

Supplementary

Table S1 Association of LA strain rate with outcomes in univariable and multivariable analysis using multiple imputation by chained equations to account for variable missing data

	LASRs		LASRa		LASRe	
	HR(95% CI)	P	HR(95% CI)	P	HR(95% CI)	P
Unadjusted	0.12 (0.02, 0.55)	0.007*	3.21 (1.08, 9.58)	0.036*	1.40 (0.52, 3.76)	0.499
Adjusted1	0.13 (0.03, 0.65)	0.013*	3.09 (0.97, 9.85)	0.056	–	–
Adjusted 2	0.16 (0.03, 0.92)	0.040*	2.3 (0.68, 7.8)	0.178	–	–

Adjusted1: the variables including age, hypertension, diabetes (20 imputation); Adjusted2: the variables including age, hypertension, diabetes were adjusted, as well as LA maximum volume index, LA diastatic volume index (20 imputation). *, P<0.05. LASRs, left atrium reservoir strain rate; LASRe, left atrium conduit strain rate; LASRa, left atrium booster pump strain rate; HR, hazard ratio; CI, confidence interval.

Table S2 LA strain rate parameters. Intra- and inter-observer variabilities showed by Bland-Altman plots and intraclass correlation coefficient

Variable	Parameter	Mean	SD of mean	95% CI	(%)	Intraclass correlation	95% CI
LASRs (s ⁻¹)	Intra observer variability	0.03	0.15	-0.26 to 0.31	1	0.948	0.883 to 0.978
	Inter observer variability	0.04	0.17	-0.29 to 0.37	1	0.924	0.829 to 0.966
LASRe (s ⁻¹)	Intra observer variability	0.03	0.2	-0.39 to 0.39	1	0.844	0.644 to 0.932
	Inter observer variability	0.06	0.16	-0.25 to 0.36	2	0.909	0.789 to 0.960
LASRa (s ⁻¹)	Intra observer variability	0.05	0.32	-0.58 to 0.68	1	0.875	0.718 to 0.945
	Inter observer variability	0.1	0.32	-0.73 to 0.52	2	0.872	0.710 to 0.943

LASRs, left atrium reservoir strain rate; LASRe, left atrium conduit strain rate; LASRa, left atrium booster pump strain rate; CI, confidence interval.