Reply to the Editor:

1. Useini D. What do we know about the indications for the transcathrotid approach? *J Thorac Cardiovasc Surg.* 2022;164:e81.
2. Allen KB, Chhatrwalla AK, Saxon J, Hermiller J, Heimansohn D, Moainie S, et al. Transcathrotid versus thoracothoracic access for transcatheter aortic valve replacement: a propensity-matched analysis. *J Thorac Cardiovasc Surg.* October 21, 2020 [Epub ahead of print].
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Dr Allen: Edwards Lifesciences: research/clinical trial support/speakers bureau/proctor; Medtronic: research/clinical trial support/speakers bureau; Abbott Vascular: research/clinical trial support/consulting. Dr Chhatrwalla: Edwards Lifesciences, Medtronic: speakers bureau, proctor; Abbott Vascular: speakers bureau; Boston Scientific: research grant; Silk Road Medical: consulting. Dr Saxon: Abbott Vascular: proctor. Dr Hermiller: Edwards Lifesciences, Medtronic, Abbott Vascular: consultant. Dr Cheema: Edwards Lifesciences: proctor. Dr Hodson: Edwards Lifesciences, Abbott Vascular: research/clinical trial support. Dr Korngold: Edwards Lifesciences: proctor; Medtronic, Abbott Vascular, Boston Scientific: consulting, honoraria. All other authors reported no conflicts of interest.

The *Journal* policy requires editors and reviewers to disclose conflicts of interest and to decline handling or reviewing manuscripts for which they may have a conflict of interest. The editors and reviewers of this article have no conflicts of interest.

REPLY FROM AUTHORS: TRANSCAROTID TRUMPS TRANSAPICAL/DIRECT AORTIC ACCESS FOR

TRANSCATHETER AORTIC VALVE REPLACEMENT—IT'S A NO

	Transcarotid (N = 667), % (n/N)	TA/TAo (N = 2729), % (n/N)	P value
Paravalvular leak			
None	80.1 (350/437)	80.9 (1319/1631)	.71
Mild	18.3 (80/437)	16.6 (271/1631)	.4
Moderate	1.6 (7/437)	2.5 (40/1631)	.29
Severe	0.0 (0/437)	0.1 (1/1631)	1
Paravalvular leak (Grouped)			
None/mild	98.4 (430/437)	97.5 (1590/1631)	.26
Moderate/severe	1.6 (7/437)	2.5 (41/1631)	.26

TA, Transapical; TAo, transaortic.

TABLE 2. Propensity-matched 30-day paravalvular leak rates

Adjusted	Transcarotid (N = 667), % (n/N)	TA/TAo (N = 1334), % (n/N)	P value
Paravalvular leak			
None	80.1 (350/437)	80.6 (636/789)	.83
Mild	18.3 (80/437)	17.5 (138/789)	.72
Moderate	1.6 (7/437)	1.9 (15/789)	.71
Severe	0.0 (0/437)	0.0 (0/789)	N/A
Paravalvular leak (grouped)			
None/mild	98.4 (430/437)	98.1 (774/789)	.71
Moderate/severe	1.6 (7/437)	1.9 (15/789)	.71

TA, transapical; TAo, transaortic; N/A, not applicable.

periprocedural and 30-day outcomes, we did not report 1-year outcomes; however, similar to previously reported rates in smaller single-center series,³ the Kaplan–Meier 1-year unadjusted mortality (18.7% vs 24.6%; HR, 0.66; 95% CI, 0.52–0.83; $P = .0005$) and propensity-matched mortality (18.7% vs 25.0%; HR, 0.65; 95% CI, 0.50–0.83; $P = .0007$) (Figure 1) were significantly lower with transcarotid access compared with intrathoracic access.

One issue alluded to by Useini is the lack of granularity in the TVT Registry. From the database, we are unable to glean why transcarotid access was chosen. Access decisions are made based on the local experience and composition of the heart team. Although the TVT Registry does not provide technical details on how transcarotid access was performed, we feel that there are important procedural tenets^{3,4} that are crucial to optimizing results and are outlined in detail in the manuscript and the accompanying video. In brief, specialized preoperative carotid imaging beyond a carotid duplex is unnecessary. Internal carotid artery stenosis is not a contraindication for carotid access, and in fact, access

is typically obtained in the common carotid with the worst internal carotid artery stenosis. Purse string sutures and serial dilation of the carotid are not recommended; rather, the sheath is inserted directly into the artery via a surgical arteriotomy, which is closed primarily after sheath removal. Finally, the common carotid artery distal to the sheath insertion is clamped during the procedure, which serves as inexpensive embolic protection for one cerebral hemisphere during the procedure.

The nonfemoral access option, which most closely mimics the safety and efficacy of the transfemoral approach, does not violate the thoracic cavity, provides the straightest path to the aortic valve, and is simple, cost-effective, and easy to learn and teach, will dominate for the few transcatheter aortic valve replacement (TAVR) patients with inadequate iliofemoral access. Useini actually asks the wrong question when championing intrathoracic access! The interventional risk of transcarotid access is more appropriately compared with that of transaxillary/subclavian access. We recently used the TVT Registry to perform a propensity-matched comparison of transcarotid and transaxillary TAVRs performed with the SAPIEN 3 valve between June 2015 and October 2019.⁵ Compared with transaxillary access, transcarotid TAVR was associated with similar 30-day mortality (4.3% vs 5.2%; $P = .34$) but a significantly lower risk of stroke (4.2% vs 7.4%; HR, 0.56; 95% CI, 0.38–0.83; $P = .003$). Other outcomes that favored transcarotid access over transaxillary access included shorter procedure time (117.0 minutes vs 132.4 minutes; $P < .001$), shorter fluoroscopy time (16.6 minutes vs 21.6 minutes; $P < .001$), lower contrast volume (78.5 mL vs 96.7 mL; $P < .001$), shorter ICU LOS (24.3 hours vs 25.0 hours; $P = .02$), shorter hospital LOS (2.0 days vs 3.0 days; $P = .002$), and higher frequency of discharge to home (82.9% vs 74.6%; $P < .001$).

Despite initial concerns about using the carotid artery to deliver a transcatheter heart valve when iliofemoral access is inadequate, transcarotid access trumps transapical/direct aortic access and is emerging as the nonfemoral access of choice for TAVR—it's a no brainer!

FIGURE 1. Kaplan-Meier 1-year mortality with transcarotid access compared with intrathoracic access.

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