

**325**  
patients

**2**  
high-volume centers

**2000-2024**  
surgical era

**128 / 197**  
repair / replacement

**4 scores**  
STS · EUSC II · MELD · TRI

### Background and aim

#### WHY THIS STUDY?

The STS Tricuspid Score is new, but its external validity outside North America is unknown.

#### AIM

Validate STS and compare it with EuroSCORE II, MELD and TRI-Score.

#### Methods

Retrospective multicentre cohort of isolated tricuspid valve surgery.

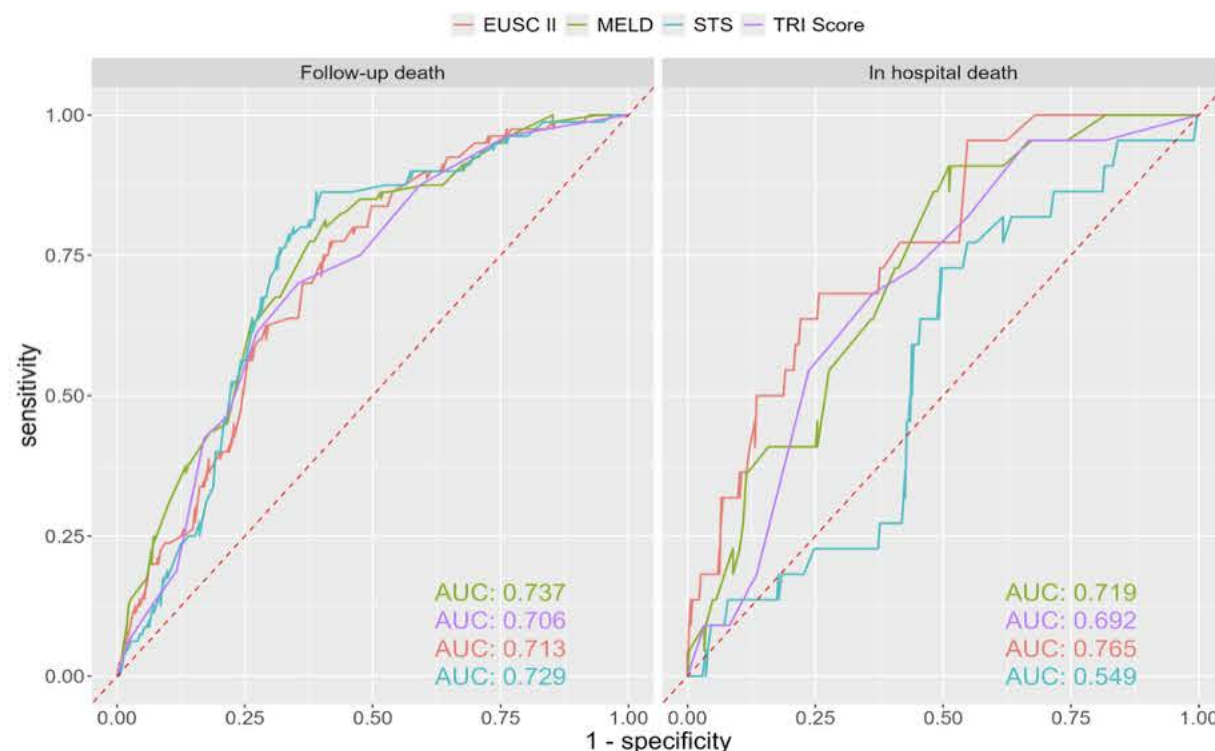
Primary endpoint: in-hospital mortality discrimination by ROC/AUC.

Secondary endpoints: follow-up mortality, calibration and 12-month survival.

#### Clinical phenotype

Age 65 years; 59% female; 86% severe/massive TR; 52% NYHA III/IV.

### Discrimination: ROC analysis



ROC curves for follow-up and in-hospital mortality. AUC values are displayed in each panel.

### Key findings

#### In-hospital mortality

Best AUC: EuroSCORE II 0.765  
MELD 0.719 · TRI-Score 0.692  
STS 0.549

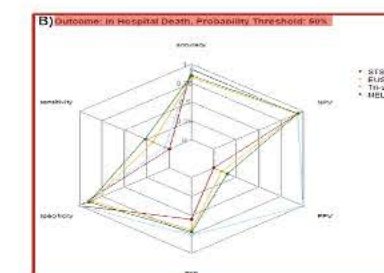
**STS: zero true positives at 50% threshold.**

#### Follow-up mortality

MELD 0.737 · STS 0.729  
EuroSCORE II 0.713 · TRI-Score 0.706

#### Interpretation

**No score achieved adequate sensitivity. MELD captures hepatorenal risk.**



Radar plots: accuracy, NPV, PPV, AUC, specificity and sensitivity at 50% threshold.

### Conclusion

**The STS Tricuspid Score showed suboptimal discrimination for in-hospital mortality compared with EuroSCORE II and MELD. For follow-up mortality, all scores performed comparably.**

**Use MELD as a complement to surgical risk scores**