Supplemental Table 1: Multivariable Cox analyses

	Model A			Model B			Model C			Model D		
	Hazard ratio	CI 95%	P-value	Hazard ratio	CI 95%	P-value	Hazard ratio	CI 95%	P-value	Hazard ratio	CI 95%	P-value
NYHA FC, per class	1.262	0.820 – 1.944	0.291	1.148	0.728 – 1.809	0.552	1.103	0.678 – 1.795	0.693	1.262	0.820 – 1.942	0.291
6MWD, per m	0.997	0.995 – 0.998	<0.001	0.997	0.995 – 0.999	0.006	0.997	0.996 – 0.999	0.007	0.997	0.995 – 0.998	<0.001
NT-proBNP, per ng/L	1.000	1.000 – 1.000	0.157	1.000	1.000 – 1.000	0.099	1.000	1.000 – 1.000	0.125	1.000	1.000 – 1.000	0.157
PaO2, per mmHg				0.997	0.974 – 1.020	0.777						
DLco, per %							0.990	0.963 – 1.018	0.494			
Age, per year										0.998	0.971 – 1.026	0.900

Abbreviations: DLco: diffusing capacity for carbon monoxide; NT-proBNP: N-terminal pro-brain natriuretic peptide; NYHA FC: New York Heart Association functional class; 6-MWD: 6-minute walking distance

Supplemental Table 2: Baseline risk status according to different risk assessment methods

	Low risk	Intermediate risk		High risk
		Intermediate-low risk	Intermediate-high risk	
REVEAL 2.0, n (%)	59 (18)	50 (15)		218 (67)
REVEAL Lite 2, n (%)	66 (20)	62 (19)		199 (61)
ESC/ERS guidelines 3 strata model, n (%)	46 (14)	224 (69)		57 (17)
ESC/ERS guidelines 4 strata model, n (%)	19 (6)	79 (24)	162 (50)	67 (20)

	4	3	2	1	0
Number of low-risk criteria (/4), n (%)	5 (2)	32 (10)	76 (23)	122 (37)	92 (28)
Number of non-invasive low risk criteria (/3), n (%)		12 (3.5)	28 (8.5)	62 (19)	225 (69)

4 low-risk criteria: NYHA FC I-II, 6-MWD >440 m, right atrial pressure (RAP) <8 mmHg, cardiac index (CI) ≥ 2.5 L/min/m²

3 non-invasive low risk criteria: NYHA FC I-II, 6-MWD >440 m, BNP <50 ng/L or NT-proBNP <300 ng/L

Supplemental Table 3:
Sensitivity analysis in 81 patients under 60 years of age: Comparison of the discrimination of risk scores calculated at baseline and at first follow-up using Harrell's c-statistic.

	Baseline **C index (CI 95%)**	**Follow-up** **C index (CI 95%)**
REVEAL 2.0	0.67 (0.57 – 0.77)	0.75 (0.63 – 0.86)
REVEAL Lite 2	0.67 (0.59 – 0.75)	0.75 (0.64 – 0.86)
ESC / ERS risk score in 3 strata	0.65 (0.57 – 0.74)	0.69 (0.54 – 0.83)
ESC/ ERS risk score in 4 strata	0.67 (0.58 – 0.75)	0.81 (0.71 – 0.91)
Number of low-risk criteria (/4)	0. 63 (0.53 – 0.73)	0.69 (0.53 – 0.85)
Number of non-invasive low risk criteria (/3)	0.65 (0.55 – 0.74)	0.78 (0.68 – 0.88)

Supplemental Table 4: Baseline characteristics of PAH patients (after matching on age, sex and PVR by propensity score according to the ratio 1 PVOD / 3 PAH)

Characteristic	**PAH Patients (n=696)**
Age, years	65±13
Female sex, n (%)	206 (30)
Body mass index, kg/m^2	27.5±5.6
Aetiology of PAH, n (%)	
Idiopathic PAH	337 (48)
Heritable PAH	29 (4)
Drug and toxin-induced	53 (8)
Connective tissue disease	151 (22)
Systemic sclerosis	120
Congenital heart disease	1 (0)
HIV infection	16 (2)
Porto pulmonary hypertension	109 (16)
Comorbidities, n (%)	
Obesity	204 (29)
Coronary heart disease	84 (12)
Diabetes mellitus	161 (23)
Hypertension	329 (47)
NYHA FC, n (%)	
I-II / III / IV	222 (32) / 382 (55) / 92 (13)
6-MWD, m	320 (208 – 402)
NT-proBNP, ng/L (n 306)	1056 (426 – 2476)
BNP, ng/L (n = 390)	265 (83 – 547)
Increased BNP or NT-proBNP, n (%)	563 (81)
Haemodynamics	
Right atrial pressure, mmHg	8 ± 5
Mean pulmonary arterial pressure, mmHg	45 ± 11
Pulmonary artery wedge pressure, mmHg	9 ± 4
Cardiac output, L/min	4.6 ± 1.4
Cardiac index, L/min/m^2	2.5 ± 0.7
Pulmonary vascular resistance, WU	8.8 ± 4.4
SvO_2, %	63 ± 9
Heart rate, bpm	76 ± 16
Stroke Volume Index, ml/m^2	33 ± 11
Pulmonary function tests	
FEV-1, *% of predicted*	86 ± 19
FVC, *% of predicted*	93 ± 20
TLC, *% of predicted*	92 ± 18
DLco, *% of predicted*	47 ± 19
DLco/AV, *% of predicted*	58 ± 22
Arterial blood gases on ambient room air	
PaO_2, *mmHg*	64 ± 17
$PaCO_2$, *mmHg*	33 ± 6

Risk stratification at baseline (3-strata model), n (%)	
Low-risk	106 (15)
Intermediate-risk	501 (72)
High-risk	89 (13)
Risk stratification at baseline (4-strata model), n (%)	
Low-risk	68 (10)
Intermediate-low risk	250 (36)
Intermediate-high risk	299 (40)
High-risk	79 (15)

Abbreviations: ; BNP: brain natriuretic peptide; DLco: diffusing capacity for carbon monoxide; DLco/AV: diffusing capacity for carbon monoxide to alveolar volume ratio; FEV-1: forced expiratory volume in 1 second; FVC: forced vital capacity; HIV: human immunodeficiency virus; NT-proBNP: N-terminal pro-brain natriuretic peptide; NYHA FC: New York Heart Association functional class; PaO_2: partial pressure of oxygen; $PaCO_2$: partial pressure of carbon dioxide; PAH: pulmonary arterial hypertension; 6-MWD: 6-minute walking distance; SvO_2: mixed venous oxygen saturation; TLC: total lung capacity.