

SUPPLEMENTAL MATERIAL

Table S1. Baseline clinical, echocardiographic, procedural, and clinical outcomes of patients who had RHC vs. patients who did not have RHC.

Baseline Characteristics	Overall N=298	No RHC N=184	RHC N=114	p-value
Age (years)	76.2 [10.5]	78.0 [10.5]	74.7 [10.6]	0.01
Female	127 (42.6)	87 (47.3)	40 (35.1)	0.03
Diabetes	82 (27.5)	47 (25.5)	35 (30.7)	0.33
Prior Myocardial Infarction	55 (18.5)	29 (15.8)	26 (22.8)	0.13
Dialysis	19 (6.4)	12 (6.5)	7 (6.1)	0.89
Atrial Fibrillation	178 (60.1)	103 (56.3)	75 (66.4)	0.08
Coronary Artery Disease	110 (36.9)	67 (36.4)	43 (37.7)	0.82
Frail	206 (69.1)	125 (67.9)	81 (71.1)	0.57
BMI (kg/m ²)	26.1 [6.0]	26.0 [6.5]	26.3 [5.2]	0.70
Hypertension	213 (71.5)	129 (70.1)	84 (73.7)	0.50
Prior PPM	47 (15.8)	30 (16.3)	17 (14.9)	0.74
Prior CABG	71 (23.8)	44 (23.9)	27 (23.7)	0.96
Prior PCI	66 (22.1)	41 (22.3)	25 (21.9)	0.94
STS Risk MV repair (%)	3.7 (2.1-6.4)	4.2 (2.2-6.9)	3.0 (1.5-5.3)	0.08
NYHA III/IV	230 (79.0)	135 (75.0)	95 (85.8)	0.03
Creatinine (mg/dL)	1.6 [1.4]	1.6 [1.5]	1.6 [1.3]	0.86
Echocardiographic Characteristics				
MR severity				
3+	59 (19.8)	33 (18.0)	26 (22.8)	0.67
4+	239 (80.2)	151 (82.0)	88 (77.2)	
MR etiology				
Primary	160 (53.7)	102 (55.4)	58 (50.9)	0.33
Secondary	110 (36.9)	61 (33.2)	49 (43.0)	
Mixed	28 (9.4)	21 (11.4)	7 (6.1)	
PASP (mmHg)	52.8 [17.5]	53.1 [16.2]	52.2 [19.4]	0.69
LV Ejection Fraction (%)	51.2 [14.6]	52.4 [15.1]	49.6 [14.0]	0.11
TR Severity \geq moderate	110 (36.9)	70 (38.0)	40 (35.1)	0.60
Procedural Characteristics				
Number of clips	1.5 [0.5]	1.4 [0.5]	1.6 [0.6]	0.02
Baseline Mean LAP (mmHg)	20.0 [8.1]	20.0 [7.9]	20.0 [8.4]	0.99
Baseline V-wave (mmHg)	34.7 [17.0]	35.0 [16.2]	34.5 [18.2]	0.81
Post-procedural Mean LAP (mmHg)	15.0 [5.8]	15.1 [5.7]	15.0 [6.1]	0.89
Post-procedural V-wave (mmHg)	21.7 [9.4]	22.0 [9.2]	21.5 [9.7]	0.63
Outcomes:				
In-hospital				
Length of Stay (days)	2 (1-4)	2 (1-3)	2 (1-5)	0.15
Discharge MR \geq moderate	62 (20.8)	35 (19.0)	27 (23.6)	0.33

Discharge TMPG (mmHg)	4.2 [1.9]	4.3 [2.0]	4.0 [1.8]	0.29
30-day				
NYHA (III/IV)	33 (15.5)	22 (16.1)	11 (14.5)	0.75
MR \geq moderate	79 (29.9)	44 (26.6)	35 (36.0)	0.20
TR \geq moderate	72 (27.8)	40 (25.0)	32 (32.3)	0.20
PASP (mmHg)	47.2 [14.4]	46.2 [14.9]	48.7 [13.8]	0.23
TMPG (mmHg)	4.4 [2.2]	4.5 [2.3]	4.3 [2.1]	0.33
2-year				
Mortality	85 (28.5)	52 (28.3)	33 (28.9)	0.89
HFH	49 (16.4)	30 (16.3)	18 (15.8)	0.93
Composite	117 (39.3)	72 (39.1)	44 (38.6)	0.95
Overall				
Follow-up (months)	27 [21]	26 [21]	28 [21]	0.22

Values are expressed as Mean [Standard Deviation], median (IQR: 1st-3rd quartile), or N (%)

BMI= body mass index; CABG= coronary artery bypass graft; FU: follow up; HFH: heart failure hospitalization; LAP: left atrial pressure; LVEF= left ventricle ejection fraction; MR= mitral regurgitation; NYHA= New York Heart Association; PCI= percutaneous coronary intervention; RHC= right heart catheterization; STS= Society for Thoracic Surgeons. PASP= pulmonary artery systolic pressure; TMPG= Transmitral mean pressure gradient; TR= tricuspid regurgitation.

Table S2. Baseline Clinical and Echocardiographic Characteristics Based on Mean PA pressures.

Baseline Characteristics	Overall N=114	mPAP < 35 N=66	mPAP ≥ 35 N=48	p-value
Age (years)	74.7 [10.6]	76.3 [10.1]	72.6 [11.0]	0.07
Female	40 (35.1)	27 (40.9)	13 (27.1)	0.12
Diabetes	35 (30.7)	13 (19.7)	22 (45.8)	0.003
Prior Stroke	19 (16.7)	12 (18.2)	7 (14.6)	0.61
Prior MI	26 (22.8)	13 (19.7)	13 (27.1)	0.35
Dialysis	7 (6.1)	3 (4.5)	4 (8.3)	0.45
Atrial Fibrillation	75 (66.4)	39 (59.1)	36 (76.6)	0.05
CAD	43 (37.7)	23 (34.8)	20 (41.7)	0.45
Frail	81 (71.1)	50 (75.8)	31 (64.6)	0.19
BMI (kg/m ²)	26.3 [5.2]	25.1 [4.9]	27.8 [5.1]	0.005
Hypertension	84 (73.7)	51 (77.3)	33 (68.8)	0.30
Prior PPM	17 (14.9)	9 (13.6)	8 (16.7)	0.65
Prior ICD	25 (21.9)	19 (28.8)	6 (12.5)	0.03
Prior CABG	27 (23.7)	17 (25.8)	10 (20.8)	0.54
Prior PCI	25 (21.9)	9 (13.6)	16 (33.3)	0.01
STS Risk MV repair (%)	3.0 (1.5-5.3)	4.5 [4.5]	4.6 [4.5]	0.85
NYHA III/IV	95 (85.8)	53 (80.3)	42 (87.5)	0.30
Creatinine (mg/dL)	1.6 [1.3]	1.3 [0.5]	2.0 [1.8]	0.03
Echocardiographic Characteristics				
MR severity				
3+	26 (22.8)	16 (24.2)	10 (20.8)	0.66
4+	88 (77.2)	50 (75.8)	38 (79.2)	
MR etiology				
Primary	58 (50.9)	37 (56.1)	21 (43.8)	0.41
Secondary	49 (43.0)	25 (37.9)	24 (50.0)	
Mixed	7 (6.1)	4 (6.1)	3 (6.3)	
PASP (mmHg)	52.2 [19.4]	42.5 [15.5]	66.1 [15.7]	<0.001
LV Ejection Fraction (%)	49.6 [14.0]	50.8 [14.6]	48.0 [13.0]	0.28
TR Severity ≥moderate	40 (35.1)	20 (30.3)	20 (41.7)	0.20

Values are expressed as Mean [Standard Deviation] or N (%)

BMI= body mass index; BNP= B-type natriuretic peptide, BSA= body surface area; CABG= coronary artery bypass graft; CAD= coronary artery disease; ICD= Implantable cardioverter/defibrillator; MI= myocardial infarction; NYHA= New York Heart Association; PCI= percutaneous coronary intervention; STS= Society for Thoracic Surgeons. MR= mitral regurgitation; LVEF= left ventricle ejection fraction; PASP= pulmonary artery systolic pressure; PPM=permanent pacemaker; TR= tricuspid regurgitation.

Table S3. Invasive Hemodynamic and Procedural Characteristics Based on Mean PA pressures. In-hospital, 30-day, 1- and 2- year Outcomes Based on Mean PA pressures.

Right Heart Catheterization	Overall N=114	mPAP < 35 N=66	mPAP ≥ 35 N=48	p-value
RAP (mmHg)	11.0 [6.0]	7.8 [4.0]	15.2 [5.8]	<0.001
PASP (mmHg)	51.0 [18.4]	38.5 [9.6]	68.2 [13.0]	<0.001
PADP (mmHg)	22.3 [8.7]	16.8 [5.1]	30.1 [6.6]	<0.001
PA mean (mmHg)	33.6 [11.5]	25.3 [5.8]	45.0 [6.6]	<0.001
PCWP (mmHg)	21.8 [9.1]	16.6 [6.5]	28.7 [7.2]	<0.001
TPG (mmHg)	12.1 [7.0]	8.8 [4.0]	16.2 [8.0]	<0.001
PAPi	3.4 [2.4]	3.7 [2.7]	3.0 [1.7]	0.13
PVR (WU)	3.1 [2.2]	2.2 [1.3]	4.2 [2.6]	<0.001
Pulmonary Artery Elastance (mmHg/mL)	0.93 [0.4]	0.6 [0.3]	1.4 [0.5]	<0.001
Pulmonary Artery Compliance (mL/mmHg)	2.7 [1.8]	3.6 [1.9]	1.5 [0.8]	<0.001
Stroke Volume (mL)	63.0 [23.9]	70.0 [26.2]	53.6 [16.4]	<0.001
Cardiac Index (mL/m ²)	2.3 [0.6]	2.4 [0.7]	2.1 [0.5]	0.03
RA/PCWP	0.5 [0.2]	0.5 [0.1]	0.6 [0.2]	0.12
Procedural Characteristics				
Number of clips	1.6 [0.6]	1.5 [0.6]	1.7 [0.6]	0.30
Baseline Mean LAP (mmHg)	20.0 [8.4]	17.4 [6.8]	23.7 [9.2]	<0.001
Baseline V-wave (mmHg)	34.5 [18.2]	29.7 [15.4]	41.1 [19.9]	<0.001
Post-procedural Mean LAP (mmHg)	15.0 [6.1]	13.6 [5.0]	17.0 [6.9]	0.005
Post-procedural V-wave (mmHg)	21.5 [9.7]	19.8 [8.4]	23.9 [11.0]	0.03
Delta Mean LAP (mmHg)	5 (1-8)	4 (0-7.5)	7 (4-10)	0.01
Delta V-wave (mmHg)	12 (3-21)	8 (1-20)	17 (10-22)	0.005
Outcomes:				
In-hospital				
LOS (days)	2 (1-4)	2 (1-2)	2 (1-5)	0.05
Discharge MR ≥moderate	27 (23.6)	16 (24.2)	11 (22.9)	0.82
Discharge TMPG (mmHg)	4.0 [1.8]	3.8 [1.8]	4.3 [1.8]	0.17
30-day				
NYHA (III/IV)	11 (14.5)	6 (12.5)	5 (17.9)	0.52
MR ≥moderate	35 (36.0)	20 (35.0)	15 (37.5)	0.67
Mortality	4 (3.5)	2 (3.0)	2 (4.2)	0.74
HFH	2 (1.8)	1 (1.5)	1 (2.1)	0.82
Composite	6 (5.3)	3 (4.5)	3 (6.2)	0.68
1-year				
Mortality	22 (19.3)	9 (13.6)	13 (27.1)	0.07

	HFH	12 (10.5)	8 (12.1)	5 (10.4)	0.77
	Composite	31 (27.2)	16 (24.2)	16 (33.3)	0.28
2-year					
	Mortality	33 (28.9)	14 (21.2)	19 (39.6)	0.03
	HFH	18 (15.8)	11 (16.7)	8 (16.7)	1.00
	Composite	44 (38.6)	22 (33.3)	23 (47.9)	0.11
Overall					
	FU (months)	28 [21]	32 [22.5]	25.5 [21.3]	0.12

Values are expressed as Mean [Standard Deviation], median (IQR), or N (%)

PCWP: Pulmonary Capillary Wedge Pressure; RAP: Right Atrial Pressure; PASP: Pulmonary Artery Systolic Pressure; PADP: Pulmonary Artery Diastolic Pressure; PA: Pulmonary Artery; TPG: Trans-Pulmonary Gradient; PAPI: Pulmonary Artery Pulsatility index; PVR: Pulmonary Vascular Resistance; RV: Right Ventricle Systolic Pressure; RVDP: Right Ventricle Diastolic Pressure; RVEDP: Right Ventricle End Diastolic Pressure; Ea: Pulmonary Effective Arterial Elastance; PH: pulmonary hypertension, LAP: left atrial pressure. LOS: length of stay; MR: mitral regurgitation; LVEF= left ventricle ejection fraction; PASP= pulmonary artery systolic pressure; ; NYHA= New York Heart Association; TR= tricuspid regurgitation; HFH: heart failure hospitalization; FU: follow up.

Table S4. Baseline Clinical and Echocardiographic Characteristics Based on Cardiopulmonary Hemodynamic Profile.

Baseline Characteristics	LE (N=35) Mean PAP < 35 Ea < 0.6	HE- (N=31) Mean PAP < 35 Ea ≥ 0.6	HE+ (N=48) Mean PAP ≥ 35 Ea ≥ 0.6	p-value (LE/HE-)	p-value (HE-/HE+)	p-value (Overall)
Age (years)	75.0 [11.5]	77.7 [8.1]	72.6 [11.0]	0.29	0.03	0.11
Female	10 (28.6)	17 (54.8)	13 (27.1)	0.03	0.01	0.02
Diabetes	5 (14.3)	8 (25.8)	22 (45.8)	0.24	0.07	0.007
Prior Stroke	6 (17.1)	6 (19.4)	7 (14.6)	0.81	0.57	0.85
Prior MI	8 (22.9)	5 (16.1)	13 (27.1)	0.49	0.25	0.52
Dialysis	2 (5.7)	1 (3.2)	4 (8.3)	0.62	0.36	0.64
Atrial Fibrillation	17 (48.6)	22 (71.0)	36 (76.6)	0.06	0.57	0.02
CAD	11 (31.4)	12 (38.7)	20 (41.7)	0.53	0.79	0.63
Frail	27 (77.1)	23 (74.2)	31 (64.6)	0.78	0.37	0.41
BMI (kg/m ²)	24.6 [4.9]	25.7 [5.0]	27.8 [5.1]	0.41	0.06	0.01
Hypertension	27 (77.1)	24 (77.4)	33 (68.8)	0.97	0.40	0.59
Prior PPM	3 (8.6)	6 (19.4)	8 (16.7)	0.20	0.76	0.42
Prior ICD	7 (20.0)	12 (38.7)	6 (12.5)	0.09	0.007	0.02
Prior CABG	9 (25.7)	8 (25.8)	10 (20.8)	0.99	0.60	0.83
Prior PCI	3 (8.6)	6 (19.4)	16 (33.3)	0.20	0.17	0.02
STS Risk MV repair (%)	4.5 [4.1]	4.4 [5.3]	4.6 [4.5]	0.93	0.85	0.98
NYHA III/IV	25 (71.4)	28 (90.3)	42 (87.5)	0.05	0.70	0.19
KCCQ score	46.8 [25.5]	35.8 [23.2]	39.7 [24.4]	0.09	0.51	0.24
Creatinine (mg/dL)	1.3 [0.5]	1.4 [0.5]	2 [1.8]	0.71	0.09	0.05
Hemoglobin (g/dL)	11.7 [2.0]	11.1 [1.8]	10.9 [2.6]	0.25	0.70	0.31
Echocardiographic Characteristics						
MR severity						
3+	6 (17.1)	10 (32.3)	10 (20.8)	0.26	0.33	0.31
4+	29 (82.9)	21 (67.7)	38 (79.2)			
MR etiology						
Primary	27 (77.1)	10 (32.3)	21 (43.8)			

Secondary	7 (20.0)	18 (58.1)	24 (50.0)	0.001	0.56	0.005
Mixed	1 (2.9)	3 (9.7)	3 (6.3)			
PASP (mmHg)	41.7 [19.5]	43.2 [10.0]	66.1 [15.7]	0.70	<0.001	<0.001
LVIDs (cm)	3.3 [1.1]	4.0 [1.2]	4.0 [1.0]	0.01	0.71	0.01
LVIDd (cm)	5.3 [0.7]	5.4 [0.9]	5.5 [0.7]	0.44	0.79	0.50
LA volume (mL)	117.2 [51.4]	117 [46.0]	120.3 [51.6]	0.95	0.83	0.95
LAVI (mL/m ²)	61.6 [26.1]	63.3 [22.0]	60.7 [24.4]	0.78	0.63	0.89
Ejection Fraction (%)	55.5 [12.2]	45.5 [15.4]	48.0 [13.0]	0.006	0.45	0.008
Mitral Valve Area (cm ²)	5.3 [1.6]	4.8 [1.4]	5.8 [2.0]	0.18	0.02	0.07
Mitral Annular Calcification	7 (20.0)	9 (29.0)	17 (35.4)	0.39	0.55	0.31
TR Severity \geq moderate	9 (25.7)	11 (35.5)	20 (41.7)	0.38	0.58	0.32

Values are expressed as Mean [Standard Deviation] or N (%)

BMI= body mass index; CABG= coronary artery bypass graft; CAD= coronary artery disease; ICD= Implantable cardioverter/defibrillator; KCCQ-12= Kansas City Cardiomyopathy Questionnaire score; MI= myocardial infarction; NYHA= New York Heart Association; PCI= percutaneous coronary intervention; STS= Society for Thoracic Surgeons. MR= mitral regurgitation; LAVI= left atrium volume index; LVEF= left ventricle ejection fraction; LVIDs/d= left ventricle internal diameter (systole/diastole); PASP= pulmonary artery systolic pressure; PPM= permanent pacemaker; RAP= right atrial pressure; TR= tricuspid regurgitation.

Table S5. Invasive Hemodynamic and Procedural Characteristics Based on Cardiopulmonary Hemodynamic Profile.

Right Heart Catheterization	LE (N=35) Mean PAP < 35 Ea < 0.6	HE- (N=31) Mean PAP < 35 Ea ≥ 0.6	HE+ (N=48) Mean PAP ≥ 35 Ea ≥ 0.6	p-value (LE/HE-)	p-value (HE-/HE+)	p-value (Overall)
RAP mean (mmHg)	7.1 [4.0]	8.7 [3.8]	15.2 [5.8]	0.13	<0.001	<0.001
PASP (mmHg)	34.6 [9.3]	42.9 [8.1]	68.2 [13.0]	<0.001	<0.001	<0.001
PADP (mmHg)	15.0 [5.5]	18.7 [4.0]	30.1 [6.6]	0.004	<0.001	<0.001
PA mean (mmHg)	22.8 [6.7]	28.4 [3.7]	45.0 [6.7]	<0.001	<0.001	<0.001
PCWP (mmHg)	14.3 [7.0]	18.8 [5.1]	28.7 [7.2]	0.006	<0.001	<0.001
TPG (mmHg)	8.1 [3.6]	9.5 [4.3]	16.2 [8.0]	0.15	<0.001	<0.001
PAPi	3.8 [3.0]	3.6 [2.5]	3.0 [1.7]	0.78	0.22	0.30
PVR (WU)	1.6 [0.8]	2.8 [1.4]	4.2 [2.6]	<0.001	0.002	<0.001
Pulmonary Artery Compliance (mL/mmHg)	4.8 [1.8]	2.2 [0.7]	1.5 [0.8]	<0.001	<0.001	<0.001
Stroke Volume (mL)	86.8 [21.0]	50.8 [16.6]	53.6 [16.4]	<0.001	0.46	<0.001
Cardiac Index (mL/m ²)	2.8 [0.5]	1.9 [0.4]	2.1 [0.5]	<0.001	0.11	<0.001
RA/PCWP	0.5 [0.1]	0.4 [0.1]	0.6 [0.2]	0.46	0.12	0.22
RVSP (mmHg)	33.8 [9.7]	44.0 [7.3]	65.9 [13.5]	<0.001	<0.001	<0.001
RVDP (mmHg)	5.9 [4.7]	5.3 [3.8]	10.7 [4.8]	0.57	<0.001	<0.001
RVEDP (mmHg)	7.7 [4.8]	8.8 [3.7]	15.4 [5.2]	0.29	<0.001	<0.001
Procedural Characteristics						
Number of clips	1.5 [0.5]	1.5 [0.6]	1.7 [0.7]	0.88	0.38	0.58
Fluoroscopy time (minutes)	20.6 [11.0]	25.7 [15.5]	24.6 [13.6]	0.12	0.73	0.25
Baseline Mean LAP (mmHg)	16.2 [6.3]	18.7 [7.1]	23.7 [9.2]	0.12	0.01	<0.001
Baseline V-wave (mmHg)	28.0 [15.5]	31.8 [15.2]	41.1 [19.9]	0.32	0.03	0.003
Post-procedural mean LAP (mmHg)	11.6 [3.5]	16.0 [5.5]	17.0 [6.9]	<0.001	0.53	<0.001
Post-procedural v-wave (mmHg)	16.0 [6.2]	24.4 [8.5]	23.9 [11.0]	<0.001	0.82	<0.001
Delta Mean LAP (mmHg)	4 (1-8)	3 (1-7)	6.5 (4-10)	0.44	0.02	0.02

Delta V-wave (mmHg)	8.5 (3-21)	6.5 (3-16)	17 (10-22)	0.27	0.007	0.01
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Values are expressed as Mean [Standard Deviation], median (IQR), or N (%)

PCWP: Pulmonary Capillary Wedge Pressure; RAP: Right Atrial Pressure; PASP: Pulmonary Artery Systolic Pressure; PADP: Pulmonary Artery Diastolic Pressure; PA: Pulmonary Artery; TPG: Trans-Pulmonary Gradient; PAPI: Pulmonary Artery Pulsatility index; PVR: Pulmonary Vascular Resistance; RV: Right Ventricle Systolic Pressure; RVDP: Right Ventricle Diastolic Pressure; RVEDP: Right Ventricle End Diastolic Pressure; Ea: Pulmonary Effective Arterial Elastance; PH: pulmonary hypertension, LAP: left atrial pressure.

Table S6. In-hospital, 30-day, 1- and 2- year outcomes Based on Cardiopulmonary Hemodynamic Profile.

Outcomes	LE (N=35) Mean PAP < 35 Ea < 0.6	HE- (N=31) Mean PAP < 35 Ea ≥ 0.6	HE+ (N=48) Mean PAP ≥ 35 Ea ≥ 0.6	p-value (LE/HE-)	p-value (HE-/HE+)	p-value (Overall)
In-hospital						
LOS (days)	2 (1-2)	2 (1-3)	2 (1-4)	0.32	0.20	0.08
Discharge MR ≥moderate	9 (25.7)	7 (22.6)	11 (23.0)	0.68	0.82	0.75
Discharge TMPG (mmHg)	3.4 [1.6]	4.3 [2.0]	4.3 [1.8]	0.07	0.90	0.08
30-Day						
LAV (mL)	117.4 [42.9]	118.3 [41.6]	138.0 [60.3]	0.94	0.19	0.22
LAVI (mL/m ²)	64.2 [20.4]	69.8 [22.8]	73.2 [28.3]	0.41	0.65	0.43
LVIDs (cm)	3.7 [1.1]	4.2 [1.1]	4.1 [1.0]	0.09	0.62	0.18
LVIDd (cm)	5.1 [0.9]	5.3 [1.1]	5.4 [0.8]	0.57	0.58	0.44
LVEF (%)	52.8 [13.8]	44.0 [17.0]	43.8 [15.0]	0.03	0.95	0.02
PASP (mmHg)	43.6 [13.9]	50.0 [13.4]	53.2 [13.5]	0.11	0.37	0.02
TR ≥moderate	3 (9.1)	11 (42.3)	18 (46.2)	0.003	0.76	0.002
NYHA (III/IV)	3 (11.1)	3 (14.3)	5 (17.9)	0.74	0.73	0.88
MR ≥moderate	7 (21.9)	14 (56.0)	17 (42.5)	0.008	0.28	0.02
TMPG (mmHg)	3.5 [2.1]	4.2 [2.0]	4.8 [2.1]	0.21	0.37	0.08
Mortality	0 (0)	2 (6.5)	2 (4.2)	0.12	0.65	0.34
HFH	0 (0)	1 (3.2)	1 (2.1)	0.28	0.75	0.59
Composite	0 (0)	3 (9.7)	3 (6.3)	0.06	0.57	0.19
1-year						
Mortality	3 (8.6)	6 (19.4)	13 (27.1)	0.20	0.43	0.10
HFH	1 (2.9)	7 (22.6)	5 (10.4)	0.01	0.14	0.04
Composite	4 (11.4)	12 (38.7)	16 (33.3)	0.01	0.62	0.02
2-year						
Mortality	4 (11.4)	10 (32.3)	19 (39.6)	0.03	0.51	0.01

HFH	1 (2.9)	8 (16.7)	10 (32.3)	0.001	0.10	0.006
Composite	5 (14.3)	17 (54.8)	23 (47.9)	<0.001	0.54	0.001
Overall						
FU (months)	36.6 [21.7]	25.2 [21.6]	25.5 [21.3]	0.02	0.96	0.01

Values are expressed as Mean [Standard Deviation], median (IQR), or N (%)

LOS: length of stay; MR: mitral regurgitation; LAV: left atrium volume; LVEF= left ventricle ejection fraction; ; LVIDs/d= left ventricle internal diameter (systole/diastole); PASP= pulmonary artery systolic pressure; ; NYHA= New York Heart Association; TMPG= transmitral mean pressure gradient; TR= tricuspid regurgitation; HFH= heart failure hospitalization; FU: follow up.

Table S7. RV-PA coupling within the hemodynamic cardiopulmonary profiles.

	LE (N=26) mPAP < 35 Ea < 0.6	HE- (N=23) mPAP < 35 Ea ≥ 0.6	HE+ (N=38) mPAP ≥ 35 Ea ≥ 0.6	p-value (Overall)	p-value (LE/HE-)
TAPSE (cm)	1.7 [0.6]	1.6 [0.5]	1.6 [0.5]	0.83	0.63
Echo-derived PASP (mmHg)	39.5 [16.5]	41.7 [10.7]	65.8 [15.9]	<0.001	0.59
TAPSE/PASP (mm/mmHg)	0.5 [0.4]	0.4 [0.1]	0.36 [0.1]	<0.001	0.16
Invasive PASP (mmHg)	33.6 [8.6]	41.6 [8.4]	67.9 [12.9]	<0.001	<0.001
Invasive SV (mL)	84.4 [20.2]	49.1 [17.0]	53.9 [15.2]	<0.001	<0.001
Ea (mmHg/mL)	0.4 [0.1]	0.9 [0.3]	1.4 [0.5]	<0.001	<0.001

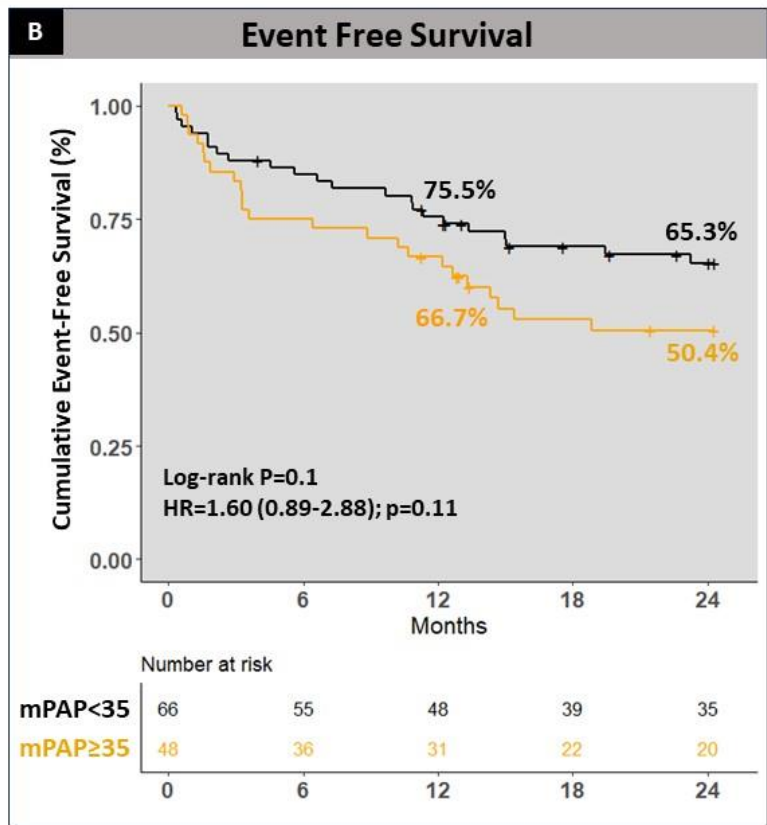
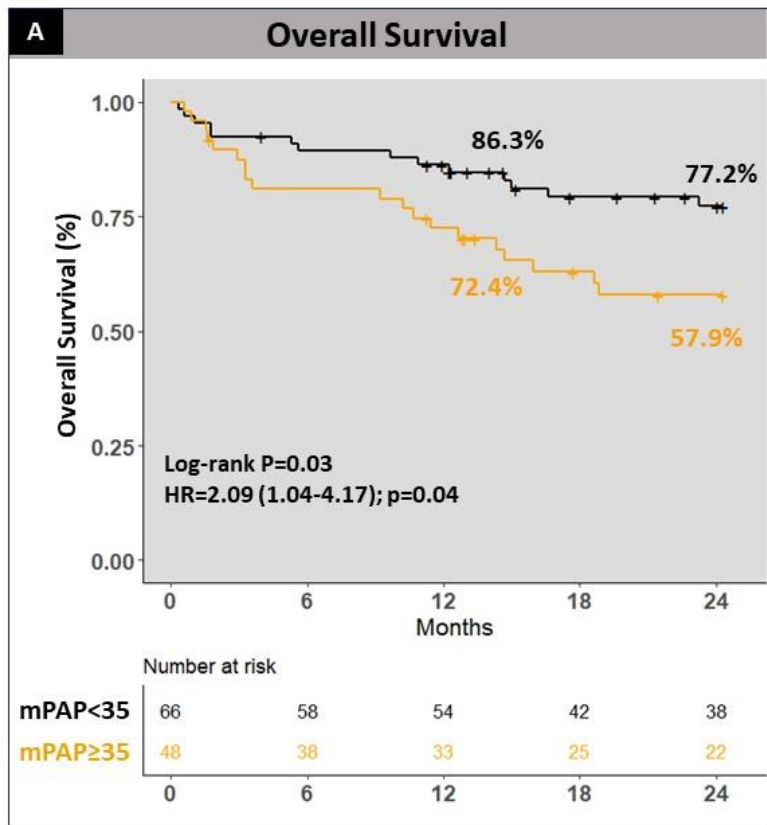
Values are expressed as Mean [Standard Deviation], median (IQR), or N (%)

Ea= Pulmonary effective arterial elastance; PASP= pulmonary artery systolic pressure; SV= stroke volume; TAPSE= Tricuspid annular plane systolic excursion

Figure S1. Overall and Event-Free Survival Analysis according to PH severity.

Compared to the none/mild PH group, cumulative overall and event-free survival were lower in the moderate/severe PH group at

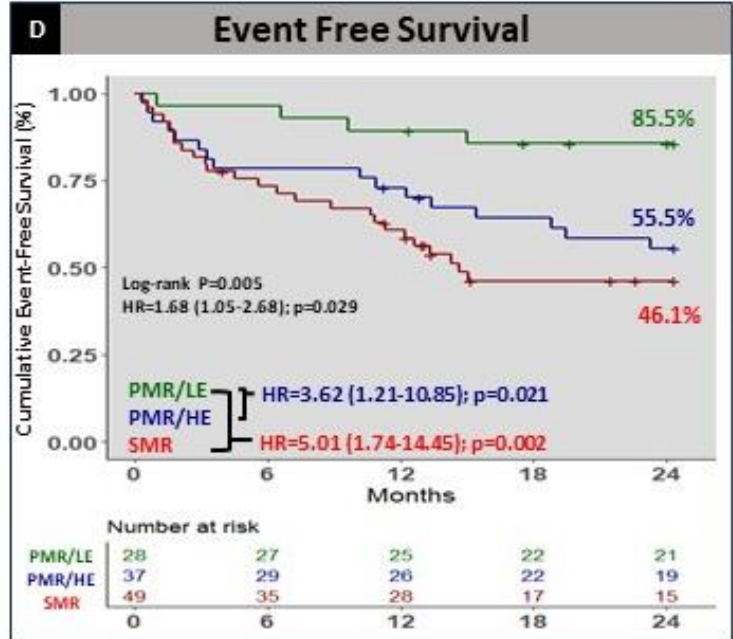
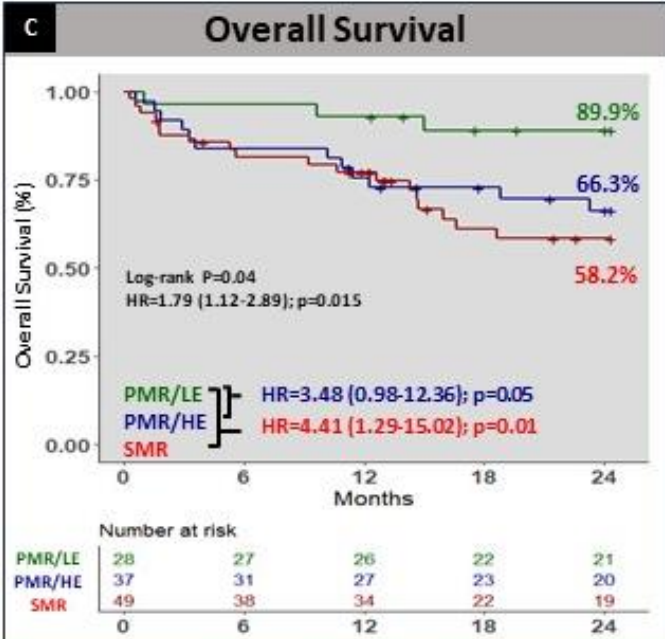
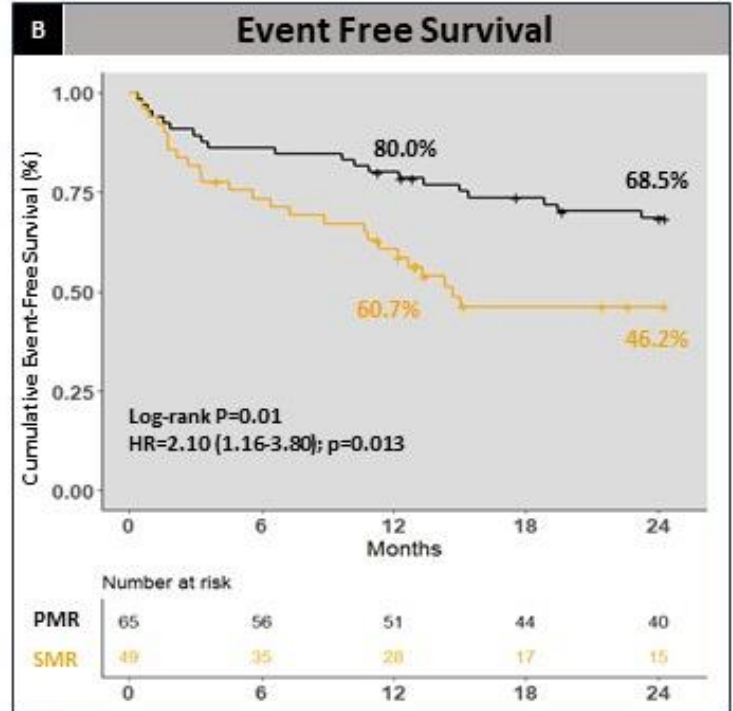
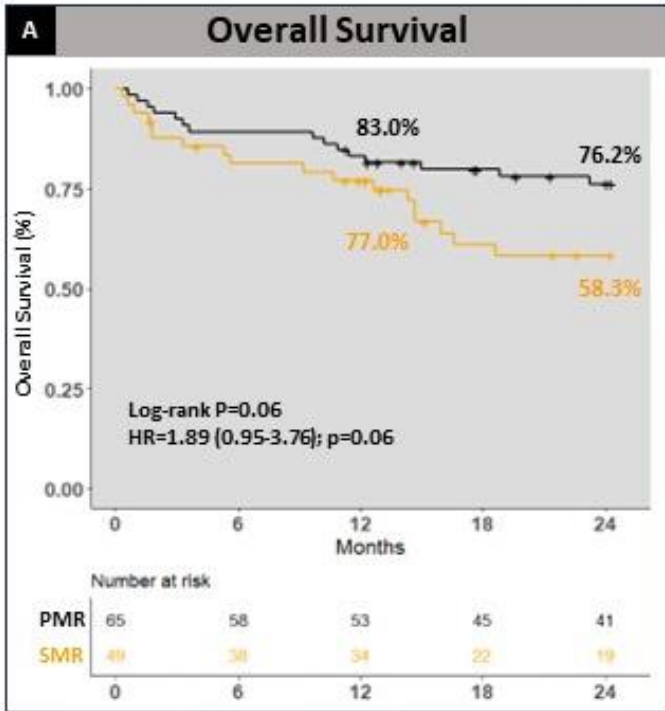
Overall and Event-Free Survival Analysis According to PH severity



HR= Hazards Ratio, PH= pulmonary hypertension

Figure S2. Survival Analysis according to MR etiology and the 3 profiles stratified by Ea and MR etiology.

Survival Analysis According to MR etiology and Hemodynamic Profile



HR= Hazards Ratio, MR= mitral regurgitation; PMR= primary mitral regurgitation; SMR= secondary mitral regurgitation, LE= low elastance (<0.6), HE= high elastance (>0.6)