Figure S1 Kaplan-Meier curves for the all-cause death (A) and heart failure hospitalization (B) stratified by MAD. MAD, mitral annular dilatation.

Table S1 Reproducibility analysis

Intraclass correlation coefficients test	Intraobserver variation (95% CI)	Interobserver variation (95% CI)
Trigone-to-trigone distance	0.94 (0.85–0.98)	0.91 (0.78–0.96)
Intercommisural distance	0.94 (0.84–0.98)	0.94 (0.86–0.98)
Anteroposterior distance	0.98 (0.94–0.99)	0.96 (0.90–0.99)
Annulus area	0.98 (0.94–0.99)	0.96 (0.90–0.98)
Annulus perimeter	0.96 (0.90–0.98)	0.94 (0.86–0.98)

CI, confidence interval.

Table S2 Predictive value of mitral annulus measurements

Variables	BSA standardized ROC cutoff	HR (95% CI)
Trigone-to-trigon distance (mm/m^2)	15.5	2.85 (1.45–5.61)
Intercommisural distance (mm/m^2)	25.4	3.96 (2.09–7.51)
Anteroposterior distance (mm/m^2)	17.5	3.72 (1.82–7.60)
Annulus area (cm^2/m^2)	6.0	3.24 (1.69–6.20)
Annulus perimeter (mm/m^2)	71.3	5.14 (2.37–11.17)

BSA, body surface area; ROC, receiver operating characteristic; HR, hazard ratio; CI, confidence interval.

Table S3 Baseline characteristics stratified by MAD

Variables	No MAD (n=149)	MAD (n=132)	P value
Age (years)	72.7±6.8	72.4±8.2	0.669
Female	36 (24.2)	57 (43.2)	0.001
BMI (kg/m^2)	24.5±3.0	21.3±2.9	<0.001
Hypertension	104 (69.8)	82 (62.1)	0.175
Diabetes mellitus	25 (16.8)	15 (11.4)	0.195
COPD	35 (23.5)	32 (24.2)	0.883
eGFR (mL/min/1.73 m^2)	64.5±20.6	62.8±20.5	0.475
Chronic kidney disease	54 (36.2)	60 (45.5)	0.116
Liver disease	3 (2.0)	1 (0.8)	0.702
Peripheral vascular disease	39 (26.2)	25 (18.9)	0.149
Prior cerebrovascular accident	29 (19.5)	20 (15.2)	0.342
Coronary artery disease	46 (30.9)	28 (21.2)	0.067
Prior PCI	17 (11.4)	11 (8.3)	0.390
Prior CABG	3 (2.0)	0 (0.0)	0.290
Prior myocardial infarction	6 (4.0)	3 (2.3)	0.621
Presence of pacemaker or ICD	3 (2.0)	3 (2.3)	>0.99
Prior cardiac surgery	9 (6.0)	7 (5.3)	0.790
Atrial fibrillation	12 (8.1)	33 (25.0)	<0.001
EuroSCORE II (%)	3.2 (1.8–5.2)	4.7 (2.7–7.6)	<0.001
NYHA class > II	121 (81.2)	113 (85.6)	0.324
Potential mechanisms of AR			0.318
Valve leaflet degeneration or prolapse	17 (11.4)	25 (18.9)	
Dilated aortic sinuses or ascending aorta	86 (57.7)	68 (51.5)	
Coexistence of leaflet and annulus lesions	27 (18.1)	20 (15.2)	
Bicuspid aortic valve	14 (9.4)	11 (8.3)	
Previous infective endocarditis	0 (0.0)	0 (0.0)	
Takayasu arteritis	5 (3.4)	8 (6.1)	
Echocardiographic findings			
LVEF (%)	55.6±11.1	50.3±12.6	<0.001
PASP >40 mmHg	45 (30.2)	57 (43.2)	0.024
≥ Moderate MR	30 (20.1)	56 (42.4)	<0.001
≥ Moderate TR	15 (10.1)	21 (15.9)	0.144
Bicuspid aortic valve	14 (9.4)	11 (8.3)	0.755
Left atrial diameter (mm)	43.9±5.4	44.6±7.7	0.379
TAPSE <16 mm	0 (0.0)	7 (5.3)	0.014

Data are presented as mean ± SD, n (%), or median (IQR). MAD, mitral annular dilatation; BMI, body mass index; COPD, chronic obstructive pulmonary disease; eGFR, estimated glomerular filtration rate; PCI, percutaneous coronary intervention; CABG, coronary artery bypass grafting; ICD, implantable cardioverter defibrillator; EuroSCORE II, European System for Cardiac Operative Risk Evaluation II; NYHA, New York Heart Association; AR, aortic regurgitation; LVEF, left ventricular ejection fraction; PASP, pulmonary artery systolic pressure; MR, mitral regurgitation; TR, tricuspid regurgitation; TAPSE, tricuspid annular plane systolic excursion; SD, standard deviation; IQR, interquartile range.