

## SUPPLEMENTAL MATERIAL

**Table S1.** Differences in clinical parameters at baseline and during follow-up corrected for differences in PVR at baseline.

	Monotherapy (n=45)			Combination therapy (n=35)			<i>P</i> -value for baseline difference between groups	B <sup>1</sup>	95% CI (B)	<i>P</i> -value for change during follow-up <sup>2</sup>
Variables	Baseline	1 year FU	Mean change	Baseline	1 year FU	Mean change				
RHC										
mPAP, mmHg	54 ± 11	53 ± 18	-3 ± 10	56 ± 17	43 ± 12	-11 ± 13**	0.675	-6.7	-11.9 to -1.5	<b>0.012</b>
RAP, mmHg	8 ± 4	7 ± 4	-1 ± 5	8 ± 5	5 ± 4	-3 ± 5***	0.761	-1.7	-4.0 to 0.6	0.142
PVR, dyn·s·cm <sup>-5</sup>	705 (485-998)	574 (347-867)	-162 ± 300**	950 (624-1050)	393 (294-514)	-426 ± 344***	<b>0.045</b>	-0.001	-0.001 to - 0.0001	<b>&lt;0.001</b>
PAWP, mmHg	9 ± 4	8 ± 4	-1 ± 5	8 ± 3	8 ± 4	0 ± 3	0.624	0.6	-1.3 to 2.6	0.533
CI, L/min/m <sup>2</sup>	2.6 ± 0,8	3.2 ± 1.2	0.7 ± 1.2**	2.3 ± 0,5	3.4 ± 0.9	1.1 ± 0.9***	<b>0.032</b>	0.5	-0.1 to 1.0	0.089
Heart rate, bpm	79 ± 18	79 ± 13	-2 ± 17	80 ± 14	74 ± 10	-7 ± 14***	0.769	-4.5	-11.7 to 2.8	0.223
SvO <sub>2</sub> , %	66 ± 7	66 ± 9	0 ± 8	63 ± 8	70 ± 5	6 ± 7***	0.102	6.3	2.5 to 10.1	<b>0.001</b>
CMR variables										
RVEDV, ml/m <sup>2</sup>	79 ± 20	82 ± 22	3 ± 16	81 ± 25	76 ± 25	-5 ± 16	0.703	-6.2	-13.6 to 1.2	0.101
RVESV, ml/m <sup>2</sup>	51 ± 19	51 ± 23	-1 ± 15	55 ± 25	43 ± 22	-13 ± 17***	0.381	-10.3	-17.7 to -3.0	<b>0.006</b>
RV mass, g/m <sup>2</sup>	51 ± 13	50 ± 15	0 ± 11	52 ± 15	46 ± 14	-6 ± 15**	0.759	-5.6	-11.6 to 0.3	0.064

Relative RV wall thickness	0.66 ± 0.18	0.64 ± 0.17	-0.02 ± 0.16	0.69 ± 0.25	0.65 ± 0.28	-0.04 ± 0.26	0.506	0.0	-1 to 0.1	0.541
RVEF, %	36 ± 11	40 ± 14	4 ± 9**	34 ± 12	47 ± 13	13 ± 11***	0.319	8.1	3.6 to 12.7	<b>0.001</b>
LVEDV, ml/m <sup>2</sup>	46 ± 13	51 ± 14	5 ± 8***	44 ± 10	53 ± 12	9 ± 12***	0.367	4.3	-0.4 to 9.0	0.073
LVESV, ml/m <sup>2</sup>	17 ± 8	19 ± 8	1 ± 7	18 ± 7	18 ± 6	0 ± 7	0.691	-1.1	-4.2 to 2.0	0.478
LV mass, g/m <sup>2</sup>	55 ± 14	57 ± 11	2 ± 9*	54 ± 9	57 ± 11	4 ± 9*	0.749	2.3	-1.8 to 6.3	0.269
SV, ml/m <sup>2</sup>	29 ± 8	33 ± 11	4 ± 6***	26 ± 6	35 ± 7	9 ± 8***	0.074	5.0	1.6 to 8.4	<b>0.004</b>
LVEF, %	63 ± 10	66 ± 10	3 ± 10*	60 ± 10	66 ± 7	6 ± 10**	0.160	3.4	-1.2 to 8.1	0.143
<b>RV wall stress, kPA</b>	12 ± 4	11 ± 4	-1 ± 4	13 ± 5	9 ± 4	-4 ± 5***	0.273	-2.5	-4.4 to -0.6	<b>0.011</b>
<b>NT-proBNP, ng/L</b>	741 (159-2392)	408 (98-1915)	-365 ± 1610*	950 (624-1050)	218 (87-572)	-1203 ± 1057***	0.121	-0.1	-0.2 to -0.0	<b>0.045</b>
<b>6MWD, m</b>	418 ± 108	446 ± 115	27 ± 95	409 ± 119	475 ± 114	70 ± 75	0.948	33.0	-8.8 to 74.8	0.120

Data are given as mean ± (SD) or median (IQR). <sup>1</sup>B represents the regression coefficient for the difference in variable change between groups with correction for baseline co-variates. <sup>2</sup>P-value for the difference in change in variables between groups during follow-up with correction for baseline co-variates.

Within group differences between baseline and follow-up variables are indicated by \*p <0.05; \*\*p < 0.01; \*\*\*p <0.001. NT-proBNP was measured in 71 patients and values were log-transformed before testing.

CMR = cardiac magnetic resonance imaging; CI = cardiac index; LVEDV = left ventricular end-diastolic volume; LVEF = left ventricular ejection fraction; LVESV = left ventricular end-systolic volume; LVSV = left ventricular stroke volume; mPAP = mean pulmonary artery pressure NT-proBNP = N-terminal pro-brain natriuretic peptide;; PAWP = pulmonary arterial wedge pressure; PVR = pulmonary vascular resistance; RAP = right atrial pressure; RVEDV = right ventricular end diastolic volume; RVEF = right ventricular ejection fraction; RVESV = right ventricular end-systolic volume, SvO<sub>2</sub>: mixed venous oxygen saturation.

**Table S2.** Differences in clinical parameters in all patients with unchanged therapy during 1 year follow-up.

Variables	Monotherapy (n=37)			Combination therapy (n=32)			<i>P</i> -value for baseline difference between groups	<i>B</i> <sup>1</sup>	95% CI (B)	<i>P</i> -value for change during follow-up <sup>2</sup>
	Baseline	1 year FU	Mean change	Baseline	1 year FU	Mean change				
RHC										
mPAP, mmHg	55 ± 12	54 ± 18	-4 ± 9	55 ± 17	42 ± 12	-12 ± 13***	0.942	-8.1	-13.3 to -2.9	<b>0.003</b>
RAP, mmHg	8 ± 5	7 ± 4	-1 ± 4	8 ± 5	5 ± 3	-3 ± 5**	0.619	-2.3	-4.6 to 0.05	0.055
PVR, dyn·s·cm <sup>-5</sup>	705 (485-976)	589 (347-990)	-144 ± 263**	940 (631-1048)	407 (299-515)	-439 ± 344***	0.078	-0.001	-0.001 to - 0.0001	<b>&lt;0.001</b>
PAWP, mmHg	9 ± 4	8 ± 4	-1 ± 5	8 ± 3	8 ± 3	-1 ± 3	0.911	-0.1	-2.0 to 1.8	0.906
CI, L/min/m <sup>2</sup>	2.6 ± 0.7	3.1 ± 1.3	0.7 ± 1.2*	2.3 ± 0.5	3.4 ± 0.9	1.1 ± 0.9***	0.089	0.4	-0.1 to 0.9	0.145
Heart rate, bpm	79 ± 18	80 ± 13	-1 ± 18	79 ± 13	74 ± 10	-7 ± 14**	0.978	-6.0	-13.7 to 1.8	0.128
SvO <sub>2</sub> , %	66 ± 8	67 ± 9	0 ± 8	64 ± 8	70 ± 5	6 ± 7***	0.349	5.6	1.8 to 9.5	<b>0.005</b>
CMR variables										
RVEDV, ml/m <sup>2</sup>	78 ± 20	83 ± 22	5 ± 16	81 ± 26	76 ± 24	-5 ± 16	0.597	-10.2	-18.1 to -2.2	<b>0.012</b>
RVESV, ml/m <sup>2</sup>	51 ± 20	53 ± 23	2 ± 15	55 ± 26	42 ± 21	-13 ± 17***	0.440	-15.1	-22.8 to -7.4	<b>&lt;0.001</b>
RV mass, g/m <sup>2</sup>	52 ± 13	53 ± 16	1 ± 11	51 ± 15	45 ± 14	-6 ± 15*	0.896	-7.7	-14.0 to -1.4	<b>0.018</b>
Relative RV wall thickness	0.68 ± 0.15	0.65 ± 0.18	-0.03 ± 0.13	0.68 ± 0.25	0.64 ± 0.27	-0.04 ± 0.27	0.850	0.0	-0.1 – 0.1	0.739
RVEF, %	36 ± 12	38 ± 15	2 ± 8	35 ± 12	47 ± 13	13 ± 11***	0.566	11.0	6.4 to 15.5	<b>&lt;0.001</b>
LVEDV, ml/m <sup>2</sup>	46 ± 13	51 ± 15	5 ± 8***	44 ± 10	53 ± 12	9 ± 12***	0.601	3.8	-1.2 to 8.7	0.132

LVESV, ml/m <sup>2</sup>	17 ± 8	19 ± 8	2 ± 7	18 ± 7	18 ± 6	0 ± 7	0.639	-1.6	-5.0 to 1.7	0.322
LV mass, g/m <sup>2</sup>	56 ± 14	58 ± 12	2 ± 9	53 ± 9	57 ± 11	4 ± 9*	0.385	2.1	-2.2 to 6.4	0.334
SV, ml/m <sup>2</sup>	28 ± 8	32 ± 11	4 ± 6**	26 ± 6	35 ± 7	9 ± 8***	0.208	5.1	1.5 to 8.7	<b>0.006</b>
LVEF, %	63 ± 10	65 ± 11	3 ± 10	60 ± 10	66 ± 8	6 ± 10**	0.160	3.5	-1.4 to 8.5	0.161
<b>RV wall stress,</b> <b>kPA</b>	12 ± 4	11 ± 4	0 ± 3	13 ± 5	9 ± 4	-4 ± 5***	0.304	-3.3	-5.3 to -1.5	<b>0.001</b>
<b>NT-proBNP, ng/L</b>	606 (131-1898)	478 (102-1988)	-261 ± 1669*	1435 (536- 2854)	198 (88-561)	-1176 ± 1099***	0.114	-0.2	-0.3 to -0.1	<b>0.002</b>
<b>6MWD, m</b>	411 ± 103	451 ± 97	31 ± 85**	419 ± 110	475 ± 114	69 ± 77***	0.754	38.4	-3.1 to 80.0	0.069

Data are given as mean ± (SD) or median (IQR). <sup>1</sup>B represents the regression coefficient for the difference in variable change between groups without correction for baseline co-variates. <sup>2</sup>P-value for the difference in change in variables between groups during follow-up without correction for baseline co-variates. NT-proBNP values were log-transformed before testing. Within group differences between baseline and follow-up variables are indicated by \*p < 0.05; \*\*p < 0.01; \*\*\*p < 0.001.