

The 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: WHY
IMPROVE HIGH-RISK
PREDICTION IF EARLY
SURGERY IS LOW RISK?**



Reply to the Editor:

We wish to thank Chen and colleagues¹ for their appreciative comment regarding our recent manuscript on the model for end-stage liver disease (MELD) score in isolated tricuspid surgery. We fully agree with the general notion that we need better and simpler scores to assess preoperative risk, such as the TRI-SCORE or the simple clinical risk score. While these 2 scores seem to have been assessed in parallel to our investigation, they are still more complex (requiring echocardiographic parameters for the right heart, which are still controversial, TRI-SCORE) or do not include any liver-related parameters (clinical risk score). The MELD score is simpler here, specifically if the international normalized ratio is left out, as for instance with the MELD-XI² or the simplified MELD score.³ The international normalized ratio in our retrospective study was not a problem because we routinely discontinued warfarin before surgery and were therefore able to take the immediate preoperative values for its calculation.

However, next to our comparison of the classic Society of Thoracic Surgeons (STS-Score) and European System for Cardiac Operative Risk Evaluation II (EuroSCORE II) with the MELD score, our paper also illustrates that patients at low risk practically do not exist in this patient population. The lowest risk scores were in the intermediate- to high-risk range (4%-5% predicted mortality and up). There appears to be a discrepancy in current guideline recommendations that relatively liberally recommend tricuspid valve surgery if it is

an adjunct to mitral valve surgery. However, if there is significant tricuspid valve disease, a rather restrictive recommendation is given, leading to high perioperative risk at the time of surgery, as underscored by our results and those of others.^{4,5} It is interesting to note in this context that Wang and colleagues⁶ recently published a paper wherein a group of patients receiving guideline-conforming surgical therapy (class I indication) of the tricuspid valve was compared with a group in which surgery was performed early (ie, guideline requirements were not met, except for the presence of severe tricuspid regurgitation). Operative mortality was 7% for class I patients and 0% in the early surgery group. Thus, this observation together with ours suggests that surgery is performed too late and the full potential of repairing a leaky valve may not be exploited for the isolated tricuspid valve if treatment recommendations continue to be restrictive.

*Gloria Färber, MD, PhD
Torsten Doenst, MD, PhD
Department of Cardiothoracic Surgery
Jena University Hospital
Friedrich Schiller University
Jena, Germany*

References

1. Chen J, Song W, Wei L. Risk stratification for isolated tricuspid valve surgery: still on the way. *J Thorac Cardiovasc Surg.* 2022;11:89-90.
2. Pfanmüller B, Budde LM, Etz CD, Noack T, Cuartas MM, Misfeld M, et al. Postoperative outcome after reoperative isolated tricuspid valve surgery-is there a predictor for survival? *Eur J Cardiothorac Surg.* 2021;60:867-71.
3. Tsuda K, Koide M, Kunii Y, Watanabe K, Miyairi S, Ohashi Y, et al. Simplified model for end-stage liver disease score predicts mortality for tricuspid valve surgery. *Interact Cardiovasc Thorac Surg.* 2013;16:630-5.
4. Dreyfus J, Flagiello M, Bazire B, Eggenspieler F, Viau F, Riant E, et al. Isolated tricuspid valve surgery: impact of aetiology and clinical presentation on outcomes. *Eur Heart J.* 2020;41:4304-17.
5. Pfanmüller B, Davierwala P, Misfeld M, Borger MA, Garbade J, Mohr FW. Postoperative outcome of isolated tricuspid valve operation using arrested-heart or beating-heart technique. *Ann Thorac Surg.* 2012;94:1218-22.
6. Wang TKM, Akyuz K, Xu B, Gillinov AM, Petterson GB, Griffin BP, et al. Early surgery is associated with improved long-term survival compared to class I indication for isolated severe tricuspid regurgitation. *J Thorac Cardiovasc Surg.* July 30, 2021 [Epub ahead of print].

<https://doi.org/10.1016/j.xjon.2022.06.016>