



Letter to editor

Reply to Echocardiographic predictors of outcome in PAH



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We thank Dr. Dandel and colleagues for their interest in our paper demonstrating the prognostic value of the right ventricular (RV) systolic to diastolic duration (SD) ratio in adult IPAH [1]. Prognostication using echocardiographic variables in PAH remains contentious and as highlighted, tricuspid regurgitation (TR) with RV dilatation may facilitate RV unloading that differentially alters longitudinal and radial contractile mechanics [2,3]. Including TR severity as a binary variable (mild vs moderate/severe) in our survival model with baseline SD ratios, the hazard ratio for death/transplantation remained unchanged compared to SD ratio alone [HR 2.34 (1.08–5.08), $p = 0.031$ vs 2.41 (1.09–5.29), $p = 0.029$ respectively], suggesting SD ratios predict death/transplantation even after adjustment for TR severity. Given an 82% 3-year cohort survival and median interval of 9 months between

baseline and follow-up echocardiograms, where RV basal diameter and TR severity remained unchanged, we are unable to speculate on the influence of TR worsening over a longer time period.

A SD ratio value of 1.1 optimally discriminated patients at risk of death/transplantation from long-term survivors in our cohort. Censoring survival data at 3 years, positive and negative predictive values for death/transplantation of a SD ratio of 1.1 were 60.0% and 80.1% respectively. Considering different population demographics and treatment strategies, this suggests broadly equivalent predictive value to echocardiographic parameters more reliant on RV geometric assumptions [3]. We support future evaluation of the SD ratio in related PAH cohorts both as a single parameter and within multi-parametric models which may help guide decisions over timing of transplantation in IPAH.

References

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