

Osteoprotegerin and Myocardial Fibrosis in Patients with Aortic Stenosis

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Supplementary Data

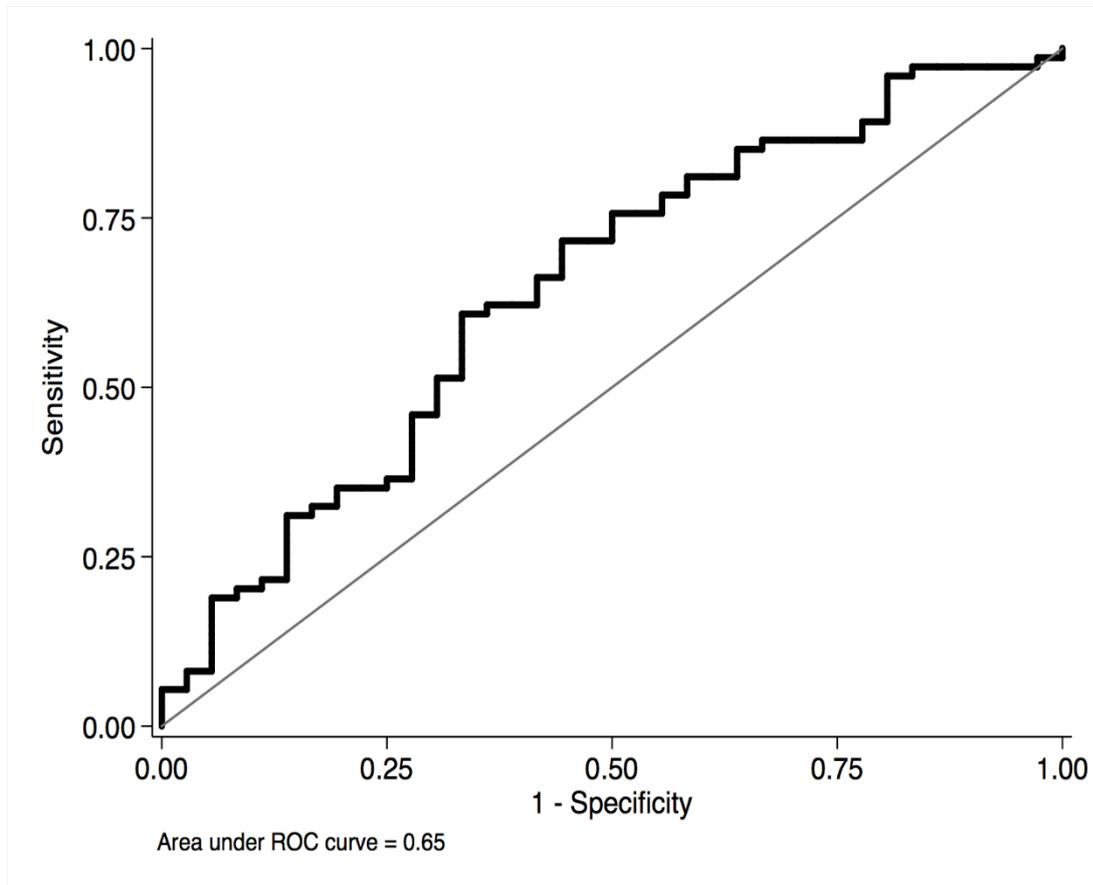
Table 1: Baseline Patient Data by Fibrosis Pattern on CMR

Demographics	No Fibrosis (n=36)	Midwall Fibrosis (n=38)	Infarction Fibrosis (n=36)	P-Value
Age, years	72 ± 12	77 ± 11	78 ± 7	0.025*
Male, n (%)	22 (61.1)	31 (81.6)	24 (66.7)	0.13
Hypertension, n (%)	20 (58.8)	17 (44.7)	20 (57.1)	0.44
SBP, mmHg	133 ± 19	130 ± 25	127 ± 18	0.49
DBP, mmHg	72 ± 15	72 ± 11	68 ± 10	0.25
Diabetes mellitus, n (%)	2 (6.9)	1 (3.0)	2 (6.7)	0.73
Current smoker, n (%)	3 (8.8)	1 (2.6)	1 (2.9)	0.52
Any coronary artery disease, n (%)	6 (16.7)	11 (28.9)	23 (63.9)	<0.0001*
Previous stroke, n (%)	0 (0.0)	3 (7.9)	0 (0.0)	0.11
Atrial Fibrillation, n (%)	4 (12.5)	2 (5.6)	5 (15.2)	0.44
Hypercholesterolaemia, n (%)	22 (66.7)	22 (59.5)	24 (68.6)	0.71
NYHA ≥ II	27 (75.0)	26 (68.4)	26 (72.2)	0.83
Height, cm	168 ± 12	172 ± 10	169 ± 10	0.26
Weight, kg	79 ± 20	82 ± 16	71 ± 15	0.026*
BMI, kg/m ²	28 ± 5	28 ± 4	25 ± 4	0.004*
Medical therapy				
Aspirin, n (%)	15 (44.1)	22 (59.5)	26 (76.5)	0.024*
Clopidogrel, n (%)	4 (12.1)	4 (11.1)	8 (25.0)	0.25
ACE I/ ARB, n (%)	14 (41.2)	13 (35.1)	24 (72.7)	0.004*
Beta Blocker, n (%)	11 (32.4)	17 (48.6)	18 (54.5)	0.16
Calcium channel blocker, n (%)	4 (12.5)	4 (11.8)	6 (18.2)	0.77
Diuretic, n (%)	11 (32.4)	23 (62.2)	23 (65.7)	0.010*
Warfarin, n (%)	5 (15.6)	3 (8.3)	2 (6.3)	0.49
Amiodarone, n (%)	3 (8.8)	1 (2.9)	0 (0.0)	0.27
Statin, n (%)	24 (70.6)	25 (67.6)	25 (73.5)	0.83
Biochemical data				
Osteoprotegerin , pmol/L	6.15 ± 2.73	7.15 ± 3.15	8.37 ± 4.16	0.023*
Creatinine, µmol/L	87 ± 21	100 ± 33	109 ± 41	0.065
CMR data				
CMR aortic valve area, cm ²	0.9 ± 0.4	0.9 ± 0.2	0.9 ± 0.2	0.81
Mild / Moderate AS, n (%)	13 (36.1)	11 (28.9)	11 (30.6)	0.82

Severe AS, n (%)	23 (63.9)	27 (71.1)	25 (69.4)	0.82
LVEF, %	66 ± 12	59 ± 18	51 ± 13	<0.0001*
LV Mass, g	153 ± 48	190 ± 66	158 ± 38	0.017*
LGE Mass	0 ± 0	7.0 ± 8.3	11.3 ± 7.2	-
LGE Percent	0 ± 0	3.7 ± 3.7	7.6 ± 5.9	-
Intervention				
None	20 (55.6)	14 (36.8)	11 (30.6)	0.13
AVR	11 (30.6)	11 (28.9)	12 (33.3)	0.13
TAVI	5 (13.9)	13 (34.2)	13 (36.1)	0.13

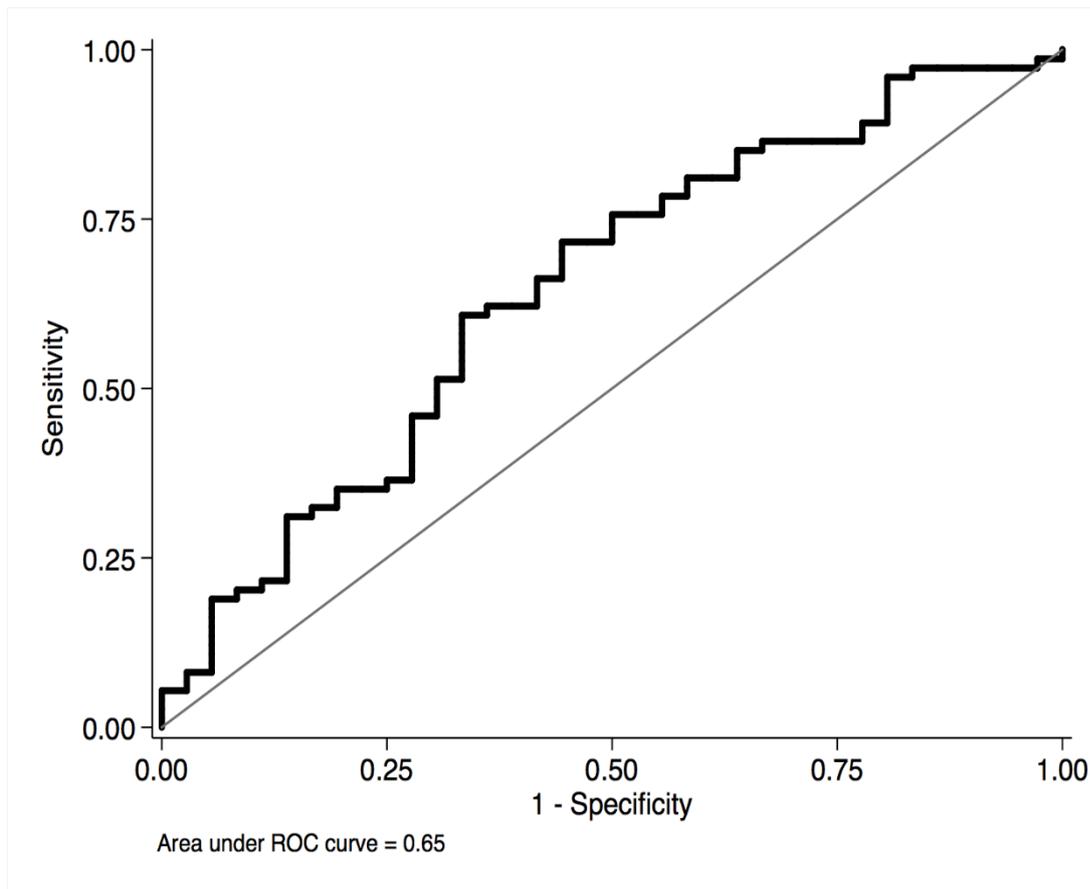
Values are mean ± SD unless otherwise stated. *p < 0.05. Baseline data for AS patients based on fibrosis pattern on CMR. ACE-I, angiotensin converting enzyme inhibitor; ARB, angiotensin II receptor blocker; AVR, aortic valve replacement; BMI, body mass index; CMR, cardiovascular magnetic resonance; DBP, diastolic blood pressure; LGE, late gadolinium enhancement; LVEF, left ventricular ejection fraction; NYHA, New York Heart Association; SBP, systolic blood pressure; TAVR, transcatheter aortic valve replacement.

Supplementary Figure 1



Receiver-operating characteristic (ROC) curve analysis for predicting AS severity. ROC curve describes the diagnostic performance of serum OPG in the distinction of severe and mild/moderate AS. Area under the ROC curve (AUC) was 0.69.

Supplementary Figure 2



Receiver-operating characteristic (ROC) curve analysis for predicting LV fibrosis. ROC curve describes the diagnostic performance of serum OPG in the distinction of 'any fibrosis' and 'no fibrosis' on CMR. Area under the ROC curve (AUC) was 0.65.