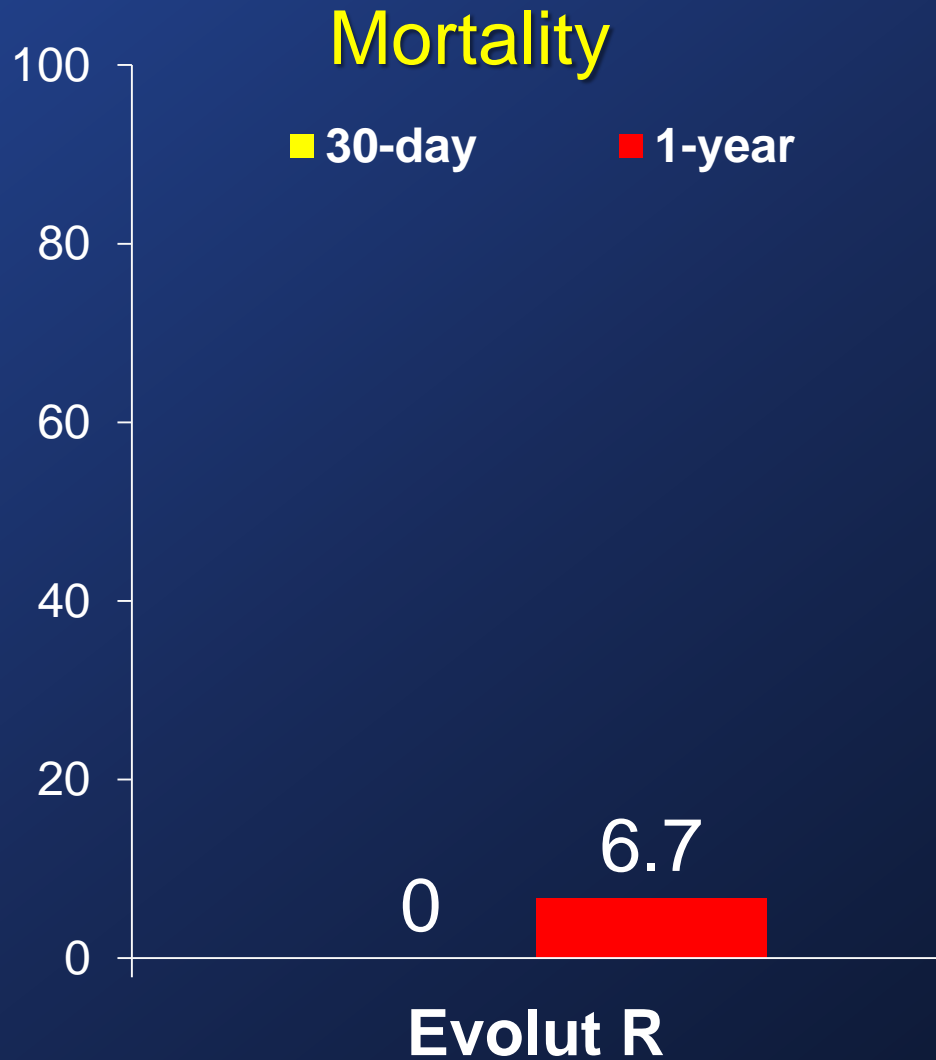
Mortality : 30 days





High-risk patients

Evolut CE study

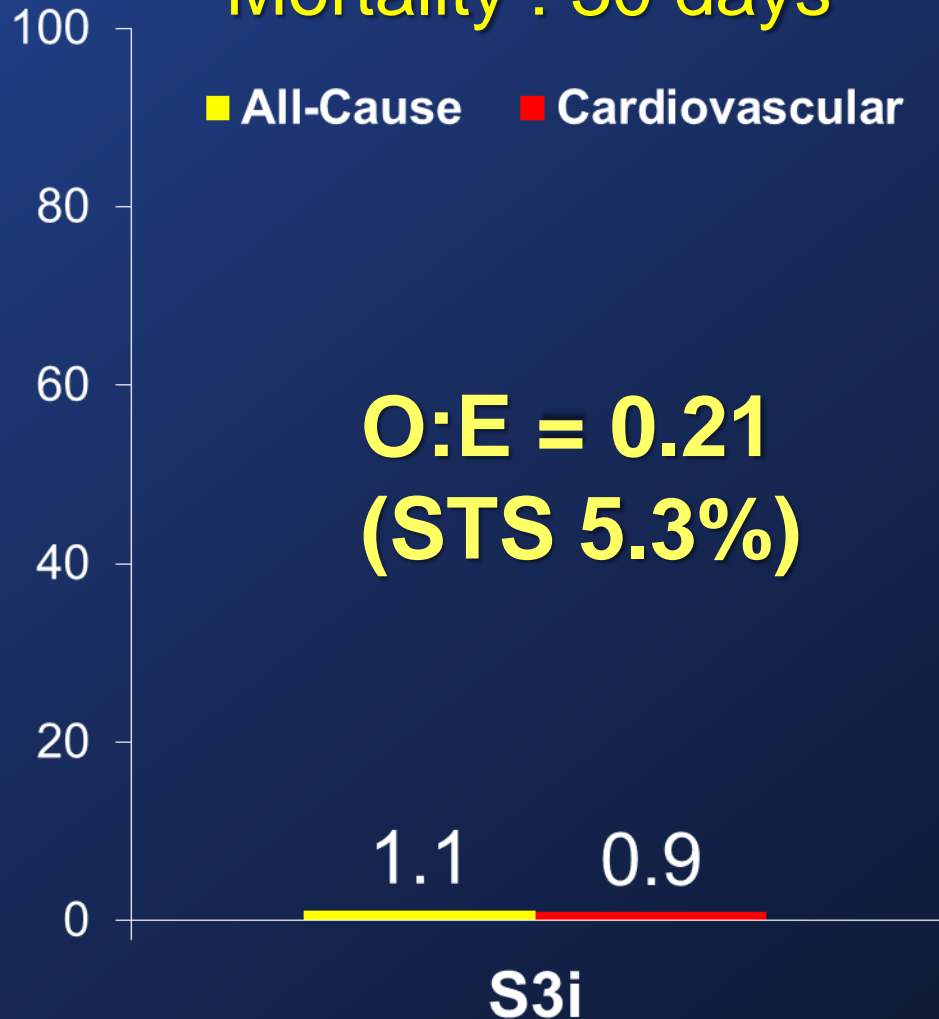


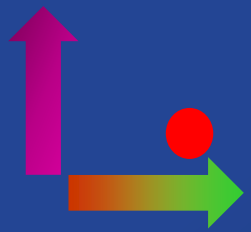
Intermediate-risk patients

PARTNER II S3i



Mortality : 30 days



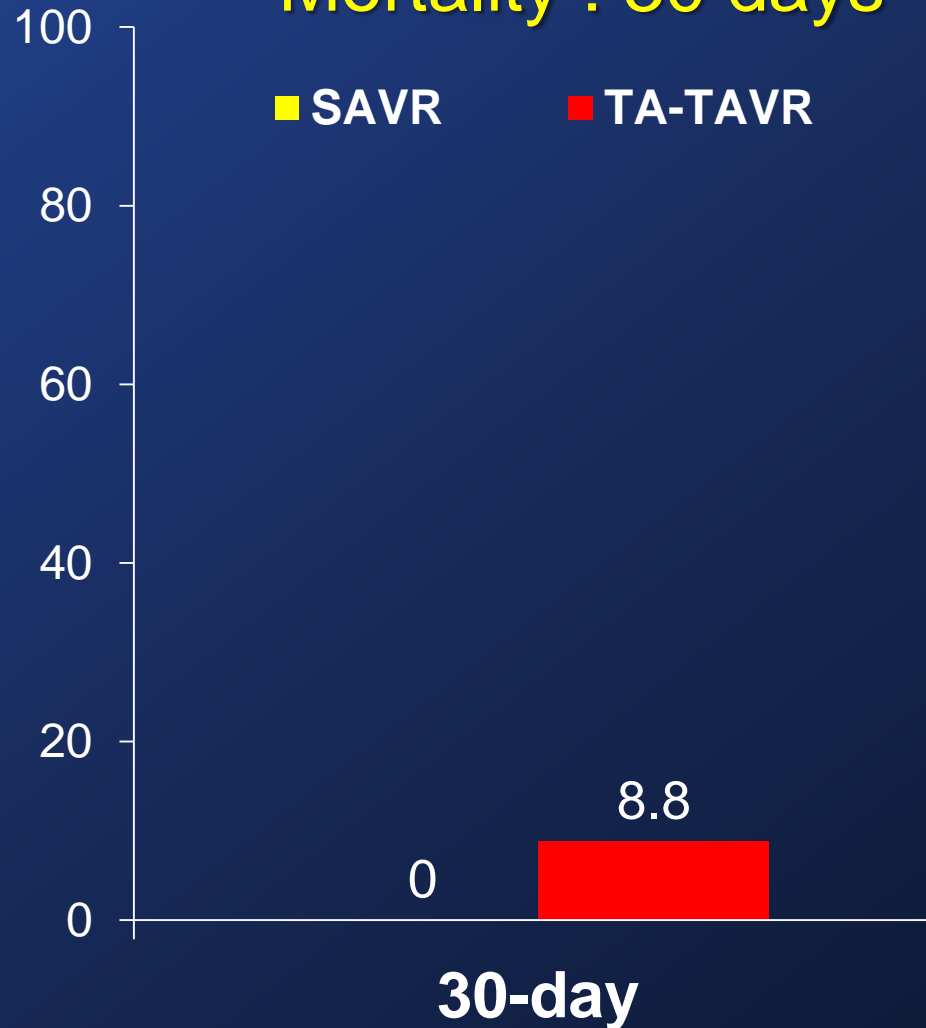


Low-risk patients

STACCATO



Mortality : 30 days

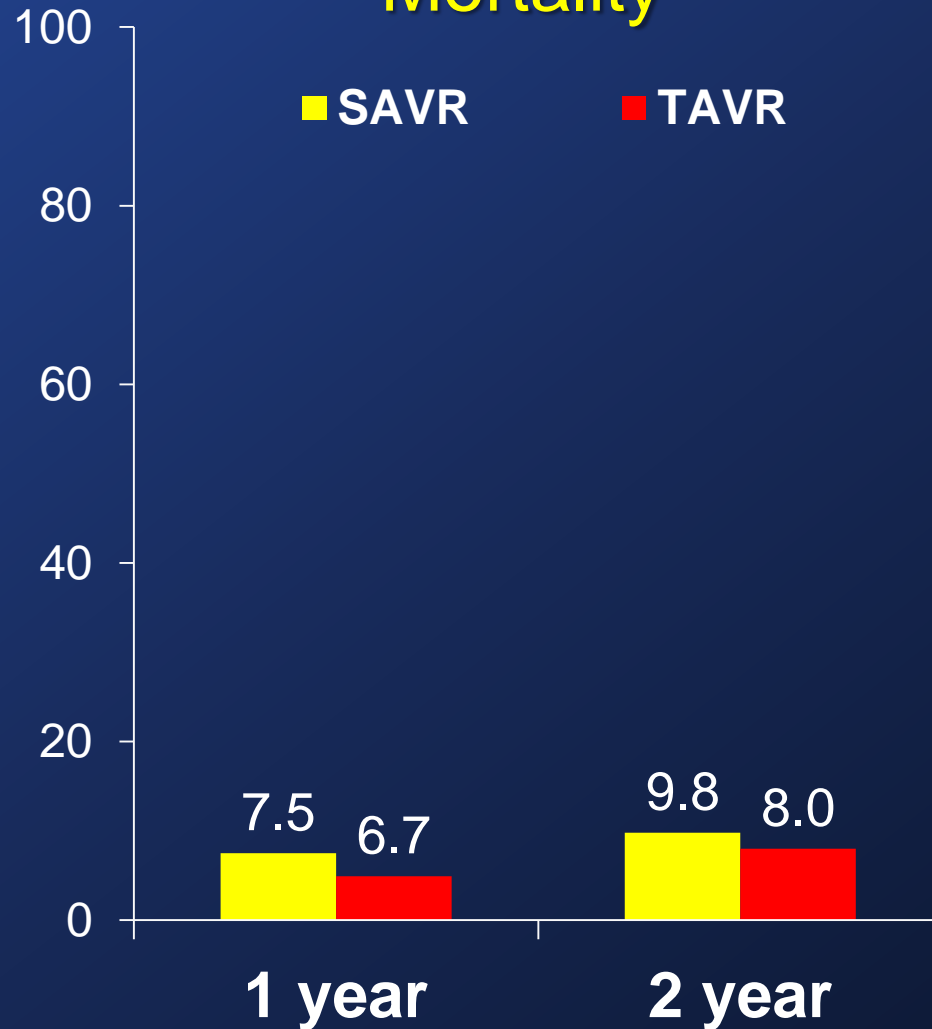


Low-risk patients

NOTION



Mortality

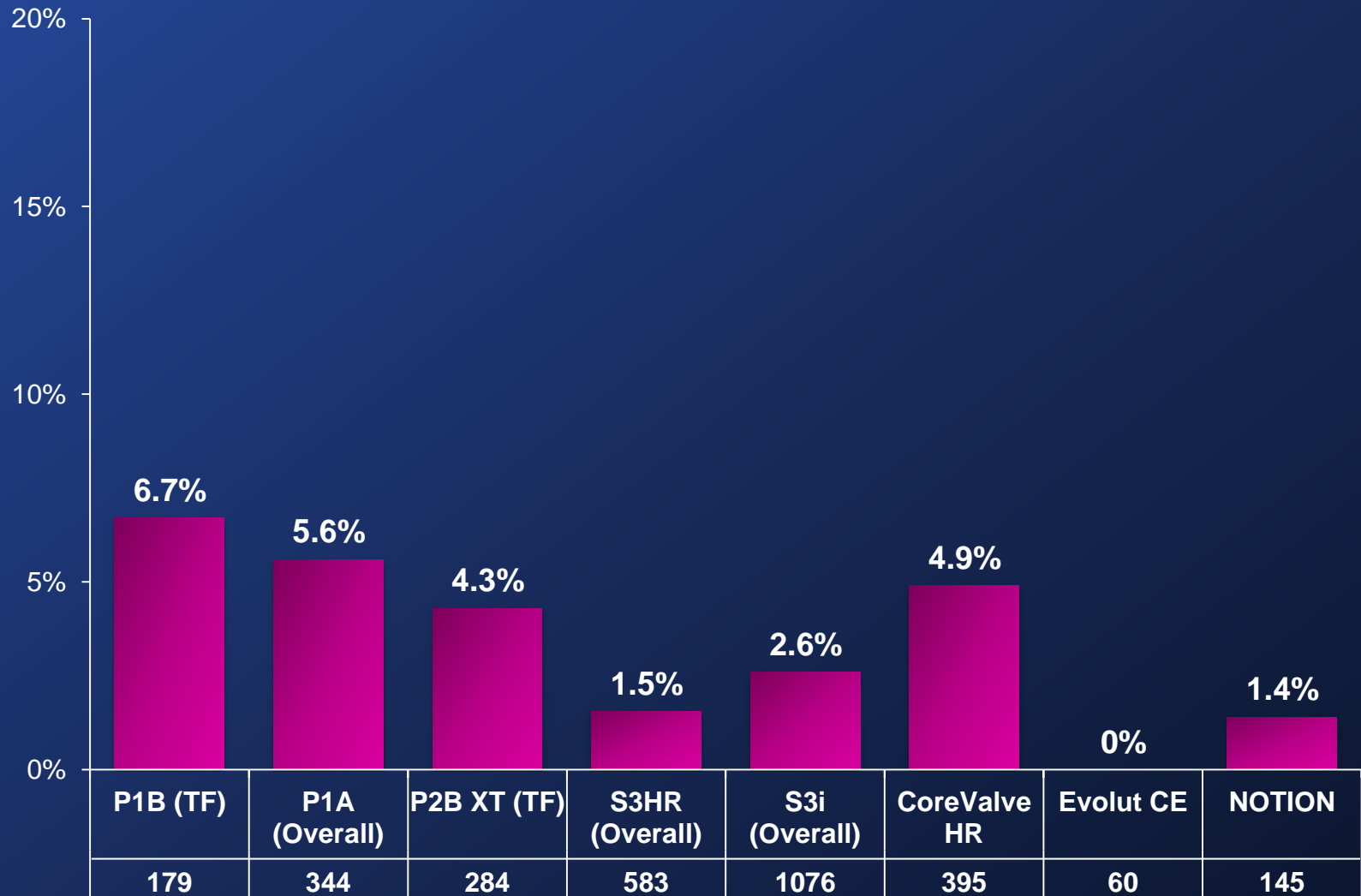


Complications

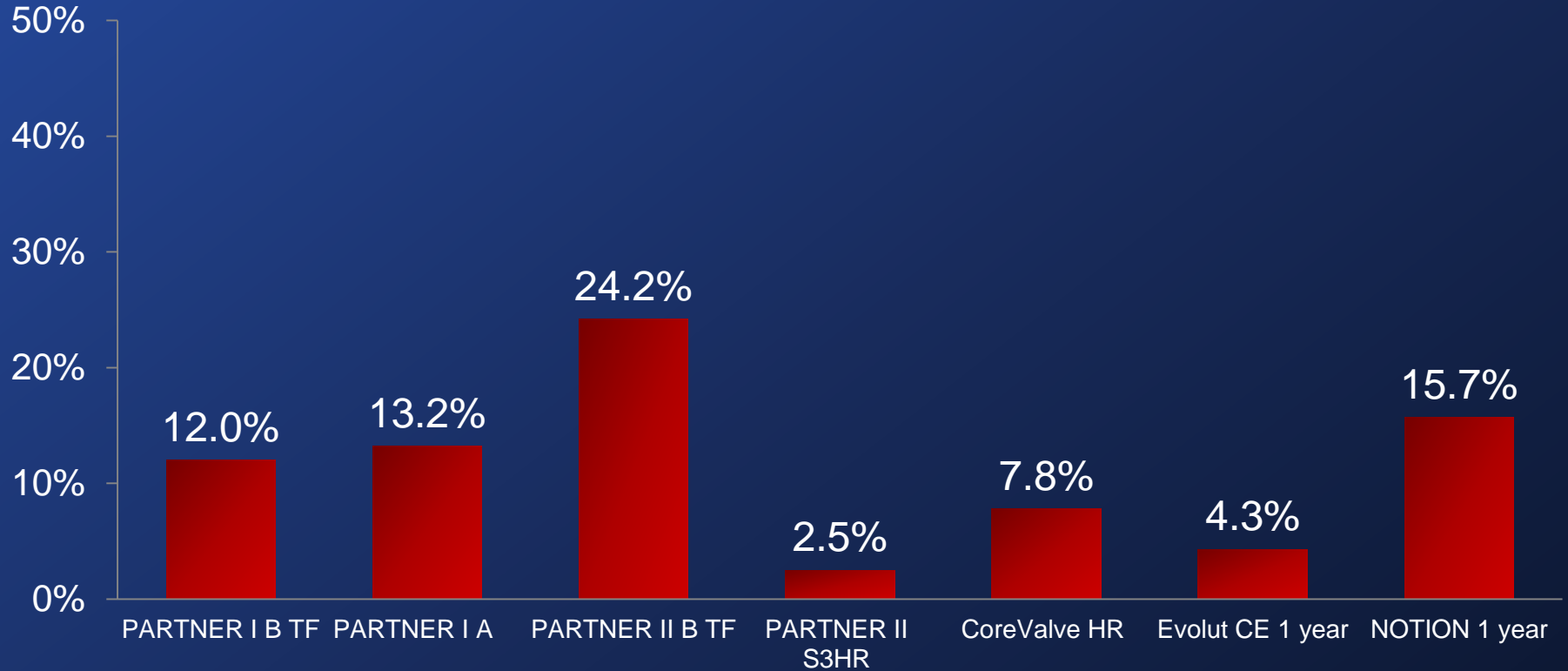


- Vascular complications
- Stroke
- Paravalvular aortic regurgitation
- Pacemaker
- Others

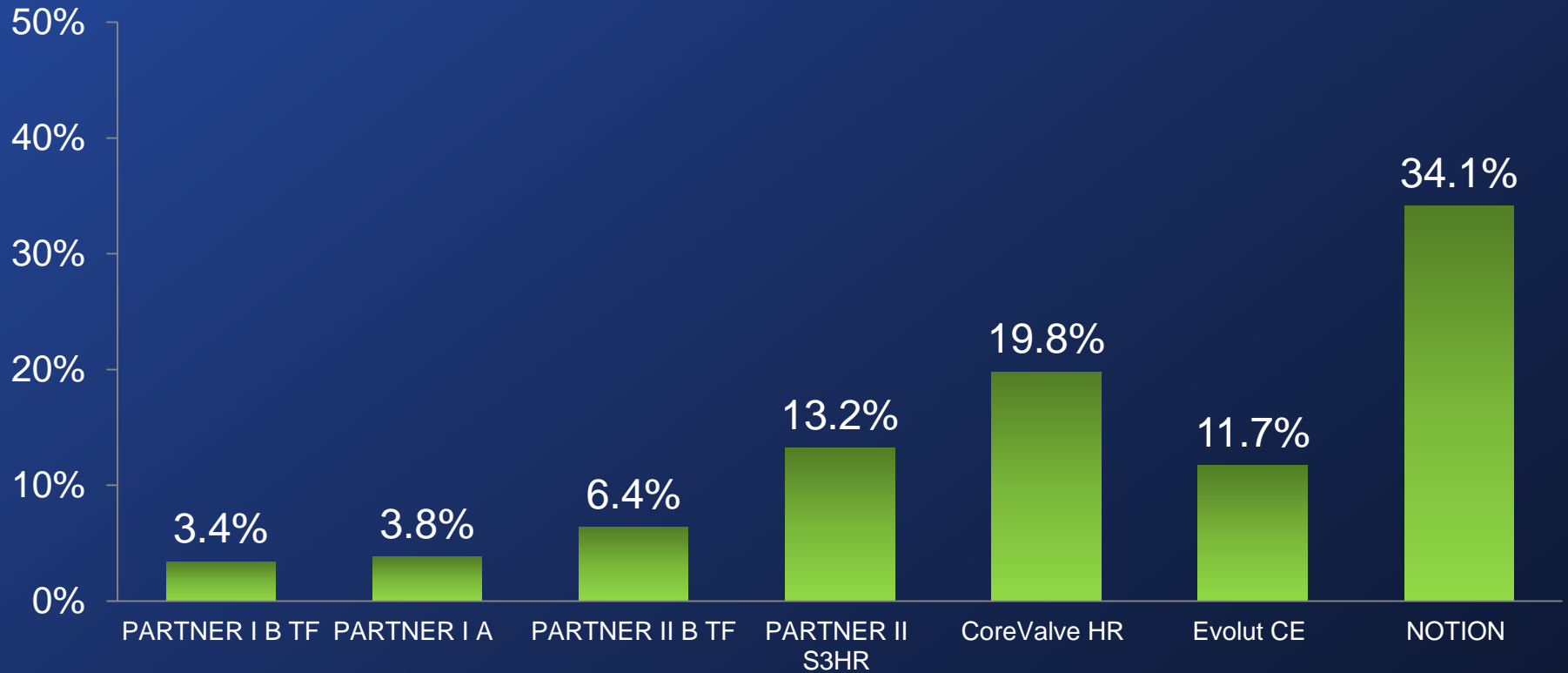
Strokes: 30 days



Moderate to severe PVL: 30 days



Pacemaker: 30 days



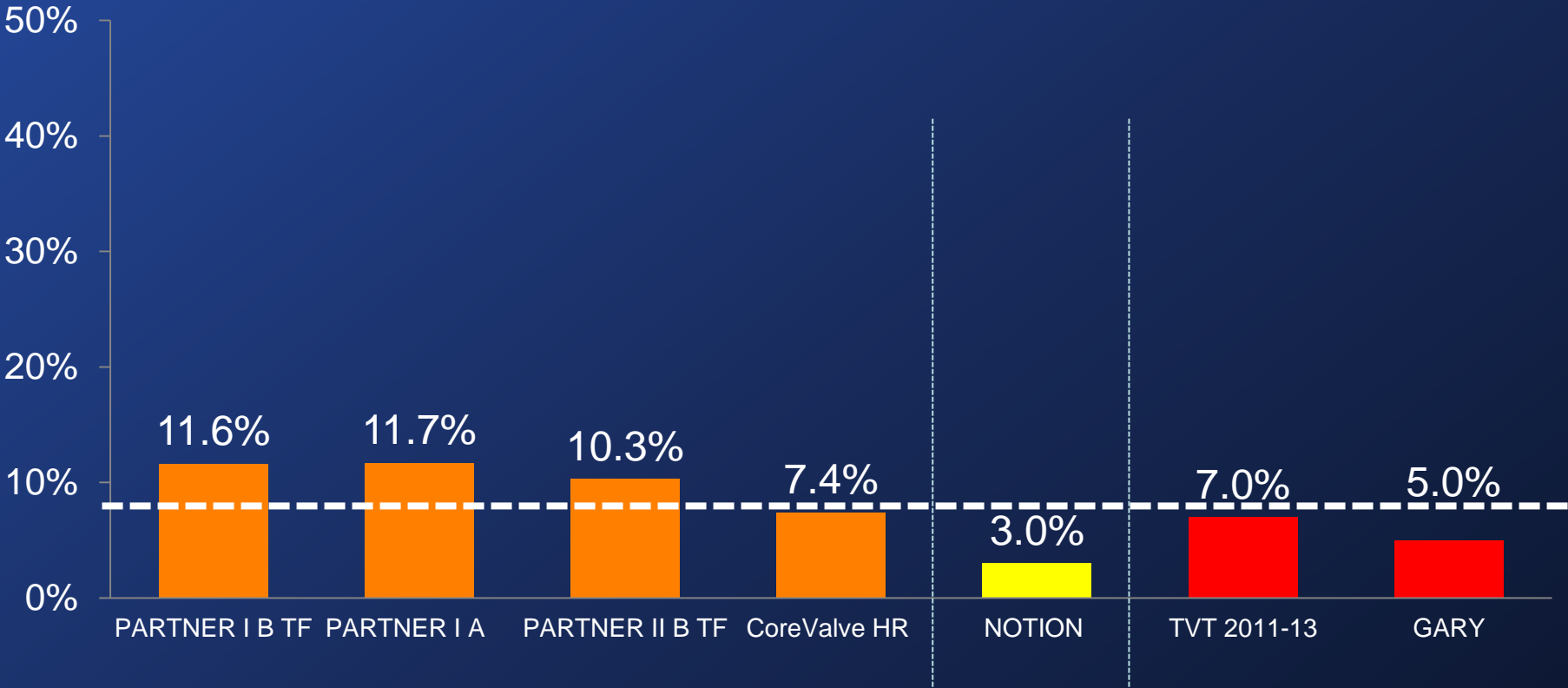
ORIGINAL ARTICLE

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

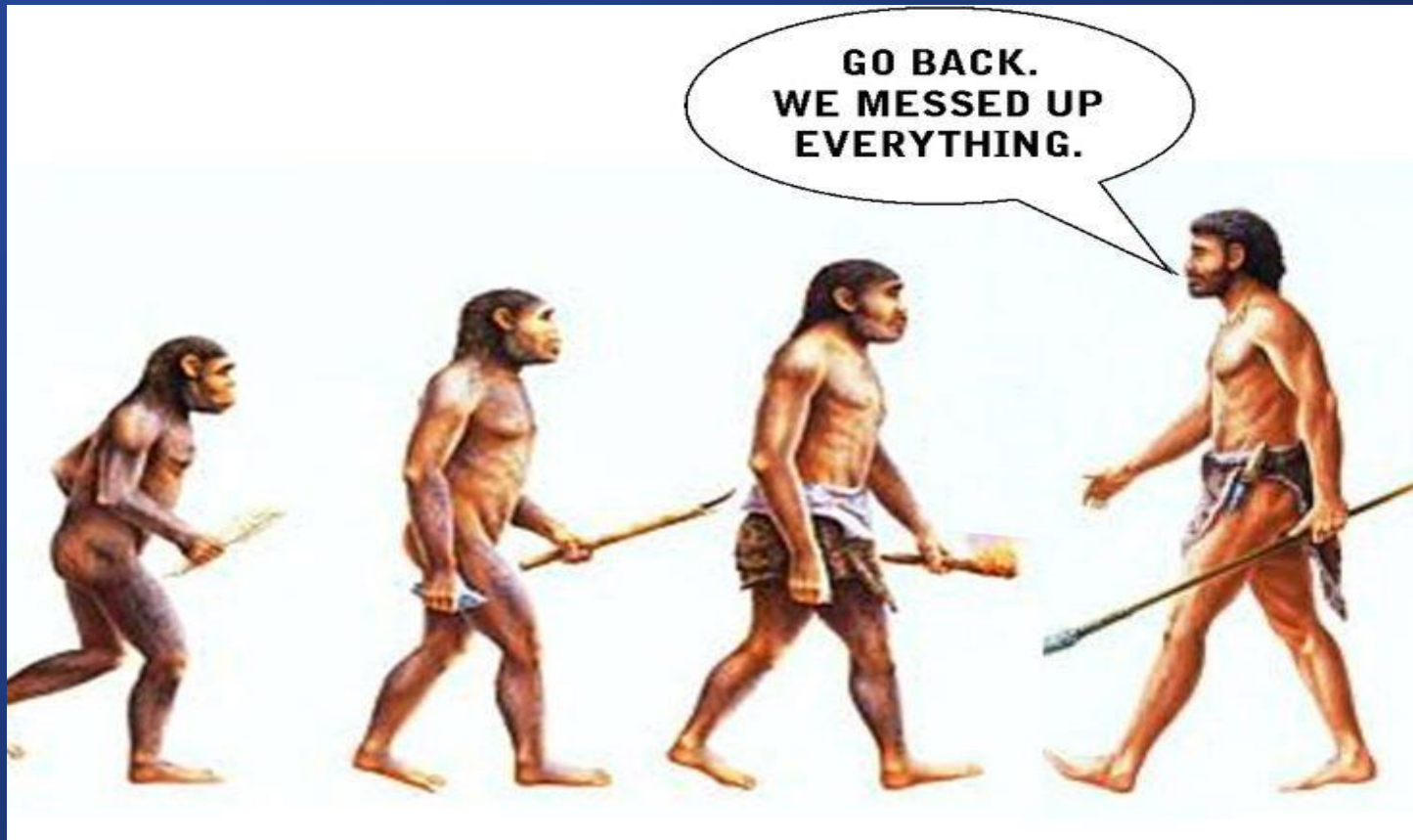
Indication creep?

STS scores



Conclusions

- Robust data for TAVR in high-risk and inoperable patients – standard of care
- Data in lower risk populations still accruing
- Several considerations regarding extension of TAVR to lower risk populations
- Stakeholders need to work together to optimize utilization of TAVR in clinical practice



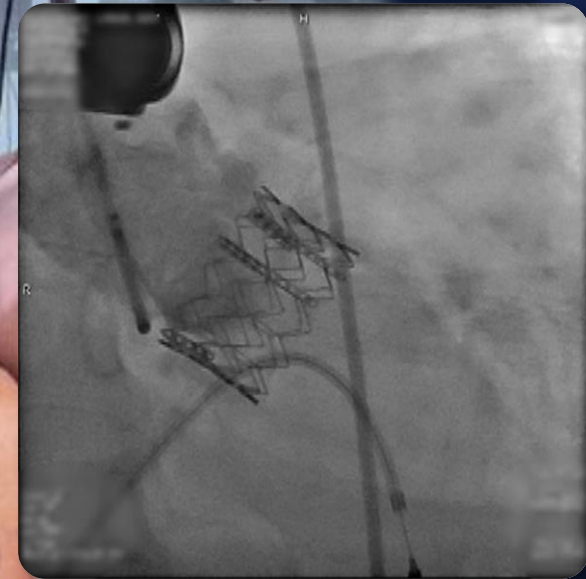
Inoperable

High

Intermediate

Low

First TAVR 2002



Evolution of Edwards THV



Cribier-Edwards

2002



SAPIEN

2006



SAPIEN XT

2009



SAPIEN 3

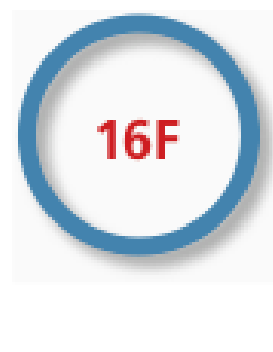
2013



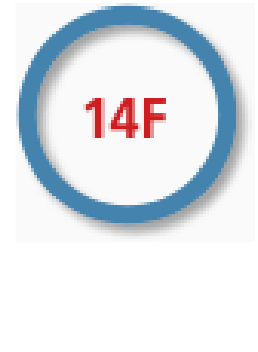
24F



22F



16F



14F

* Sheath compatibility for a 23 mm valve

Evolution of Medtronic THV

