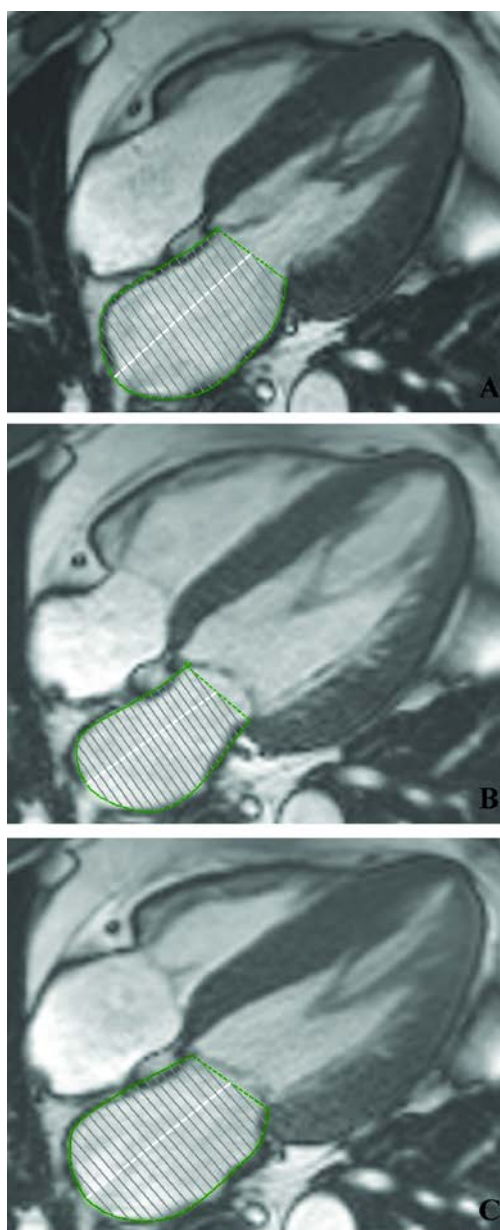


## *Supplementary material*

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*Cionca C, Zlibut A, Orzan R-I, et al. Left atrial geometric and functional remodeling parameters by cardiac magnetic resonance imaging and outcome prediction in patients with severe aortic stenosis. Kardiol Pol. 2022.*

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**Figure S1.**

**Table S1.** CMR parameters of systolic and diastolic function with AS patients and controls

Variables	AS all patients n=70	Controls n=70	P-value
<b>LV and RV systolic parameters</b>			
LVEDV index, mean (SD) mL/m <sup>2</sup>	80.9 (20.5)	62.8 (14.5)	<0.001
- LVESV index, mean (SD), mL/m <sup>2</sup>	34.5 (15.7)	21.4 (5.8)	<0.001
- LVM index, mean (SD),g/m <sup>2</sup>	95.8 (23.4)	63.1 (16.0)	<0.001
- LVEF, mean (SD), %	58.8 (9.6)	65.9 (4.8)	<0.001
- LAS, mean (SD), %	-17.8 (3.7)	-20.6 (1.5)	<0.001
- LV-LGE, n, %	34 (48.5)	-	NA
- LV-LGE mass, mean (SD) g	10.9 (5.4)	-	NA
- RVEDV index, mean (SD), mL/m <sup>2</sup>	37.7 (10.6)	36.4 (11.5)	0.102
- RVESV index, mean (SD), mL/m <sup>2</sup>	16.6 (6.5)	15.4 (5.1)	0.099
- RVEF, mean (SD), %	56.1 (8.1)	57.4 (6.1)	0.201
- TAPSE, mean (SD), mm	16.8 (4.7)	19.6 (3.5)	<0.001
<b>LV diastolic parameters</b>			
- E, mean (SD), cm/s	68.8 (10.9)	69.7 (17.6)	0.121
- A, mean (SD), cm/s	51.1 (9.4)	73.6 (6.9)	<0.001
- DT, mean (SD), ms	178 (30.4)	220 (33.3)	<0.001
- IVRT, mean (SD), ms	64 (28.7)	68 (19.8)	0.144
- E', mean (SD), cm/s	7.2 (1.97)	10.62 (2.12)	<0.001
- A', mean (SD), cm/s	4.3 (1.6)	3.9 (1.8)	0.078
- E/Aratio, mean (SD)	1.06 (0.49)	1.37 (0.33)	<0.001
- E/E'ratio, mean (SD)	10.08 (3.16)	6.58 (0.88)	<0.001

Abbreviations: n, number of patients; SD, standard deviation; IQR, *interquartile range*; LAS, left ventricular longitudinal-axis strain; LV-LV-LGE, left ventricular late gadolinium enhancement; LVEDV, left ventricular end-diastolic volume; LVESV, left ventricular end-systolic volume; LVM, left ventricular mass; LVEF, left ventricular ejection fraction; RVEDV, right ventricular end-diastolic volume; RVESV, right ventricular end-systolic volume; RVEF, right ventricular ejection fraction; TAPSE, tricuspid annular plane systolic excursion; A, late peak mitral flow velocity; A', myocardial longitudinal late diastolic peak myocardial velocity; E, early peak mitral flow velocity; E', myocardial longitudinal early diastolic peak myocardial velocity; DT, early diastolic filling deceleration time; IVRT, isovolumic relaxation time.

**Table S2.** Correlation of LV conventional function and LA function in the AS group

	LATF	LAPF	LAAF	LA- $\epsilon_t$	LA- $\epsilon_p$	LA- $\epsilon_a$
Age, years	-0.128 (0.131)	0.028 (0.74)	-0.126 (0.137)	-0.098 (0.25)	-0.075 (0.38)	-0.104 (0.223)
Body mass index kg/m <sup>2</sup>	-0.121 (0.154)	-0.018 (0.835)	-0.082 (0.334)	-0.099 (0.243)	-0.112 (0.19)	-0.085 (0.318)
LVEDV index, mL/m <sup>2</sup>	-0.159 (0.06)	0.198 (0.02)	-0.318 (<0.001)	-0.436 (<0.001)	-0.404 (<0.001)	-0.345 (<0.001)
LVESV index, mL/m <sup>2</sup>	-0.245 (0.003)	0.163 (0.06)	-0.365 (<0.001)	-0.452 (<0.001)	-0.398 (<0.001)	-0.368 (<0.001)
LVEF, %	0.258 (0.002)	-0.091 (0.287)	0.317 (<0.001)	0.386 (<0.001)	0.320 (<0.001)	0.324 (<0.001)
LVM index, g/m <sup>2</sup>	-0.214 (0.011)	0.194 (0.02)	-0.360 (<0.001)	-0.552 (<0.001)	-0.459 (<0.001)	-0.464 (<0.001)
LAS, %	-0.140 (0.10)	0.244 (<0.001)	-0.360 (<0.001)	-0.386 (<0.001)	-0.308 (<0.001)	-0.327 (<0.001)
LV-LGE mass	-0.301 (0.008)	0.352 (<0.001)	-0.364 (<0.001)	-0.455 (<0.001)	-0.369 (<0.001)	-0.376 (<0.001)
E /E'ratio	-0.252 (0.002)	0.174 (0.04)	-0.355 (<0.001)	-0.501 (<0.001)	-0.391 (<0.001)	-0.417 (<0.001)
LAV max index, mL/m <sup>2</sup>	-0.100 (0.24)	0.382 (<0.001)	-0.433 (<0.001)	-0.736 (<0.001)	-0.535 (<0.001)	-0.652 (<0.001)
LAV min index, mL/m <sup>2</sup>	-0.300 (<0.001)	0.321 (<0.001)	-0.546 (<0.001)	-0.714 (<0.001)	-0.545 (<0.001)	-0.622 (<0.001)
LAV pre-A index, mL/m <sup>2</sup>	-0.231 (0.006)	0.227 (0.007)	-0.393 (<0.001)	-0.715 (<0.001)	-0.561 (<0.001)	-0.616 (<0.001)
LASI	0.106 (0.212)	0.184 (<0.001)	-0.257 (<0.001)	-0.457 (<0.001)	-0.365 (<0.001)	-0.388 (<0.001)

Values represent R (*P*- value). Abbreviations: LAS, left ventricular longitudinal-axis strain; LVEDV, left ventricular end-diastolic volume; LVESV, left ventricular end-systolic volume; LVM, left ventricular mass; LVEF, left ventricular ejection fraction; LV-LGE, left ventricular late gadolinium enhancement; LAV, left atrial volume; LASI, left atrial sphericity index; LAPF, left atrial passive emptying fraction; LAAF, left atrial active emptying fraction; LATF, left atrial total emptying fraction; LA- $\epsilon_t$ , left atrial total strain; LA- $\epsilon_p$ , left atrial passive strain; LA- $\epsilon_a$ , left atrial active strain; E, early peak mitral flow velocity; E', myocardial longitudinal early diastolic peak myocardial velocity.