

## **SUPPLEMENTAL MATERIAL**

**Table S1. Baseline and echocardiographic characteristics of patients with presence of MR.**

<b>Presence of MR</b>	<b>Total (n = 278)</b>	<b>Obstructive HCM (n = 59)</b>	<b>Non-obstructive HCM (n = 219)</b>	<b>P- value</b>
<b><i>Clinical variables</i></b>				
Age, years	62.3±14.4	57.0±15.8	63.7±13.6	0.001
Male sex, n (%)	121 (43.5)	25 (42.4)	96 (43.8)	0.841
BMI, kg/m <sup>2</sup>	24.5±3.7	24.5±3.4	24.5±3.7	0.958
Hypertension, n (%)	129 (46.4)	26 (44.1)	103 (47.0)	0.685
Diabetes mellitus, n (%)	48 (17.3)	8 (13.6)	40 (18.3)	0.396
Dyslipidemia, n (%)	59 (21.2)	12 (20.3)	47 (21.5)	0.852
CKD, n (%)	19 (6.8)	1 (1.7)	18 (8.2)	0.078
Atrial fibrillation, n (%)	102 (36.7)	14 (23.7)	88 (40.2)	0.020
CAD, n (%)	35 (12.6)	4 (6.8)	31 (14.2)	0.130
Prior alcohol ablation, n (%)	1 (0.4)	1 (1.7)	0 (0.0)	0.054
<b><i>Medications</i></b>				
RAAS blockers, n (%)	102 (36.7)	17 (28.8)	85 (38.8)	0.157
Beta-blockers, n (%)	151 (54.3)	39 (66.1)	112 (51.1)	0.041
CCBs, n (%)	118 (42.4)	28 (47.5)	90 (41.1)	0.380
Diuretics, n (%)	67 (24.1)	6 (10.2)	61 (27.9)	0.005
Statin, n (%)	62 (22.3)	14 (23.7)	48 (21.9)	0.767
Antiplatelet agents, n (%)	111 (39.9)	18 (30.5)	93 (42.5)	0.096
Anticoagulants, n (%)	54 (19.4)	7 (11.9)	47 (21.5)	0.098
<b><i>Echocardiographic variables</i></b>				
LVEDD, mm	48.1±6.4	44.6±6.1	49.1±6.2	<0.001
LVESD, mm	31.6±6.5	27.4±4.7	32.7±6.4	<0.001
LV maximal thickness, mm	18.7±4.1	20.3±5.5	18.3±3.6	0.011
IVS thickness, mm	14.7±5.0	17.8±5.7	13.9±4.4	<0.001
PW thickness, mm	10.7±2.1	11.6±2.8	10.5±1.9	0.007
LVEF, %	68.4±9.9	74.1±6.6	66.9±10.1	<0.001
LA volume index, ml/m <sup>2</sup>	49.6±31.4	47.4±16.2	50.3±34.8	0.541
E velocity, m/s	72.4±22.9	0.77±0.25	0.71±0.22	0.108
E/e'	17.5±7.3	20.0±8.1	16.8±6.9	0.003
RVSP, mmHg	31.8±9.2	30.6±7.8	32.0±9.5	0.372

MV abnormalities

SAM, n (%)	78 (28.1)	56 (94.9)	22 (10.0)	<0.001
MV prolapse, n (%)	23 (8.3)	3 (5.1)	20 (9.1)	0.316
MAC, n (%)	57 (20.5)	22 (37.3)	35 (16.0)	<0.001

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HCM, hypertrophic cardiomyopathy; BMI, body mass index; CKD, chronic kidney disease; CAD, coronary artery disease; RAAS, renin-angiotensin-aldosterone system; CCB, calcium channel blockers; NOAC, novel oral anticoagulants, LVEDD, left ventricular end-diastolic dimension; LVESD, left ventricular end-systolic dimension; IVS, interventricular septum; PW posterior wall, LVEF, left ventricular ejection fraction; LA, left atrium; E, mitral inflow early diastolic filling; E/e', ratio of early diastolic mitral inflow velocity to early diastolic mitral annular tissue velocity; RVSP, right ventricular systolic pressure

**Table S2. Prevalence of MR according to the MV structural abnormalities.**

	<b>All (n=1185)</b>	<b>MAC (+) (n=154)</b>	<b>MAC (-) (n=1031)</b>	<b>P-value</b>	<b>MVP (+) (n=29)</b>	<b>MVP (-) (n=1156)</b>	<b>P-value</b>
MR, n (%)	278 (23.5)	57 (37.0)	221 (21.4)	<0.001	23 (79.3)	255 (22.1)	<0.001
Significant MR, n (%)	46 (3.9)	15 (9.7)	31 (3.0)	<0.001	12 (41.4)	34 (2.9)	<0.001

MR, mitral regurgitation; MV, mitral valve; MAC, mitral annular calcification, MVP, mitral valve prolapse

**Table S3. MV characteristics in patients with obstructive HCM with SAM.**

	<b>All (n=97)</b>	<b>No intrinsic MV disease (n=66)</b>	<b>Combined intrinsic MV disease (n=31)</b>	<b>P- value</b>
MV prolapse, n (%)	3 (3.1)	0 (0.0)	3 (9.7)	0.010
MAC, n (%)	28 (28.9)	0 (0.0)	28 (90.3)	<0.001
MR, n (%)	56 (57.7)	31 (47.0)	25 (80.6)	0.001
Mild	40 (41.2)	26 (39.4)	14 (45.2)	
Moderate	13 (13.4)	4 (6.1)	9 (29.0)	
Severe	3 (3.1)	1 (1.5)	2 (6.5)	
Significant MR, n (%)	16 (16.5)	5 (7.6)	11 (35.5)	0.001
Clinical outcome, n (%)	23 (23.7)	16 (24.2)	7 (22.6)	0.858

MV, mitral valve; MAC, mitral annular calcification; MR, mitral regurgitation; MS, mitral stenosis