ONLINE SUPPLEMENTARY INFORMATION

AE, n (rate per 100 patient-years) [#]	CHEST-1		CHEST-2
	Riociguat (n=173)	Placebo (n=88)	Total (n=237)
Any AE	889 (1732.5)	405 (1525.0)	2081 (550.9)
Five most frequent AEs in CHEST-2			
Nasopharyngitis	29 (56.5)	10 (37.7)	86 (22.8)
Dizziness	57 (111.1)	13 (49.0)	61 (16.2)
Peripheral oedema	30 (58.5)	20 (75.3)	61 (16.2)
Upper respiratory tract infection	11 (21.4)	4 (15.1)	40 (10.6)
Diarrhoea	27 (52.6)	4 (15.1)	39 (10.3)
Dyspnoea	9 (17.5)	14 (52.7)	39 (10.3)
AEs of special interest			
Syncope	4 (7.8)	4 (15.1)	22 (5.8)
Hypotension	16 (31.2)	3 (11.3)	17 (4.5)
Other AEs of interest			
Haemoptysis/pulmonary haemorrhage	4 (7.8)	0	11 (2.9)

TABLE S1 Rates of adverse events per 100 patient-years in CHEST-1 and CHEST-2

[#]: total number of events are shown; a patient may have more than one event.

AE: adverse event.

WHO FC improved/ Change from baseline in 6MWD, mean±SD (m) stabilised/worsened (%)[#] CHEST-2 CHEST-2 CHEST-2 CHEST-21 year Week 12 Week 12 1 year Mixed-model LOCF*** **LOCF**^{***} LOCF¶ **LOCF**[§] for repeated measures⁺ Former riociguat +57±69 m +51±67 m +54±6 m 41/55/4% 45/48/7% group (n=155) Former placebo group $40/57/4\%^{f}$ 40/57/4%^f +43±72 m +36±71 m +38±8 m (n=82) 40/56/4%## $43/51/6\%^{\#\!\#}$ **Overall population (n=237)** +52±70 m +46±69 m +48±5 m

TABLE S2 Missing data sensitivity analyses for 6MWD and WHO FC at week 12 and 1 year of CHEST-2

*: data do not always add up to 100% due to rounding.

****: with worst value imputation.

": without worst value imputation.

⁺: data are LS mean±SEM.

[§]: with worst value plus 1 (V) in cases of death.

^{*f*}: n=81.

##: n=236.

6MWD: 6-minute walking distance; FC: functional class; LOCF: last observation carried forward; LS: least-squares; SD: standard deviation; SEM: standard error of the mean.



FIGURE S1 Daily dose of riociguat received during CHEST-2

tid: three times daily. Percentages may not add up to 100% due to rounding.