Supplementary data

Supplementary Table 1. Association of adjusted variables for the primary endpoint.

Variables	Unadjusted		Adjusted	
	HR (95%CI)	p-value	HR (95%CI)	p-value
Age	0.99 (0.98–1.01)	0.37	0.99 (0.97–1.01)	0.26
Sex female	1.03 (0.77–1.37)	0.85	0.94 (0.69–1.27)	0.67
Atrial fibrillation	1.17 (0.86–1.59)	0.32	1.02 (0.74–1.43)	0.89
Coronary artery disease	1.59 (1.17–2.16)	0.003	1.58 (1.13–2.20)	0.007
Estimated GFR	0.99 (0.98–1.00)	0.02	0.99 (0.98–1.00)	0.07
Logistic EuroSCORE	1.01 (1.00–1.02)	0.08	1.00 (0.99–1.01)	0.50
New York Heart Association	1.49 (1.00–2.22)	0.05	1.51 (0.98–2.32)	0.06
LV ejection fraction	0.99 (0.98–0.99)	0.01	0.99 (0.98–1.00)	0.19
MR moderate-to-severe or more	0.78 (0.54–1.14)	0.20	0.83 (0.56–1.23)	0.35
TAPSE/PASP	0.30 (0.14–0.64)	0.002	0.45 (0.22–0.93)	0.031

CI: confidence interval; GFR: glomerular filtration ratio; HR: hazard ratio; LV: left ventricular; MR: mitral regurgitation; PASP: pulmonary artery systolic pressure; TAPSE: tricuspid annular plane systolic excursion

Supplementary Table 2. Summarised output of mediation analysis.

Effect*	Est. (95%CI)	Exp (Est.) (95%CI)
Total effect of TR		
Pure natural direct effect	0.65 (0.25-1.06)	1.92 (1.28-2.87)
Total natural indirect effect mediated by RV function	-0.001 (-0.01-0.01)	1.00 (0.99-1.01)
Total natural direct effect	0.66 (0.25-1.06)	1.93 (1.29-2.89)
Proportion mediated	-0.01 (-0.02-0.01)	NA

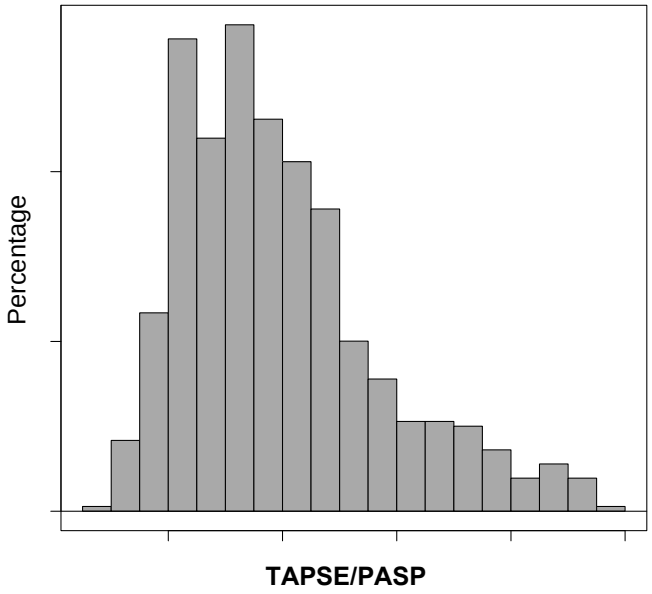
*All effects are conditional on covariates and for an average individual.

CI: confidence interval; Est.: estimated; Exp: exponentiation

Supplementary Table 3. Association of post-procedural variables in the Cox proportional hazard model.

Variables	Unadjusted		Adjusted	
	HR (95%CI)	p-value	HR (95%CI)	p-value
Age	0.99 (0.98–1.01)	0.51	0.98 (0.97–1.01)	0.14
Sex female	0.97 (0.71–1.31)	0.81	0.76 (0.54–1.07)	0.11
Atrial fibrillation	1.41 (0.99–2.00)	0.055	1.15 (0.80–1.67)	0.45
Coronary artery disease	1.54 (1.10–2.16)	0.011	1.51 (1.04–2.19)	0.029
Estimated GFR	0.99 (0.98–1.00)	0.009	0.99 (0.98–1.00)	0.030
Logistic EuroSCORE	1.01 (1.00–1.02)	0.11	1.00 (0.99–1.01)	0.60
New York Heart Association	1.33 (0.87–2.02)	0.18	1.43 (0.90–2.27)	0.13
Post-procedural LV ejection fraction	0.99 (0.98–1.00)	0.011	0.99 (0.98–1.00)	0.030
Residual MR moderate-to-severe or more	1.29 (0.73–2.27)	0.38	1.54 (0.81–2.96)	0.19
Post-procedural TAPSE/PASP	0.30 (0.15–0.58)	<0.001	0.45 (0.23–0.87)	0.017

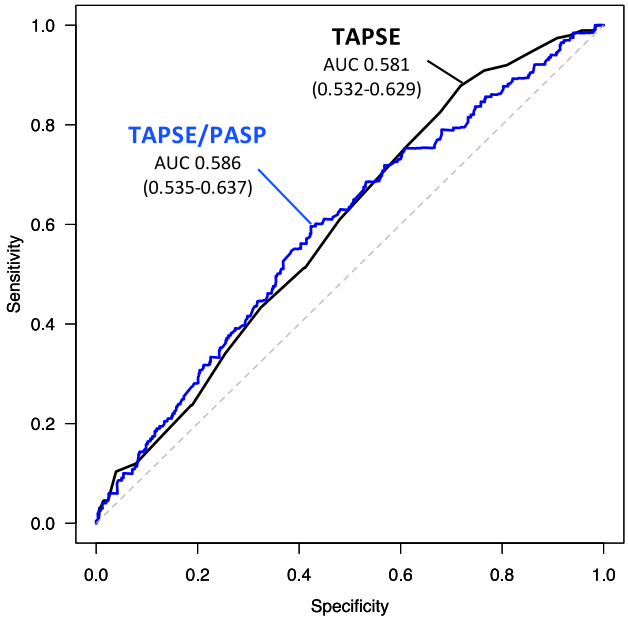
CI: confidence interval; GFR: glomerular filtration ratio; HR: hazard ratio; LV: left ventricular; MR: mitral regurgitation; PASP: pulmonary artery systolic pressure; TAPSE: tricuspid annular plane systolic excursion



Supplementary Figure 1. Distribution of TAPSE/PASP.

Shown is the histogram of TAPSE/PASP values, with a mean value of 0.43±0.25.

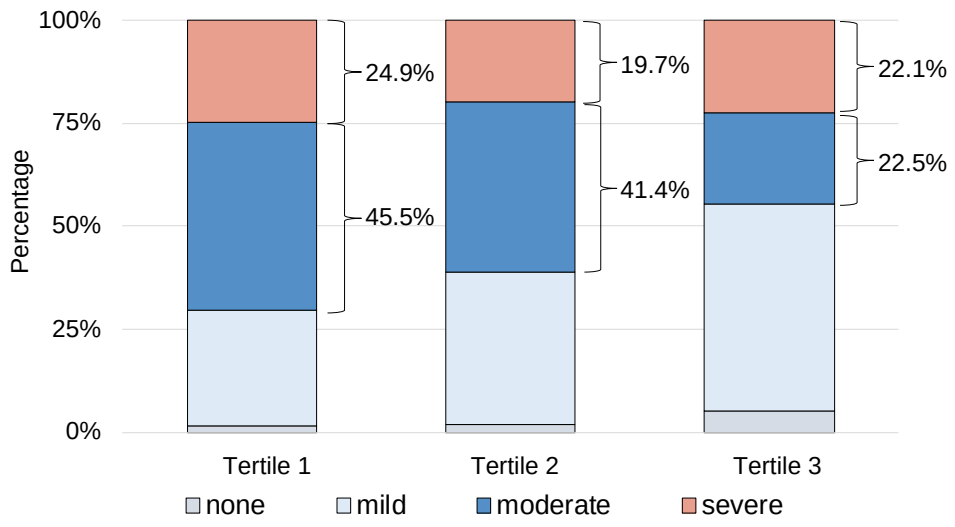
PASP: pulmonary artery systolic pressure; TAPSE: tricuspid annular plane systolic excursion



Supplementary Figure 2. Receiver operating characteristics curve analysis for predicting all-cause mortality or rehospitalisation due to heart failure.

Shown is the ROC curve analysis showing that, in the present study, TAPSE was comparable to TAPSE/PASP in predicting the composite of mortality or rehospitalisation after mitral TEER.

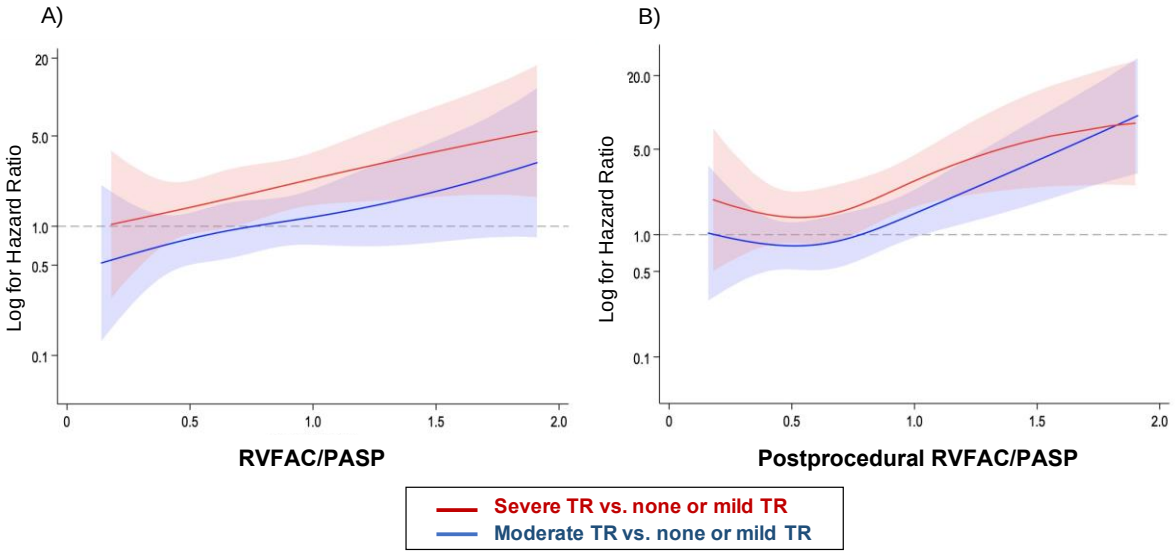
AUC: area under the curve; PASP: pulmonary artery systolic pressure; ROC: receiver operating characteristics; TAPSE: tricuspid annular plane systolic excursion



Supplementary Figure 3. Severity of TR by TAPSE/PASP tertile.

The severity of TR differed across the TAPSE/PASP tertiles ($p<0.001$). Patients with reduced TAPSE/PASP tended to have a more severe grade of TR.

PASP: pulmonary artery systolic pressure; TAPSE: tricuspid annular plane systolic excursion



Supplementary Figure 4. Fitting spline curve of the outcome correlation of TR according to RVFAC/PASP.

Shown are the fitting spline curves showing the outcome correlation of TR across RVFAC/PASP using (A) parameters at baseline and (B) those after mitral valve treatment.

PASP: pulmonary artery systolic pressure; RVFAC: right ventricular fractional area change