Supplementary Material

Supplementary Table S1. Change in NT-proBNP and 6MWD from baseline to Week 24

	CTD-PAH		SSc-PAH	
	Combination therapy	**Monotherapy (pooled)**	**Combination therapy**	**Monotherapy (pooled)**
NT-proBNP				
n	91	78	64	46
Reduction in geometric mean from baseline to Week 24 (%)	58.3	44.0	58.2	40.2
6MWD				
n	113	97	77	55
Median increase from baseline to Week 24 (m)	40.5	23.0	34.0	8.0

6MWD, 6-minute walking distance, NT-pro BNP, N-terminal pro-B-type natriuretic peptide.

Supplementary Table S2. Restricted mean survival time* for baseline parameters with evidence of non-proportional hazards (Cox proportional hazards regression analysis)

Subgroup	Restricted mean survival time (95% CI)		Test of proportional hazards p-value
	Combination therapy	Monotherapy (pooled)	
PVR >593.5 dyne·sec/cm^5	46.9 (45.5, 48.2)	35.1 (30.7, 39.6)	0.0408
Cardiac Index ≤2.5 L/min/m^2	46.5 (45.1, 48.0)	35.9 (31.3, 40.5)	0.0270
No comorbidities	47.5 (46.9, 48.2)	41.5 (38.2, 44.8)	0.0384

*Calculated based on time from randomisation to first clinical failure event of Week 48 (area under the curve for each group).
CI, confidence interval; PVR, pulmonary vascular resistance.

Supplementary Table S3. Risk category transition* from baseline to Week 16 in patients with CTD-PAH according to the abbreviated COMPERA method

Treatment group[†]	Improved	Maintained	Exacerbated	Missing (Week 16)
Combination, n (%)	22/108 (20.4)	81/108 (75.0)	5/108 (4.6)	9
Monotherapy (pooled), n (%)	20/89 (22.5)	59/89 (66.3)	10/89 (11.2)	10
Total, n (%)	42/197 (21.3)	140/197 (71.1)	15/197 (7.6)	19

*Risk category transition was defined as improved (high to intermediate or low; intermediate to low), maintained (low to low, intermediate to intermediate) and exacerbated (low to intermediate or high; intermediate to high and high to high).
[†]No statistically significant difference was observed between treatment groups in the proportion of patients who improved, maintained or worsened (based on Mantel-Haenszel test), nor between treatment groups within each baseline risk category (based on Fisher's Exact test).
CTD-PAH, connective tissue disease pulmonary arterial hypertension.

Supplementary Table S4. Summary of risk category at baseline and Week 16 in the CTD-PAH population according to the French registry non-invasive method

		Number of low-risk criteria fulfilled, n (%)				
	N	**0**	**1**	**2**	**3**	**Missing**
Combination therapy						
Baseline	117	60 (54)	36 (32)	13 (12)	2 (2)	6
Week 16	117	29 (31)	37 (39)	20 (21)	9 (9)	22
Monotherapy (pooled)						
Baseline	99	52 (54)	29 (30)	15 (15)	1 (1)	2
Week 16	99	34 (39)	28 (32)	18 (20)	8 (9)	11
Total						
Baseline	216	112 (54)	65 (31)	28 (13)	3 (1)	8
Week 16	216	63 (34)	65 (36)	38 (21)	17 (9)	33

CTD-PAH, connective tissue disease pulmonary arterial hypertension.

Supplementary Figure S1. Kaplan–Meier curves for time to clinical failure in the systemic sclerosis pulmonary arterial hypertension (SSc-PAH) population by risk category according to the abbreviated COMPERA method at baseline and Week 16; A) Baseline SSc-PAH: Overall; B) Baseline SSc-PAH: combination versus monotherapy (pooled); C) Week 16 SSc-PAH: Overall; D) Week 16 SSc-PAH: combination versus monotherapy (pooled [low- and intermediate-risk only]).

*No calculation due to no event in the combination therapy group.
Week 16 Kaplan–Meier plots were described based on the period from Week 16 to end of study.
CI, confidence interval; HR, hazard ratio.

Supplementary Figure S2. Kaplan–Meier curves for time to clinical failure in the CTD-PAH population by risk category according to the French registry non-invasive method at baseline and Week 16: A) Baseline: overall; B) Baseline: combination versus monotherapy (pooled); C) Week 16: overall; D) Week 16: combination versus monotherapy (pooled)

Given the low numbers of patients meeting 3 low-risk criteria, patients meeting 2 or 3 low-risk criteria were combined in the time to clinical failure analyses.
*HR <1 indicates higher risk for 0 criteria group.
[†]HR <1 indicates lower risk for combination therapy group.
[‡]Not presented due to evidence of non-proportionality; restricted mean survival time (95% CI) 46.5 (45.1, 48.0) for combination therapy and 37.1 (32.8, 41.4) for monotherapy (pooled).
[§]No HR calculation due to no event in the combination therapy group (log-rank p-value=0.014).
**Not presented due to evidence of non-proportionality; restricted mean survival time (95% CI) 42.2 (37.9, 46.4) for combination therapy and 32.2 (25.5, 38.9) for monotherapy (pooled).
CI, confidence interval; CTD-PAH, connective tissue disease pulmonary arterial hypertension; HR, hazard ratio.