

Supplementary table 1

Characteristics of borderline patients at baseline

	n (%) or mean (SD)		median	Q25%-Q75%
gender				
female	19	79.2%		
Demography				
Age, years	61.0	± 9.3	61.0	56.5 - 67.5
Body height, cm	160.8	± 7.4	160.3	155.5 - 165.5
Body weight, kg	66.2	± 13.3	64.9	57.0 - 72.4
BMI	25.5	± 4.5	25.2	-
Vital Signs				
Blood Pressure, systolic, mmHg	118	± 17	114	110 - 132
Blood Pressure, diastolic, mmHg	70	± 11	68	60 - 80
Heart rate, /min	77.8	± 12.9	77	72 - 80
Systemic sclerosis characteristics				
Modified Rodnan Skin Score	10	± 8	8	6 - 12
Duration of SSc, months	11.2	± 6.5	9.5	6.5 - 15.0
Type of systemic sclerosis				
Diffuse cutaneous SSc	6	25.0 %		
Limited cutaneous SSc	15	62.5 %		
Mixed connective tissue disease	3	12.5 %		
WHO-functional class				
I	1	4.2 %		
II	4	16.7 %		
III	12	50.0 %		

BMI = Body Mass Index, SSc = Systemic Sclerosis

Supplementary table 2

Characteristics of borderline patients at baseline developing and not developing PH

	borderline patients not developing PH					patients developing manifest PH					p-value
	n	mean	SD	median	Q25%-Q75%	n	mean	SD	median	Q25%-Q75%	
6-MWD	15	320 ± 111		375	231 - 393	7	311 ± 153		364	198 - 472	
NTproBNP	14	170 ± 457		37	-51 - 269	7	195 ± 387		61	40 - 104	
pulmonary function											
FVC, l	17	2.23 ± 0.7		2.2	1.8 - 2.5	6	3.0 ± 0.6		3.1	2.8 - 3.3	*
FVC, %	17	84.45 ± 20.0		88.3	67.2 - 95.9	7	89.8 ± 27.6		82.9	71.0 - 121.0	
FEV ₁ , l	17	1.6 ± 0.5		1.6	1.4 - 1.8	6	2.2 ± 0.4		2.3	2.1 - 2.5	*
FEV ₁ , %	17	74.62 ± 13.4		77.0	63.0 - 84.2	6	83.8 ± 21.0		86.1	71.8 - 104.3	
DL _{CO} , mmol/min/kPa	17	7.1 ± 3.4		7.5	4.6 - 10.0	6	10.8 ± 2.8		10.9	8.5 - 13.4	
DL _{CO} , %	17	43.3 ± 12.8		42.9	37.0 - 50.5	7	42.9 ± 12.8		36.8	31.9 - 55.0	*
DL _{CO} /VA, mmol/min/kPa/l	17	3.0 ± 1.2		3.1	2.6 - 3.6	6	2.7 ± 0.5		2.5	2.5 - 3.0	
DL _{CO} /VA, %	17	69.3 ± 18.7		70.7	61.4 - 78.0	6	61.7 ± 14.0		60.7	52.3 - 69.7	
TLC, %	14	73.4 ± 18.5		70.6	58.5 - 82.0	6	82.7 ± 28.3		83.0	59.1 - 101.8	
RV, %	15	66.3 ± 26.6		62.6	52.4 - 74.5	6	74.3 ± 35.8		72.1	39.3 - 96.8	
Echocardiography											
LA, mm	16	31.7 ± 4.9		32.0	27.3 - 34.6	6	33.2 ± 5.4		31.5	30.0 - 33.0	
IVC, mm	12	14.9 ± 4.2		15.6	12.3 - 18.7	5	13.4 ± 3.3		13.0	12.1 - 13.1	
IVS, mm	16	10.2 ± 1.6		10.6	9.8 - 11.1	6	9.3 ± 2.4		9.0	8.0 - 10.7	
RA, cm ²	15	12.1 ± 4.3		11.6	9.0 - 14.3	6	15.6 ± 4.8		16.8	11.3 - 19.4	
RVD, mm	14	26.2 ± 3.7		26.2	22.6 - 30.0	6	26.8 ± 5.5		27.5	21.0 - 32.0	
RV, cm ²	14	13.3 ± 4.9		12.5	10.6 - 15.3	6	19.6 ± 2.7		19.0	18.5 - 21.0	*
LV-EDD, mm	16	44.5 ± 4.3		44.8	42.5 - 46.9	6	50.0 ± 4.8		51.0	46.0 - 54.1	*
LV-ESD, mm	16	27.0 ± 4.1		26.0	25.0 - 29.5	6	31.3 ± 6.4		30.3	29.0 - 35.0	
TRV, m/s	17	2.7 ± 0.3		2.7	2.5 - 2.8	6	2.6 ± 0.4		2.6	2.5 - 2.7	
TAPSE, mm	15	20.4 ± 5.6		19.1	15.5 - 24.0	6	24.7 ± 7.8		22.5	22.0 - 28.2	
sPAP, mmHg	17	33.5 ± 5.5		33.7	30.0 - 36.4	6	33.1 ± 8.7		32.4	29.2 - 34.2	
right heart catheterisation											
mPAP, mmHg	17	22.0 ± 0.9		22.0	21.0 - 23.0	7	22.6 ± 1.1		22.0	22.0 - 24.0	
PAWP, mmHg	17	10.9 ± 2.4		11.0	10.0 - 12.0	7	11.6 ± 3.4		12.0	8.0 - 15.0	
TPG, mmHg	17	10.8 ± 2.3		12.0	9.0 - 12.0	7	11.0 ± 3.4		11.0	9.0 - 14.0	
CO, l/min	17	4.9 ± 1.3		4.4	3.9 - 5.9	7	4.8 ± 0.6		4.9	4.4 - 5.2	
PVR, dynes	17	190.2 ± 64.9		181.0	140.0 - 223.3	7	183.9 ± 64.3		169.2	146.9 - 231.0	
RAP, mmHg	17	4.8 ± 2.4		4.0	3.0 - 3.46	7	5.6 ± 2.8		5.0	4.0 - 7.0	

PH = pulmonary hypertension, Q25% - Q75% = 25% and 75% quantiles, 6-MWD = 6-minute walking distance, NTproBNP = N-terminal pro Brain Natriuretic Peptide, FVC = forced vital capacity, FEV1 = forced expiratory volume in one second, DLCO = diffusion capacity of the lung for carbon monoxide, VA = alveolar volume, TLC = total lung capacity, RV = residual volume, LA = left atrium, IVC = inferior vena cava, IVS = interventricular septum, RA = right atrium, RVD = right ventricular diameter, RV = right ventricle, LV = left ventricle, EDD = end-diastolic diameter, ESD = end-systolic diameter, TRV = tricuspid regurgitation velocity, TAPSE = tricuspid annular plane systolic excursion, sPAP = systolic pulmonary arterial hypertension, mPAP = mean pulmonary arterial pressure, PAWP = pulmonary arterial wedge pressure, TPG = transpulmonary gradient, CO = cardiac output, PVR = pulmonary vascular resistance.

Supplementary table 3

baseline characteristics, all patients - extended description

	n	mean	SD	median	Q25%-Q75%
6-MWD	91	403 ± 111		419	335 - 477
NT-proBNP, pg/ml	95	216 ± 266		124	67 - 256
pulmonary function testing					
FVC, l	94	2.85 ± 1.0		2.7	2.08 - 3.54
FVC, %	96	91.2 ± 23.7		90.9	73.2 - 110
FEV ₁ , l	94	2.2 ± 0.8		2.1	1.52 - 2.81
FEV ₁ , %	95	85.7 ± 22.9		84.2	68.3 - 101
DL _{CO} , mmol/min/kPa	93	7.5 ± 4.0		5.5	4.57 - 10.31
DL _{CO} , %	95	48.9 ± 10.8		51.1	41.3 - 57.1
DL _{CO} /VA, mmol/min/kPa/l	93	2.5 ± 1.5		2.54	1.11 - 3.4
DL _{CO} /VA, %	93	71.4 ± 16.9		69.7	60.2 - 82.9
TLC, %	83	85.8 ± 22.3		87.2	68.0 - 101.8
RV, %	84	85.8 ± 33.1		82.5	62.8 - 106.4
echocardiography					
LA, mm	93	29.1 ± 6.4		29	25.5 - 32.0
IVC, mm	82	14.0 ± 3.7		14	11.8 - 16.0
IVS, mm	92	10.1 ± 1.8		10	9.0 - 11.0
RA, cm ²	89	12.1 ± 3.7		11.8	9.3 - 14.0
RVD, mm	85	29.1 ± 5.6		30	26.0 - 33.0
RV, cm ²	88	14.5 ± 4.3		14.7	11.7 - 17.0
LV-EDD, mm	92	44.1 ± 5.5		44	40.5 - 47.0
LV-ESD, mm	91	27.0 ± 5.1		26	23.5 - 30.0
TRV, m/s	88	2.4 ± 0.4		2.41	2.2 - 2.6
TAPSE, mm	89	22.5 ± 4.6		22	19.8 - 25.0
sPAP, mmHg	87	29.1 ± 7.1		28.4	24.4 - 33.1
right heart catheterisation					
mPAP, mmHg	96	17.1 ± 4.0		17	15.0 - 20.5
PAWP, mmHg	96	8.5 ± 3.3		9	6.0 - 11.0
TPG, mmHg	96	8.5 ± 2.9		8	6.0 - 11.0
CO, l/min	96	5.3 ± 1.2		5.2	4.4 - 6.2
PVR, dynes	96	135.2 ± 55.4		124.2	100.1 - 163.0
RAP, mmHg	96	4.1 ± 2.4		4	2.0 - 5.0

PH = pulmonary hypertension, Q25% - Q75% = 25% and 75% quantiles, 6-MWD = 6-minute walking distance, NTproBNP = N-terminal pro Brain Natriuretic Peptide, FVC = forced vital capacity, FEV1 = forced expiratory volume in one second, DLCO = diffusion capacity of the lung for carbon monoxide, VA = alveolar volume, TLC = total lung capacity, RV = residual volume, LA = left atrium, IVC = inferior vena cava, IVS = interventricular septum, RA = right atrium, RVD = right ventricular diameter, RV = right ventricle, LV = left ventricle, EDD = end-diastolic diameter, ESD = end-systolic diameter, TRV = tricuspid regurgitation velocity, TAPSE = tricuspid annular plane systolic excursion, sPAP = systolic pulmonary arterial hypertension, mPAP = mean pulmonary arterial pressure, PAWP = pulmonary arterial wedge pressure, TPG = transpulmonary gradient, CO = cardiac output, PVR = pulmonary vascular resistance.

Supplementary table 4

Additional baseline characteristics of PH Groups

	PH left heart disease						PH lung disease					
	n	mean	SD	median	Q25%-Q75%		n	mean	SD	median	Q25%-Q75%	
6-MWD	7	416	± 188	445	394	- 560	10	392	± 101	376	330	- 477
NT-proBNP, pg/ml	7	382	± 111	256	92	- 310	10	115	± 87	107	34	- 160
pulmonary function testing												
FVC, l	7	2.9	± 0.9	3.1	2.6	- 3.7	9	2.7	± 1.2	2.0	1.9	- 3.9
FVC, %	7	94.3	± 33.3	102.0	77.2	- 113.2	10	77.1	± 27.3	69.5	55.8	- 90.8
FEV ₁ , l	7	2.3	± 0.7	2.6	1.9	- 2.8	9	2.4	± 1.2	1.9	1.6	- 3.8
FEV ₁ , %	7	87.2	± 25.5	92.2	85.3	- 100.9	9	77.3	± 31.0	60.6	59.0	- 80.8
DL _{co} , mmol/min/kPa	7	8.2	± 4.1	4.8	4.7	- 12.7	9	6.0	± 2.3	5.5	4.9	- 7.5
DL _{co} , %	7	55.3	± 2.1	55.1	54.5	- 56.5	10	38.6	± 12.5	34.0	27.3	- 48.1
DL _{co} /VA, mmol/min/kPa/l	7	1.9	± 0.8	1.4	1.1	- 3.0	9	2.6	± 2.3	2.5	1.0	- 2.5
DL _{co} /VA, %	7	69.0	14.7	65.1	57.8	85.3	9	60.6	16.4	58.7	52.8	61.7
TLC, %	6	96.5	± 30.9	96.5	83.0	- 123.1	8	66.8	± 27.7	57.7	49.9	- 76.3
RV, %	6	11.4	± 33.3	116.6	78.9	- 137.5	8	57.9	± 33.2	52.3	37.3	- 78.9
echocardiography												
LA, mm	7	28.9	± 6.9	30.0	20.0	- 32.0	9	26.8	± 8.4	27.0	22.0	- 30.0
IVC, mm	7	13.0	± 3.5	12.0	11.0	- 15.3	8	15.0	± 3.7	15.6	11.6	- 18.5
IVS, mm	7	10.4	± 0.7	9.0	8.5	- 10.0	9	10.1	± 1.8	10.0	9.0	- 11.0
RA, cm ²	7	11.9	± 3.4	11.6	8.8	- 13.0	9	12.6	± 4.8	12.0	9.8	- 16.0
RVD, mm	5	31.6	± 3.2	35.0	29.0	- 35.0	9	28.7	± 4.8	28.0	26.0	- 33.0
RV, cm ²	7	13.7	± 5.7	15.0	12.2	- 16.0	9	14.4	± 4.9	14.9	11.5	- 18.0
LV-EDD, mm	7	43.8	± 5.9	46.0	37.0	- 49.0	9	41.4	± 6.7	42.6	39.0	- 43.0
LV-ESD, mm	7	28.3	± 2.7	29.0	25.0	- 31.0	8	27.3	± 6.3	25.6	23.5	- 29.0
TRV, m/s	6	2.5	± 0.1	2.5	2.3	- 2.6	9	2.4	± 0.4	2.3	2.2	- 2.6
TAPSE, mm	7	22.6	± 5.7	23.0	17.0	- 27.0	9	21.2	± 4.2	22.0	19.0	- 22.0
sPAP, mmHg	6	30.3	± 2.5	29.8	26.2	- 31.6	9	28.2	± 7.1	26.5	24.4	- 32.7
right heart catheterisation												
mPAP, mmHg	7	17.0	± 4.5	20.0	13.0	- 20.0	10	18.5	± 3.3	18.5	16.0	- 22.0
PAWP, mmHg	7	8.9	± 5.1	8.0	6.0	- 12.0	10	8.9	± 1.9	9.0	7.0	- 10.0
TPG, mmHg	7	7.3	± 1.3	8.0	6.0	- 8.0	10	10.7	± 3.6	11.0	10.0	- 13.0
CO, l/min	7	5.1	± 0.8	5.0	4.4	- 5.6	10	5.0	± 1.0	5.0	4.1	- 5.9
PVR, dynes	7	128.4	± 29.5	111.0	105.7	- 167.4	10	161.3	± 74.8	153.0	123.1	- 231.0
RAP, mmHg	7	4.7	± 3.6	5.0	3.0	- 6.0	10	4.6	± 2.2	4.5	4.1	- 5.0

PH left heart disease = pulmonary hypertension secondary to left heart disease, PH lung disease = pulmonary hypertension secondary to lung disease, Q25% - Q75% = 25% and 75% quantiles, 6-MWD = 6-minute walking distance, NTproBNP = N-terminal pro Brain Natriuretic Peptide, FVC = forced vital capacity, FEV1 = forced expiratory volume in one second, DLCO = diffusion capacity of the lung for carbon monoxide, VA = alveolar volume, TLC = total lung capacity, RV = residual volume, LA = left atrium, IVC = inferior vena cava, IVS = interventricular septum, RA = right atrium, RVD = right ventricular diameter, RV = right ventricle, LV = left ventricle, EDD = end-diastolic diameter, ESD = end-systolic diameter, TRV = tricuspid regurgitation velocity, TAPSE = tricuspid annular plane systolic excursion, sPAP = systolic pulmonary arterial hypertension, mPAP = mean pulmonary arterial pressure, PAWP = pulmonary arterial wedge pressure, TPG = transpulmonary gradient, CO = cardiac output, PVR = pulmonary vascular resistance.

Supplementary table 5

Baseline characteristic of patients according to follow-up (patients who did perform RHC vs. patients who only performed noninvasive follow-up)

	noninvasive follow-up							right heart catheterisation							p-value
	n	mean	SD	median	Q25%-Q75%		n	mean	SD	median	Q25%-Q75%				
6-MWD	13	456	± 108	480	420	- 537	66	384	± 110	397	334	- 451	*		
NT-proBNP, pg/ml	13	205	± 340	92	60	- 193	69	216	± 249	128	68	- 256			
pulmonary function testing															
FVC, l	13	2.9	± 1.2	2.9	2.1	- 4.0	69	2.8	± 0.9	2.5	2.0	- 3.3			
FVC, %	13	88.5	± 20.5	84.0	73.0	- 103.7	71	90.2	± 23.5	90.0	71.0	- 110.0			
FEV ₁ , l	13	2.4	± 1.0	2.6	1.4	- 3.0	69	2.1	± 0.8	2.0	1.5	- 2.6			
FEV ₁ , %	13	89.0	± 21.5	85.3	70.6	- 109.5	70	83.0	± 22.6	83.7	64.6	- 99.8			
DL _{CO} , mmol/min/kPa	13	4.2	± 1.6	4.4	3.5	- 4.8	69	8.1	± 3.9	7.5	4.7	- 11.0	*		
DL _{CO} , %	13	45.8	± 13.1	47.4	41.8	- 55.2	71	48.7	± 10.8	50.6	40.1	- 57.1			
DL _{CO} /VA, mmol/min/kPa/l	13	1.4	± 0.9	1.1	0.9	- 1.4	69	2.8	± 1.5	2.9	1.5	- 3.6	*		
DL _{CO} /VA, %	13	70.1	± 18.8	67.5	61.0	- 82.9	69	71.4	± 17.3	70.7	59.0	- 83.0			
TLC, %	11	87.1	± 17.6	93.0	75.7	- 100.0	61	83.0	± 21.4	83.0	67.9	- 97.0			
RV, %	11	96.9	± 30.9	102.9	64.0	- 125.0	62	81.2	± 32.5	79.2	62.1	- 102.0			
echocardiography															
LA, mm	13	25.0	± 6.1	25.0	22.0	- 29.0	68	30.3	± 6.1	30.0	26.0	- 33.0	*		
IVC, mm	12	12.3	± 4.5	12.3	9.5	- 14.0	58	14.1	± 3.4	14.0	12.0	- 16.0			
IVS, mm	13	10.5	± 1.5	10.6	9.0	- 11.0	67	10.0	± 1.9	10.0	9.0	- 11.0			
RA, cm ²	13	9.9	± 2.4	9.5	8.4	- 11.2	64	12.7	± 4.0	12.0	10.0	- 15.5	*		
RVD, mm	11	30.8	± 4.2	31.0	29.0	- 33.0	62	28.5	± 6.0	29.5	25.0	- 33.3			
RV, cm ²	13	14.1	± 3.4	14.0	13.3	- 15.0	63	14.8	± 4.4	15.0	11.7	- 18.5			
LV-EDD, mm	13	44.3	± 6.0	44.0	39.0	- 49.0	67	44.2	± 5.4	44.0	41.2	- 47.0			
LV-ESD, mm	13	27.8	± 5.3	26.0	25.0	- 31.0	66	26.8	± 5.1	26.0	23.0	- 30.0			
TRV, m/s	12	2.5	± 0.4	2.5	2.4	- 2.6	66	2.5	± 0.4	2.5	2.3	- 2.7			
TAPSE, mm	13	22.8	± 4.5	23.0	20.0	- 26.0	64	22.5	± 5.0	22.0	19.0	- 26.0			
sPAP, mmHg	12	29.6	± 6.9	29.0	27.3	- 32.8	65	29.7	± 7.4	30.0	25.3	- 33.7			
right heart catheterisation															
mPAP, mmHg	13	16.4	± 4.1	16.0	14.0	- 19.0	71	17.7	± 3.7	18.0	15.0	- 21.0			
PAWP, mmHg	13	6.9	± 2.8	7.0	5.0	- 8.0	71	9.0	± 3.0	9.0	7.0	- 11.0	*		
TPG, mmHg	13	9.4	± 3.5	8.0	7.0	- 12.0	71	8.6	± 2.9	8.0	6.0	- 11.0			
CO, l/min	13	5.3	± 1.3	5.3	4.4	- 6.2	71	5.3	± 1.2	5.2	4.4	- 6.1			
PVR, dynes	13	148.4	± 73.1	12.7	103.2	- 171.4	71	138.2	± 52.9	126.0	104.9	- 163.3			
RAP, mmHg	13	3.5	± 2.0	4.0	2.0	- 5.0	71	4.2	± 2.3	4.0	3.0	- 5.0			

Q25% - Q75% = 25% and 75% quantiles, 6-MWD = 6-minute walking distance, NTproBNP = N-terminal pro Brain Natriuretic Peptide, FVC = forced vital capacity, FEV1 = forced expiratory volume in one second, DLCO = diffusion capacity of the lung for carbon monoxide, VA = alveolar volume, TLC = total lung capacity, RV = residual volume, LA = left atrium, IVC = inferior vena cava, IVS = interventricular septum, RA = right atrium, RVD = right ventricular diameter, RV = right ventricle, LV = left ventricle, EDD = end-diastolic diameter, ESD = end-systolic diameter, TRV = tricuspid regurgitation velocity, TAPSE = tricuspid annular plane systolic excursion, sPAP = systolic pulmonary arterial hypertension, mPAP = mean pulmonary arterial pressure, PAWP = pulmonary arterial wedge pressure, TPG = transpulmonary gradient, CO = cardiac output, PVR = pulmonary vascular resistance. * denotes a significant difference between groups.

Supplementary table 6
Additional follow-up characteristics of PH Groups

	normal					PH														
						PAH					PH left heart disease					PH lung disease				
	n	mean	SD	median	Q25%-Q75%	n	mean	SD	median	Q25%-Q75%	n	mean	SD	median	Q25%-Q75%	n	mean	SD	median	Q25%-Q75%

6-MWD	47	399 ± 121		400	327 - 472	4	325 ± 133		292	225 - 425	7	376 ± 159		390	340 - 434	8	366 ± 122		330	261 - 461
NT-proBNP, pg/ml	57	276 ± 377		132	74 - 237	5	418 ± 538		237	107 - 328	6	466 ± 717		177	114 - 328	9	1142 ± 2963		123	107 - 262
pulmonary function testing																				
FVC, l	58	2.6 ± 0.9		2.6	1.9 - 3.34	3	3.0 ± 0.3		2.9	2.8 - 3.3	6	3.3 ± 0.6		3.3	2.9 - 3.7	8	2.4 ± 1.6		1.7	1.2 - 4.1
FVC, %	57	88.9 ± 22		92.1	68.2 - 108.2	4	105.4 ± 27.7		115.4	87.3 - 123.4	6	106.2 ± 16.7		111.8	99 - 118.7	9	73 ± 34		56.4	53.5 - 106.6
FEV ₁ , l	57	2.01 ± 0.8		2.0	1.4 - 2.5	3	2.0 ± 0.1		2.0	1.9 - 2.1	6	2.5 ± 0.5		2.6	2.2 - 3.0	8	2.0 ± 1.2		1.5	1.0 - 3.3
FEV ₁ , %	57	81.8 ± 20,5		80.1	64.9 - 95.9	3	95.2 ± 10.9		90.5	87.4 - 107.7	6	96.2 ± 12.3		95.2	84.1 - 109.4	9	74.2 ± 31.7		67.8	53.8 - 96.5
DL _{co} , mmol/min/kPa	55	2.9 ± 1.6		3.9	3.0 - 4.77	3	3.0 ± 0.4		3.2	2.6 - 3.3	5	4.4 ± 0.5		4.5	4.5 - 4.6	5	3.1 ± 1.3		3.5	2.2 - 3.6
DL _{co} , %	55	47.4 ± 11.2		50.4	41.3 - 55.7	4	38.8 ± 8.2		38.8	31.9 - 45.7	5	54.6 ± 8.9		54	48.1 - 62	6	34.8 ± 13.1		31	24.3 - 49.6
DL _{co} /VA, mmol/min/kPa/l	55	1.38 ± 0.9		1.05	0.9 - 1.4	3	0.7 ± 0.1		0.7	0.6 - 0.8	5	2.5 ± 1.9		1.5	1.1 - 3.6	6	1.7 ± 2.2		0.8	0.6 - 1.6
DL _{co} /VA, %	55	69.0 ± 15.6		68.1	60.3 - 82.8	3	48.8 ± 6.8		52.7	41 - 52.7	5	79.1 ± 18.5		75	71.2 - 93.1	6	56.2 ± 22.6		50.8	45.7 - 78
TLC, %	55	88.7 ± 21.9		89	68.1 - 106.2	3	101.3 ± 6.4		102.1	94.5 - 107.2	6	101.8 ± 19.1		104.1	85.1 - 111.9	6	81.1 ± 36		72.9	54 - 122.4
RV, %	49	95.16 ± 34.6		97.9	79 - 113	3	93.8 ± 7.9		89.9	88.6 - 102.9	5	100.5 ± 35.4		94.8	89.1 - 105.3	6	38.9 ± 42.5		65.2	54.1 - 107.9
echocardiography																				
LA, mm	55	30.4 ± 6.5		30	28 - 34	4	29.2 ± 1.9		29	28 - 30.4	7	31.6 ± 8.1		32	8.5 - 35	6	26.8 ± 7.3		26.5	22 - 32
IVC, mm	50	12.2 ± 5.9		14	8.6 - 16	2	18.5 ± 5.0		18.5	15 - 22	5	11.1 ± 8.0		10	8,5 - 13	7	13.9 ± 2.8		14	11 - 16
IVS, mm	30	10.7 ± 2.0		10.4	9 - 12	3	8.7 ± 1.6		9.2	7 - 10	2	10.1 ± 0.1		10.1	10 - 10.2	5	7.5 ± 3.8		8	8 - 9.3
RA, cm ²	54	12.6 ± 4.1		12	10.6 - 13.8	4	15.8 ± 6.5		13.8	11.5 - 20	6	12.5 ± 3.0		12.8	10 - 14	8	11.7 ± 3.3		12.4	9.2 - 14.5
RVD, mm	30	31 ± 7		30	27 - 36	4	36 ± 8		34	30 - 41	3	33 ± 3		33	30 - 36	5	28 ± 4		26	26 - 30
RV, cm ²	53	13.24 ± 3.63		13.5	10.3 - 15.5	4	15.9 ± 7.1		15.5	9.8 - 22	6	12.9 ± 2.0		13.0	11.3 - 15	9	12.3 ± 2.7		12.5	10.3 - 15
LV-EDD, mm	31	42.3 ± 5.7		43	39 - 46	4	47.2 ± 5.4		46	42.9 - 51.5	2	45.7 ± 0.4		45.7	45.4 - 46	5	35.5 ± 19.0		40	34 - 44
LV-ESD, mm	31	26.4 ± 5.5		27	21.8 - 31	4	29.6 ± 2.1		29.8	28.3 - 31	2	31.2 ± 1.2		31.2	30.3 - 32	5	23.5 ± 14.8		24	21 - 24
TRV, m/s	47	2.5 ± 0.4		2.5	2.3 - 2.8	3	2.9 ± 0.6		2.8	2.4 - 3.6	6	2.4 ± 0.4		2.4	2.1 - 2.6	7	2.9 ± 0.4		2.8	2.5 - 3.2
TAPSE, mm	56	22.1 ± 4.2		22	19 - 25	5	22 ± 3.5		24	22 - 24	7	22.3 ± 8,2		22	19 - 27	9	21.8 ± 6.9		20	18 - 26
sPAP, mmHg	47	31.4 ± 8.4		30	25.8 - 35.7	3	40.3 ± 14.9		35.9	28.0 - 56.8	6	28.8 ± 7.0		27.5	22.8 - 31.6	7	38.7 ± 9.7		36.8	29.6 - 47.0
right heart catheterisation																				
mPAP, mmHg	52	19 ± 3.7		19	16 - 22	5	30.6 ± 3.2		31	28 - 32	5	27.8 ± 2		27	26 - 30	9	27.7 ± 6.6		27	26 - 32
PAWP, mmHg	52	10.5 ± 3		11	8,5 - 13	5	11 ± 3		12	11 - 12	5	17.6 ± 3.3		16	16 - 20	9	9.1 ± 2.3		9	8 - 11
TPG, mmHg	52	8.4 ± 2.6		8	6,5 - 11	5	10.4 ± 2.3		10	9 - 11	5	7.6 ± 1.7		8	7 - 9	9	10.2 ± 3.1		11	10 - 11
CO, l/min	52	5.2 ± 1.2		5	4.2 - 5.9	5	5.4 ± 0.7		5,3	5 - 5,4	5	5.4 ± 1.3		6	5.4 - 6.1	9	4.7 ± 0.8		4.6	4.3 - 4.7
PVR, dynes	52	144.3 ± 79.0		147.2	98.3 - 180.5	5	300.3 ± 81.5		281	250 - 345	5	167.6 ± 85.6		132.7	131 - 163	9	340.1 ± 171.1		330.4	238 - 483
RAP, mmHg	50	5 ± 3		5	3 - 6	5	6 ± 1		7	5 - 7	5	10 ± 3		9	8 - 10	9	5 ± 2		4	4 - 6

PAH = pulmonary arterial hypertension, PH left heart disease = pulmonary hypertension secondary to left heart disease, PH lung disease = pulmonary hypertension secondary to lung disease, Q25% - Q75% = 25% and 75% quantiles, 6-MWD = 6-minute walking distance, NTproBNP = N-terminal pro Brain Natriuretic Peptide, FVC = forced vital capacity, FEV1 = forced expiratory volume in one second, DLCO = diffusion capacity of the lung for carbon monoxide, VA = alveolar volume, TLC = total lung capacity, RV = residual volume, LA = left atrium, IVC = inferior vena cava, IVS = interventricular septum, RA = right atrium, RVD = right ventricular diameter, RV = right ventricle, LV = left ventricle, EDD = end-diastolic diameter, ESD = end-systolic diameter, TRV = tricuspid regurgitation velocity, TAPSE = tricuspid annular plane systolic excursion, sPAP = systolic pulmonary arterial hypertension, mPAP = mean pulmonary arterial pressure, PAWP = pulmonary arterial wedge pressure, TPG = transpulmonary gradient, CO = cardiac output, PVR = pulmonary vascular resistance.