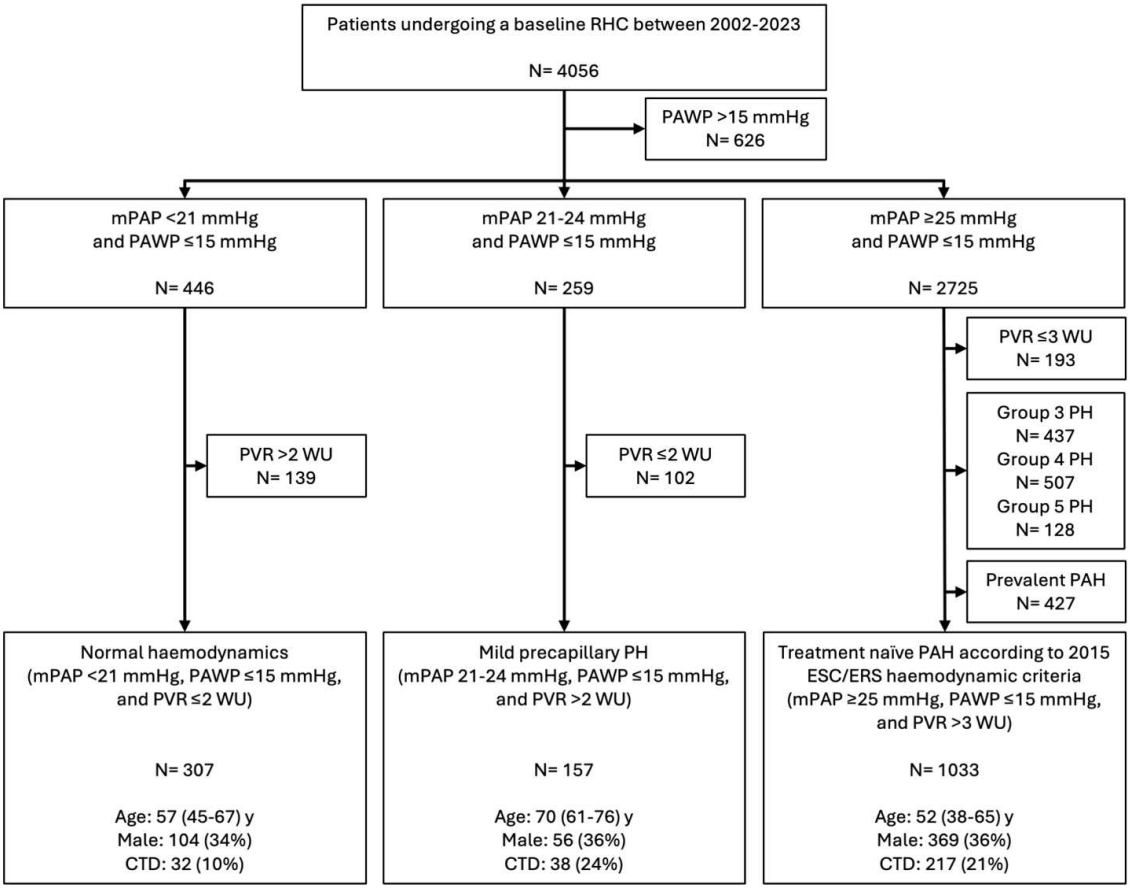
Supplementary Figure S1. Flow chart showing the process of selecting patients and creating matched controls for the study.



Legend: CTD, connective tissue disease; ESC/ERS, ESC/ERS, European society of cardiology/European respiratory society; mPAP, mean pulmonary arterial pressure; PAWP, pulmonary artery wedge pressure; PAH, pulmonary arterial hypertension; PH, pulmonary hypertension; PVR, pulmonary vascular resistance; RHC, right heart catheterization.

Supplementary Table S1. Definition of left heart and lung disease.

Left heart disease was defined by instrumental and/or clinical findings suggestive of left heart disease: diastolic dysfunction, systolic dysfunction and/or left heart cardiomyopathy, and significant valvular heart disease.	
	(i) Diastolic dysfunction was defined by: 1) enlarged left atrial size (unless in the presence of corrected or uncorrected congenital heart disease or hyperkinetic circulation defined as a cardiac index >4 l/min/m^2) defined as: . at least mild left atrial volume increase (>34 ml/m^2) in case of sinus rhythm . at least moderate left atrial volume increase (>41 ml/m^2) in case of atrial fibrillation AND at least one among: a. mitral doppler measurements suggestive of diastolic dysfunction (E/e' ≥ 14 and/or E/A ratio >2) b. pulmonary artery wedge pressure between 13-15 mmHg on optimized diuretic therapy c. H2FPEF score ≥4 d. HFpEF-ABA score >75% 2) H2FPEF score ≥6. 3) HFpEF-ABA score >90%
	(ii) Systolic dysfunction was defined as a left ventricular ejection fraction <50%. Left heart cardiomyopathies include hypertrophic, dilated and restrictive cardiomyopathies
	(iii) Significant valvular disease was based on echo parameters, and defined as more than moderate left-sided valvular stenosis, regurgitation, or presence of left heart prosthetic valves
Lung disease was defined as abnormality identified on lung function (spirometry) and/or imaging of the lungs (>20% extension of parenchymal lung disease at HRCT scan) and/or a multidisciplinary team diagnosis of lung disease.	
	Lung function tests criteria: . Obstructive lung disease was defined by a reduced FEV1/FVC ratio < 0.7, FEV1 < 60% predicted . Restrictive lung disease was defined by a FEV1/FVC ratio > 0.7 and reduced FVC <70% (regardless of the values of FEV1) . All patients treated with bronchodilators were considered to have lung disease if lung function tests met the previous criteria before starting the treatment . DLCO <45% in non-scleroderma population and <32% for the scleroderma population was considered as evidence of lung disease unless in the presence of normal lung function tests and lung parenchyma on HRCT.

Legend: DLCO, diffusion capacity for carbon monoxide; FEV1, forced expiratory volume in 1 second; FVC, forced vital capacity; HRCT, high resolution computed tomography scan.

Supplementary Table S2. Comorbidities and cardio-pulmonary parameters considered for the definition of left heart or lung disease and REVEAL Lite 2 score in patients with mPAP between 21-24 mmHg and PAWP ≤15 mmHg.

	Overall cohort	According to baseline PVR			p-value
		PVR ≤2 WU	PVR 2-3 WU	PVR >3 WU	
		Unclassified PH	Mild precapillary PH		
n	259	102	100	57	
WHO-FC, n (%)		*ǂ	*	ǂ	<0.001
- I	56 (22)	38 (37)	14 (14)	4 (7)	
- II	104 (40)	38 (37)	49 (49)	17 (30)	
- III	91 (35)	25 (25)	33 (33)	33 (58)	
- IV	8 (3)	1 (1)	4 (4)	3 (5)	
6MWD, m (n)	430 (347-512) (n= 171)	435 (360-517) ǂ (n= 65)	452 (360-539) ∬ (n= 66)	384 (280-443) ∬ǂ (n= 40)	0.005
Natriuretic peptides,					
- BNP, pg/ml (n)	140 (67-225) (n= 87)	149 (75-197) (n= 35)	120 (46-196) (n= 30)	162 (78-433) (n= 22)	0.328
- NT-proBNP, pg/ml (n)	245 (115-807) (n= 73)	269 (128-807) (n= 26)	293 (126-994) (n= 33)	163 (81-245) (n= 14)	0.201
BNP/NT-proBNP, n (%)					0.973
- <50/<300 ng/l	63 (39)	22 (36)	25 (40)	16 (44)	
- 50-200/300-650 ng/l	52 (33)	21 (34)	20 (32)	11 (31)	
- 200-800/650-1100 ng/l	28 (17)	12 (20)	10 (16)	6 (17)	
- >800/>1100 ng/l	17 (11)	6 (10)	8 (12)	3 (8)	
eGFR, ml/min	89 (69-100)	91 (75-104)	87 (65-99)	88 (67-98)	0.174
Systemic hypertension, n (%)	156 (60)	64 (63)	63 (63)	29 (51)	0.263
Diabetes mellitus, n (%)	35 (14)	12 (12)	19 (19)	4 (7)	0.086
Atrial fibrillation, n (%)	80 (31)	36 (35)	33 (33)	11 (19)	0.094
BMI, kg/m2	25 (22-29)	26 (23-30) ǂ	25 (23-29)	24 (21-27) ǂ	0.002
Obesity, n (%)	48 (19)	23 (23) ǂ	21 (21)	4 (7) ǂ	0.039
Coronary artery disease, n (%)	31 (12)	4 (4) *ǂ	15 (15) *	12 (21) ǂ	0.003
LVEF, n (%)					0.908
- ≤40%	6 (2)	2 (2)	2 (2)	2 (4)	
- 41-49%	8 (3)	4 (4)	3 (3)	1 (2)	
- ≥50%	245 (95)	96 (94)	95 (95)	54 (95)	
LA dimension, n (%)	n= 231				0.836
- Normal	84 (36)	31 (34)	32 (36)	21 (41)	
- Mildly abnormal	46 (20)	19 (20)	19 (22)	8 (16)	
- Moderately abnormal	59 (26)	22 (24)	22 (25)	15 (29)	
- Severely abnormal	42 (18)	20 (22)	15 (17)	7 (14)	
E/e' ≥ 14 and/or E/A ratio >2, n (%)	16 (11) n= 145	7 (12) n= 55	6 (12) n= 51	3 (8) n= 39	0.729
Valvular heart disease, n (%)					0.607
- Aortic moderate/severe stenosis/regurgitation or prosthetic aortic valve	16 (34)	7 (47)	6 (30)	3 (25)	
- Mitral moderate/severe stenosis/regurgitation or prosthetic mitral valve	24 (51)	7 (47)	11 (55)	6 (50)	
- Double	7 (15)	1 (6)	3 (15)	3 (25)	
PAWP between 13-15 mmHg, n (%)	61 (24)	45 (44) *ǂ	14 (14) *	2 (4) ǂ	<0.001
H2FPEF score	3 (1-5)	3 (1-5)	3 (1-5)	2 (2-3)	0.393
HFpEF-ABA score, %	58 (31-82)	64 (31-86)	58 (30-85)	51 (37-71)	0.487
Left heart disease, n (%)					0.296
- None	131 (51)	49 (48)	48 (48)	34 (60)	
- Diastolic dysfunction	63 (24)	31 (30)	25 (25)	7 (12)	

- Valvular heart disease - Systolic dysfunction/ cardiomyopathy	47 (18) 18 (7)	15 (15) 7 (7)	20 (20) 7 (7)	12 (21) 4 (7)	
Smoke, n (%) - Current	104 (40) 12 (12)	39 (38) 6 (15)	36 (36) 1 (3)	28 (49) 5 (18)	0.264
OSAS	8 (3)	4 (4)	3 (3)	1 (2)	0.749
LFT, % predicted	n= 183	n= 70	n= 65	n= 48	
- FEV1	89 (66-100)	92 (73-102)	90 (66-101)	73 (57-100)	0.073
- FVC	94 (72-108)	96 (81-109)	97 (73-109)	79 (61-103)	0.068
- FEV1/FVC	77 (72-82)	78 (71-81)	78 (73-82)	77 (69-84)	0.929
- DLCO	n= 118 60 (39-73)	n= 41 73 (60-90) +	n= 43 58 (36-67) ∬	n= 34 40 (27-56) ∬+	<0.001
LFT, n (%) - Obstructive - Restrictive - Normal		+ 3 (3) 6 (6) 93 (91)	 5 (5) 11 (11) 84 (84)	+ 5 (9) 15 (26) 37 (65)	0.001
Systemic O_2 saturation, %	97 (96-99)	97 (96-99)	97 (96-99)	97 (95-98)	0.150
HRCT scan, n (%) - Normal - Emphysema - Fibrosis - CPFE	 184 (71) 32 (12) 38 (15) 5 (2)	+ 87 (85) 7 (7) 8 (8) 0	∬ 74 (74) 10 (10) 13 (13) 3 (3)	∬+ 23 (40) 15 (26) 17 (30) 2 (4)	<0.001
Previous PE, n (%)	49 (19)	12 (12)	24 (24)	9 (16)	0.067

Legend: 6MWD, 6-minute walking distance; BMI, body mass index; BNP, brain natriuretic peptide; CPFE, combined pulmonary fibrosis and emphysema; DLCO, diffusion capacity for carbon monoxide; eGFR, estimated glomerular filtration rate; FEV1, forced expiratory volume in 1 second; FVC, forced vital capacity; HRCT, high resolution computed tomography scan; LA, left atrium; LFT, lung function test; LVEF, left ventricular ejection fraction; mPAP, mean pulmonary arterial pressure; NT-proBNP, N-terminal proBNP; OSAS, obstructive sleep apnoea syndrome; PAWP, pulmonary artery wedge pressure; PE, pulmonary embolism; PH, pulmonary hypertension; PVR, pulmonary vascular resistance; WHO-FC, World health organization functional class
*+∬ = p-value <0.05 between respective pairs

Supplementary Table S3. Follow-up of patients with mPAP between 21-24 mmHg and PAWP ≤15 mmHg.

	According to baseline PVR		
	PVR ≤2 WU	PVR 2-3 WU	PVR >3 WU
	Unclassified PH	Mild precapillary PH	
Lost at follow-up, n (%)	6 (6)	1 (1)	2 (4)
Develop mPAP ≥25 mmHg (and PVR >3 WU for precapillary PH) during follow-up, n (%)	5 (5)	9 (9)	6 (11)
- Group 1 PH (PAH)	0	2	0
- Group 2 PH	5	3	1
- Group 3 PH	0	2	4
- Group 4 PH	0	1	1
- Group 5 PH	0	1	0
Deaths, n (%)	22 (22)	40 (40)	33 (58)
- HF	8 (36)	9 (23)	7 (21)
. Right HF due to PH	0	0	1
. HF due to left heart disease/cardiomyopathy	8	9	6
- End-stage respiratory failure	0	6 (15)	12 (37)
. due to fibrosis	/	5	8
. due to emphysema	/	1	4
- Cancer	3 (14)	3 (8)	2 (6)
- Infection	7 (32)	9 (23)	9 (27)
- Stroke/myocardial infarction	0	2 (5)	2 (6)
- Sudden death	0	1 (2)	0
- Bleeding	0	1 (2)	0
- Renal/liver failure	1 (4.5)	1 (2)	0
- Cachexia/dementia	1 (4.5)	4 (10)	0
- Other/unknown	2 (9)	4 (10)	1 (3)
Age at death, y	74 (65-77)	77 (68-83)	74 (68-79)

Legend: HF, heart failure; mPAP, mean pulmonary arterial pressure; PAH, pulmonary arterial hypertension; PAWP, pulmonary artery wedge pressure; PH, pulmonary hypertension; PVR, pulmonary vascular resistance.

Supplementary Table S4. Comparison between patients a) repeating RHC at follow-up or not and b) repeating a clinical evaluation at follow-up or not

a)

	Patients not repeating RHC at follow-up	Patients repeating RHC at follow-up	p-value
N	209	50	
Age, y	68 (57-75)	64 (54-72)	0.037
Male gender, n (%)	76 (36)	14 (28)	0.265
REVEAL Lite 2 score	4 (3-6)	4 (3-5)	0.111
Known BMPR2 mutation, n (%)	0	1 (2)	0.193
Connective tissue disease, n (%)	32 (15)	19 (38)	<0.001
- Systemic sclerosis	19 (58)	13 (69)	
- Rheumatoid arthritis	4 (13)	1 (5)	
- SLE	1 (3)	4 (21)	
- Sjogren	4 (13)	1 (5)	
- Other	4 (13)	0	
Congenital heart disease, n (%)	29 (14)	6 (12)	0.727
- Corrected	8 (28)	1 (17)	
HIV infection, n (%)	3 (1)	0	0.394
Portal hypertension, n (%)	12 (6)	3 (6)	0.944
Left heart disease, n (%)	106 (51)	22 (44)	0.393
Lung disease, n (%)	65 (31)	10 (20)	0.120
CTEPD, n (%)	22 (11)	14 (28)	0.001
O_2 treatment, n (%)	28 (13)	2 (4)	0.083
Diuretic treatment:			0.148
- None	75 (36)	26 (52)	
- Furosemide/HCT ≤50 mg/die	89 (43)	14 (28)	
- Furosemide 75-125 mg/die	32 (15)	6 (12)	
- Furosemide >125 mg/die	13 (6)	4 (8)	
Haemodynamics:			
- Heart rate, bpm	74 (64-80)	70 (61-79)	0.162
- RAP, mmHg	5 (4-7)	5 (3-7)	0.252
- mPAP, mmHg	22 (21-23)	23 (22-24)	<0.001
- PAWP, mmHg	11 (8-13)	10 (7-12)	0.058
- CI, l/min/m^2	2.9 (2.5-3.6)	3.0 (2.6-3.2)	0.815
- SVI, ml/m^2	41 (35-52)	41 (37-51)	0.621
- PVR, WU	2.2 (1.7-2.9)	2.8 (2.1-3.0)	0.007
- PAC, ml/mmHg	3.06 (2.32-3.86)	2.99 (2.52-3.58)	0.834
Length of follow-up, y	3.3 (0.9-6.0)	5.0 (2.3-6.5)	0.028

b)

	Patients without clinical evaluation at follow-up	Patients with clinical evaluation at follow-up	p-value
N	45	214	
Age, y	69 (62-76)	67 (56-75)	0.157
Male gender, n (%)	19 (42)	71 (33)	0.356
REVEAL Lite 2 score	4 (3-6)	4 (3-6)	0.265
Known BMPR2 mutation, n (%)	0	1 (0.5)	0.646
Connective tissue disease, n (%)	16 (36) *	35 (16)	0.003
- Systemic sclerosis	10 (63)	22 (63)	
- Rheumatoid arthritis	2 (12)	3 (9)	
- SLE	0	5 (14)	
- Sjogren	1 (6)	4 (11)	
- Other	3 (19)	1 (3)	
Congenital heart disease, n (%)	5 (11)	30 (14)	0.604
- Corrected	2 (40)	7 (23)	
HIV infection, n (%)	1 (2)	2 (1)	0.463
Portal hypertension, n (%)	3 (7)	12 (6)	0.782
Left heart disease, n (%)	21 (47)	107 (50)	0.684
Lung disease, n (%)	16 (36)	59 (28)	0.283
CTEPD, n (%)	2 (4)	34 (16)	0.044
O_2 treatment, n (%)	10 (22)	20 (9)	0.014
Diuretic treatment:			0.348
- None	13 (29)	88 (41)	
- Furosemide/HCT ≤50 mg/die	22 (49)	81 (38)	
- Furosemide 75-125 mg/die	8 (18)	30 (14)	
- Furosemide >125 mg/die	2 (4)	15 (7)	
Haemodynamics:			
- Heart rate, bpm	76 (70-85)	70 (62-80)	0.007
- RAP, mmHg	5 (4-7)	5 (4-7)	0.987
- mPAP, mmHg	23 (21-23)	22 (21-23)	0.905
- PAWP, mmHg	9 (7-12)	11 (9-12)	0.039
- CI, l/min/m^2	2.9 (2.4-3.3)	2.9 (2.6-3.6)	0.542
- SVI, ml/m^2	40 (34-43)	42 (36-53)	0.015
- PVR, WU	2.5 (1.8-3.6)	2.2 (1.7-2.9)	0.110
- PAC, ml/mmHg	3.06 (2.13-3.59)	3.04 (2.41-3.86)	0.486
Length of follow-up, y	2.9 (0.9-5.3)	3.7 (1.1-6.4)	0.340

Legend: BMPR2, Bone morphogenetic protein receptor type 2; CI, cardiac index; CTEPD, chronic thromboembolic pulmonary disease; HCT, hydrochlorothiazide; HIV, human immunodeficiency virus; mPAP, mean pulmonary arterial pressure; PAC, pulmonary arterial compliance; PAWP, pulmonary artery wedge pressure; PVR, pulmonary vascular resistance; RAP, right atrial pressure; REVEAL, Registry to Evaluate Early and Long-term PAH Disease Management; RHC, right heart catheterization; SLE, systemic lupus erythematosus; SVI, stroke volume index

* seven patients had a condition that prevented a CTD-PAH diagnosis during follow-up (six had severe interstitial lung disease, and one patient died of scleroderma cardiomyopathy four months later); seven patients died from causes than could not be related to PAH (two from cancer, one from scleroderma renal crisis, two from myocardial infarction, one from left heart failure due to scleroderma cardiomyopathy and one from an infectious complication after orthopaedic surgery); the cause of death was unknown for two patients.

Supplementary Table S5. Predictors of all-cause death in patients with mPAP between 21-24 mmHg and PAWP ≤15 mmHg

	Univariate		Multivariate	
	HR (95% CI)	p-value	HR (95% CI)	p-value
Age, y	1.04 (1.03-1.06)	<0.001	1.03 (1.01-1.05)	0.009
Male gender	1.64 (1.09-2.47)	0.017	1.89 (1.19-2.99)	0.007
REVEAL Lite 2	1.31 (1.19-1.45)	<0.001	1.18 (1.05-1.32)	0.005
Connective tissue disease	1.94 (1.26-2.99)	0.003	1.80 (1.11-2.90)	0.016
Congenital heart disease	0.44 (0.21-0.90)	0.026		
HIV infection	1.10 (0.15-7.97)	0.927		
Portal hypertension	1.94 (0.94-4.00)	0.074	5.56 (2.29-13.54)	<0.001
Left heart disease	1.83 (1.20-2.826)	0.005	1.81 (1.10-2.98)	0.020
Lung disease	2.52 (1.67-3.80)	<0.001	2.59 (1.57-4.25)	<0.001
CTEPD	0.42 (0.19-0.90)	0.025		
Haemodynamics				
- Heart rate, bpm	1.01 (0.99-1.03)	0.129		
- RAP, mmHg	1.05 (0.99-1.12)	0.131	1.08 (1.02-1.15)	0.009
- mPAP, mmHg	1.18 (0.98-1.41)	0.081		
- PAWP, mmHg	0.93 (0.87-1.00)	0.062		
- CI, l/min/m^2	0.52 (0.39-0.70)	<0.001		
- SVI, ml/m^2	0.95 (0.93-0.97)	<0.001		
- PVR, WU	1.64 (1.38-1.95)	<0.001		
○ PVR ≤2 WU	Ref.	Ref.	Ref.	Ref.
○ PVR 2-3 WU	1.98 (1.17-3.33)	0.010	2.45 (1.37-4.36)	0.002
○ PVR >3 WU	3.83 (2.22-6.61)	<0.001	3.68 (1.92-7.05)	<0.001
- PAC, ml/mmHg	0.74 (0.61-0.89)	0.001		

Legend: CI, cardiac index; CTEPD, chronic thromboembolic pulmonary disease; HIV, human immunodeficiency virus; HR, hazard ratio; mPAP, mean pulmonary arterial pressure; PAC, pulmonary arterial compliance; PAWP, pulmonary artery wedge pressure; PH, pulmonary hypertension; PVR, pulmonary vascular resistance; RAP, right atrial pressure; REVEAL, Registry to Evaluate Early and Long-term PAH Disease Management; SVI, stroke volume index

Supplementary Table S6. Comorbidities and cardio-pulmonary parameters considered for the definition of left heart or lung disease and REVEAL Lite 2 score and follow-up of patients with mild precapillary PH vs patients with normal haemodynamics and patients with PAH according to ESC/ERS 2015 PH guidelines.

	Normal haemodynamics	Mild precapillary PH	PAH (ESC/ERS 2015 PH guidelines)	p-value
WHO-FC, n (%)	ǂ*	∬*	ǂ∬	<0.001
- I	55 (35)	18 (11)	5 (3)	
- II	57 (36)	66 (42)	32 (20)	
- III	44 (28)	66 (42)	116 (74)	
- IV	1 (1)	7 (4)	4 (3)	
6MWD, m (n)	455 (390-547) ǂ* (n= 104)	427 (325-490) ∬* (n= 106)	345 (250-425) ǂ∬ (n= 147)	<0.001
Natriuretic peptides,	ǂ	∬	ǂ∬	
- BNP, pg/ml (n)	108 (53-255) (n= 77)	135 (61-228) (n= 52)	194 (121-602) (n= 47)	0.002
- NT-proBNP, pg/ml (n)	184 (95-474) (n= 32)	210 (113-907) (n= 47)	1013 (335-4069) (n= 70)	<0.001
BNP/NT-proBNP, n (%)	ǂ	∬	ǂ∬	<0.001
- <50/<300 ng/l	38 (35)	41 (42)	19 (16)	
- 50-200/300-650 ng/l	44 (40)	31 (31)	32 (28)	
- 200-800/650-1100 ng/l	21 (19)	16 (16)	26 (22)	
- >800/>1100 ng/l	6 (6)	11 (11)	40 (34)	
eGFR, ml/min	87 (70-96) ǂ	88 (66-99) ∬	77 (57-88) ǂ∬	<0.001
Systemic hypertension, n (%)	85 (54)	92 (59)	95 (61)	0.503
Diabetes mellitus, n (%)	15 (10) ǂ	23 (15)	35 (22) ǂ	0.007
Atrial fibrillation, n (%)	40 (25) ǂ	44 (28) ∬	23 (15) ∬ǂ	0.011
BMI, kg/m^2	25 (22-28)	24 (22-28)	25 (23-29)	0.302
Obesity, n (%)	22 (14)	25 (16)	28 (18)	0.652
Coronary artery disease, n (%)	16 (10)	27 (17)	29 (18)	0.090
LVEF, n (%)				0.232
- ≤40%	6 (4)	4 (3)	1 (1)	
- 41-49%	7 (4)	4 (3)	3 (2)	
- ≥50%	144 (92)	149 (94)	153 (97)	
LA dimension, n (%)	n= 149ǂ	n= 139∬	n= 151∬ǂ	<0.001
- Normal	63 (42)	53 (38)	106 (70)	
- Mildly abnormal	31 (21)	27 (19)	19 (13)	
- Moderately abnormal	33 (22)	37 (27)	14 (9)	
- Severely abnormal	22 (15)	22 (16)	12 (8)	
E/e' ≥ 14 or E/A ratio >2, n (%)	8 (8) n= 100	9 (10) n= 90	4 (4) n= 102	0.247
Valvular heart disease, n (%)	ǂ	∬	∬ǂ	0.020
- Aortic moderate/severe stenosis/regurgitation or prosthetic aortic valve	8 (33)	9 (28)	11 (65)	
- Mitral moderate/severe stenosis/regurgitation or prosthetic mitral valve	12 (50)	17 (53)	1 (6)	
- Double	4 (17)	6 (19)	5 (29)	
PAWP between 13-15 mmHg, n (%)	10 (6)	16 (10)	13 (8)	0.470
H2FPEF score	2 (1-4)	3 (1-5)	3 (2-4)	0.238
HFpEF-ABA score, %	49 (32-81)	55 (33-82)	54 (32-69)	0.614

Left heart disease, n (%)	ǂ	∬	∬ǂ	0.003
- None	92 (58)	82 (52)	115 (73)	
- Diastolic dysfunction	23 (15)	32 (20.5)	20 (13)	
- Valvular heart disease	25 (16)	32 (20.5)	17 (11)	
- Systolic dysfunction/ cardiomyopathy	17 (11)	11 (7)	5 (3)	
Smoke, n (%)	52 (33)	64 (41)	62 (39)	0.264
- Current	10 (19)	6 (9)	12 (19)	
OSAS	5 (3)	4 (3)	11 (7)	0.120
LFT, % predicted	n= 97	n= 113	n= 128	
- FEV1	96 (79-109) *	82 (62-100) *	87 (71-102)	0.049
- FVC	100 (88-111) *	90 (65-107) *	93 (79-110)	0.014
- FEV1/FVC	75 (71-81)	77 (72-83) ∬	74 (68-79) ∬	0.045
	n= 64	n= 77	n= 109	
- DLCO	75 (63-90) *ǂ	49 (34-65) *	45 (32-60) ǂ	<0.001
LFT, n (%)	*	∬*	∬	<0.001
- Obstructive	3 (3)	10 (9)	6 (5)	
- Restrictive	7 (7)	25 (22)	5 (4)	
- Normal	87 (90)	78 (69)	117 (91)	
Systemic O_2 saturation, %	98 (97-99) ǂ*	97 (96-99) *∬	95 (93-97) ǂ∬	<0.001
HRCT scan, n (%)	ǂ*	*	ǂ	<0.001
- Normal	138 (88)	97 (62)	119 (76)	
- Emphysema	6 (4)	25 (16)	16 (10)	
- Fibrosis	13 (8)	30 (19)	17 (11)	
- CPFE	0	5 (3)	5 (3)	
Previous PE, n (%)	25 (16)	33 (21) ∬	13 (8) ∬	0.006
Lost at follow-up, n (%)	2 (1)	3 (2)	0	/
Deaths, n (%)	36	73	102	/
- HF	4 (11)	16 (22)	48 (47)	
. Right HF due to PH	0	1	48	
. HF due to left heart disease/cardiomyopathy	4	15	0	
- End-stage respiratory failure	1 (3)	18 (24.5)	1 (1)	
. due to fibrosis	1	13	0	
. due to emphysema	0	5	1	
- Cancer	7 (19)	5 (7)	7 (7)	
- Infection	8 (22)	18 (24.5)	10 (9)	
- Stroke/myocardial infarction	0	4 (6)	3 (3)	
- Sudden death	0	1 (1)	8 (8)	
- Bleeding	0	1 (1)	8 (8)	
- Renal/liver failure	3 (8)	1 (1)	5 (5)	
- Cachexia/dementia	2 (6)	4 (6)	4 (4)	
- Other/unknown	11 (31)	5 (7)	8 (8)	
Age at death, y	77 (66-81)	75 (68-81)	76 (65-82)	/

Legend: 6MWD, 6-minute walking distance; BMI, body mass index; BNP, brain natriuretic peptide; CPFE, combined pulmonary fibrosis and emphysema; DLCO, diffusion capacity for carbon monoxide; eGFR, estimated glomerular filtration rate; ESC/ERS, European society of cardiology/European respiratory society; FEV1, forced expiratory volume in 1 second; FVC, forced vital capacity; HF, heart failure; HRCT, high resolution computed tomography scan; LA, left atrium; LFT, lung function test; LVEF, left ventricular ejection fraction; mPAP, mean pulmonary arterial pressure; NT-proBNP, N-terminal proBNP; OSAS, obstructive sleep apnoea syndrome; PAH, pulmonary arterial hypertension; PAWP, pulmonary artery wedge pressure; PH, pulmonary hypertension; PVR, pulmonary vascular resistance; WHO-FC, World health organization functional class

*ǂ∬ = p-value <0.05 between respective pairs

Supplementary Table S7. Predictors of all-cause death in the merged group of patients with mild precapillary PH vs patients with normal haemodynamics and patients with PAH according to ESC/ERS 2015 PH guidelines

	Univariate		Multivariate*	
	HR (95% CI)	p-value	HR (95% CI)	p-value
Groups:				
- normal haemodynamics	Ref.	Ref.	Ref.	Ref.
- mild precapillary PH	2.53 (1.70-3.78)	<0.001	2.39 (1.58-3.60)	<0.001
- PAH (ESC/ERS 2015 PH guidelines)	2.56 (1.75-3.74)	<0.001	2.68 (1.82-3.93)	<0.001
Age, y	1.04 (1.03-1.05)	<0.001	1.04 (1.02-1.05)	<0.001
Male gender	1.67 (1.26-2.20)	<0.001	1.58 (1.16-2.14)	0.003
Connective tissue disease	1.53 (1.14-2.05)	0.005	1.67 (1.21-2.29)	0.002
Congenital heart disease	0.65 (0.39-1.06)	0.084		
HIV infection	0.54 (0.22-1.31)	0.173		
Portal hypertension	1.92 (1.22-3.02)	0.005	2.29 (1.41-3.72)	0.001
Left heart disease	1.66 (1.26-2.18)	<0.001	1.50 (1.11-2.02)	0.008
Lung disease	2.92 (2.18-3.92)	<0.001	2.42 (1.78-3.28)	<0.001
CTEPD	0.46 (0.23-0.94)	0.033		

Legend: CTEPD, chronic thromboembolic pulmonary disease; ESC/ERS, European society of cardiology/European respiratory society; HIV, human immunodeficiency virus; HR, hazard ratio; PAH, pulmonary arterial hypertension; PE, pulmonary embolism; PH, pulmonary hypertension.

* Including the following cardiopulmonary comorbidities in the multivariate model — diabetes mellitus, systemic hypertension, coronary artery disease, obesity/body mass index, atrial fibrillation, obstructive sleep apnoea syndrome, smoking, and previous pulmonary embolism — does not add prognostic significance, nor does adding the performance of the baseline right heart catheterisation after 2015.