

Clinical Summary

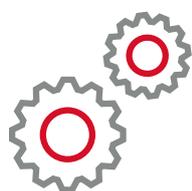
Utilisation, Costs, and Outcomes of Conscious Sedation Versus General Anesthesia for Transcatheter Aortic Valve Replacement

Herrmann HC, et al. *Circ Cardiovasc Interv.* 2021;14: e010310.



Study aim

To retrospectively compare the clinical outcomes from PARTNER II and PARTNER 3 Trials according to the anaesthetic scheme (conscious sedation versus general anaesthesia) using core echocardiographic assessments and clinical endpoints. (TAVI patients at intermediate and low surgical risk who received Edwards SAPIEN 3 valve).¹



Methods

A retrospective analysis of patients treated with TF-TAVI in the PARTNER S3i Registry and the PARTNER 3 Trial.¹

Conscious sedation was compared with general anaesthesia with respect to death, stroke, bleeding, PVR, length of stay, and costs. All patients underwent multidetector computed tomography to evaluate annulus and access dimensions, and clinical events were independently adjudicated.¹



Edwards



Results

Patient population

Nine hundred and fifty patients from S3i and the 493 patients from the PARTNER 3 Trial were included in the analysis (n = 1,443). Of these, 499 received conscious sedation and 944 received general anaesthesia.¹



There were no major differences in baseline characteristics between the groups.¹

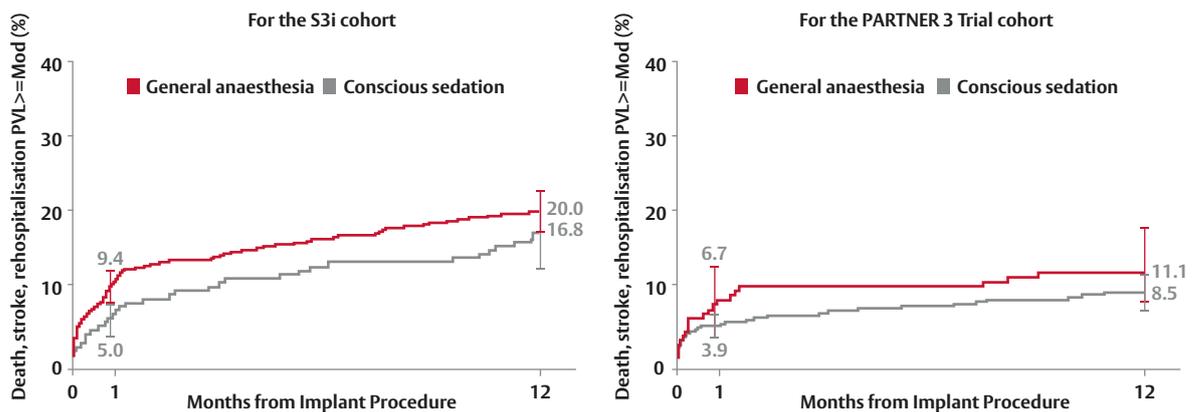
Major clinical endpoints

In the Kaplan-Meier analysis of major clinical endpoints at 1 Year, there were no significant differences in death, all stroke, rehospitalisation and \geq moderate PVR between the conscious sedation and general anaesthesia groups in S3i cohort (HR 0.98, [95% CI, 0.80–1.20] p = 0.87). No significant differences were also observed in the PARTNER 3 Trial cohort (HR 0.93 [95% CI, 0.61–1.43] p = 0.76).¹

Conscious Sedation vs. General Anaesthesia for TAVR

TAVR patients receiving conscious sedation, instead of general anaesthesia, experienced no significant differences in death, stroke, rehospitalisation, or PVAR \geq moderate.

Kaplan-Meier estimates of the rate of a composite of clinical endpoints to 1 Year



No. at risk:

	0	1	12
Conscious sedation	180	171	143
General anaesthesia	770	696	598

Procedural outcomes

For both cohorts the time in the ICU and length of hospital stay was significantly shorter for patients who received conscious sedation versus general anaesthesia.¹

In the S3i cohort, 30-day costs were lower with conscious sedation vs. general anaesthesia (adjusted mean \$54,309 versus \$58,192 [95% CI, -\$6,243 to -\$1,522] p = 0.001). Cost data was not reported for the PARTNER 3 cohort.¹

In-Hospital Outcomes

	S3i cohort			PARTNER 3 cohort		
	Conscious sedation (n = 180)	General anaesthesia (n = 770)	p value	Conscious sedation (n = 330)	General anaesthesia (n = 163)	p value
Time in ICU (days)	1.8±0.1	2.7±0.1	<0.001	1.1±0.1	1.8±0.2	<0.001
Length of hospital stay (days)	4.4±0.2	5.2±0.2	0.0014	2.7±0.1	3.4±0.2	<0.001

Adapted from Herrmann, *et al.* 2021



Conclusions

- The choice of anaesthetic scheme, whether CS or GA, had no significant impact on 1-year clinical outcomes of TAVI patients at intermediate- and low-surgical risk who received Edwards SAPIEN 3 valve¹
- CS was increasingly chosen over time in PARTNER Trials and was associated with shorter intensive care unit and post-procedure hospital length of stay, lower cost, with comparable efficacy¹

Abbreviations

CI:	confidence interval
HR:	hazard ratio
PARTNER:	Placement of Aortic Transcatheter Valves
PVR:	paravalvular regurgitation
S3i:	PARTNER S3i Registry (part of the PARTNER II Trial)
TF:	Transfemoral
TAVI:	transcatheter aortic valve implantation
ICU:	intensive care unit

Reference

1. Herrmann HC, *et al.* *Circ Cardiovasc Interv.* 2021;14: e010310

This document is a summary of the presentation by Dvir D, at TCT CONNECT 2020. The full presentation is available at: <https://www.tctconnect.com/interventional-cardiology-in-the-era-of-covid-19/>

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