

European Respiratory Society Annual Congress 2013

Abstract Number: 2594

Publication Number: P3417

Abstract Group: 4.3. Pulmonary Circulation and Pulmonary Vascular Disease

Keyword 1: Pulmonary hypertension **Keyword 2:** Treatments **Keyword 3:** Exercise

Title: Is 6-minute walk distance (6MWD) associated with long-term outcomes in pulmonary arterial hypertension (PAH)? Results from SERAPHIN

Prof. Marion 8437 Delcroix marion.delcroix@uz.kuleuven.ac.be MD ¹, Prof. Richard 8438 Channick rchannick@partners.org MD ², Prof. Nazzareno 8439 Galiè nazzareno.galie@unibo.it MD ³, Prof. Hossein-Ardeschir 8472 Ghofrani Ardeschir.Ghofrani@innere.med.uni-giessen.de MD ⁴, Prof. Pavel 8473 Jansa jansapavel@yahoo.com MD ⁵, Mr. Franck-Olivier 8475 Le Brun franck-olivier.le-brun@actelion.com ⁶, Prof. Sanjay 8478 Mehta Sanjay.Mehta@lhsc.on.ca MD ⁷, Dr. Loïc 8479 Perchenet loic.perchenet@actelion.com ⁶, Prof. Tomás 8481 Pulido tpulido@prodigy.net.mx MD ⁸, Prof. B.K.S. 8482 Sastry bkssastry@hotmail.com MD ⁹, Prof. Olivier 8483 Sitbon olivier.sitbon@bct.aphp.fr MD ¹⁰, Prof. Rogério 8485 Souza souza.rogerio@me.com MD ¹¹, Prof. Adam 8500 Torbicki adam.torbicki@ecz-otwock.pl MD ¹², Prof. Gérald 8513 Simonneau gerald.simonneau@bct.aphp.fr MD ¹⁰ and Prof. Lewis 8509 Rubin ljr@lewisrubinmd.com MD ¹³. ¹ Department of Pneumology, Gasthuisberg University Hospital, Leuven, Belgium ; ² Pulmonary and Critical Care, Massachusetts General Hospital, Boston, United States ; ³ Institute of Cardiology, University of Bologna, Bologna, Italy ; ⁴ Pulmonary Hypertension Division, Department of Internal Medicine II, University Hospital Giessen, Giessen, Germany ; ⁵ Clinical Department of Cardiology and Angiology, 1st Faculty of Medicine, 2nd Medical Department, Charles University, Prague, Czech Republic ; ⁶ Actelion Pharmaceuticals Ltd, Actelion Pharmaceuticals Ltd, Allschwil, Switzerland ; ⁷ Division of Respiriology, Department of Medicine, London Health Sciences Centre - Victoria Hospital, Western University, London, Canada ; ⁸ Cardiopulmonary Department, The National Institute of Cardiology, Mexico City, Mexico ; ⁹ Department of Cardiology, CARE Hospitals, Hyderabad, India ; ¹⁰ CHU De Bicêtre, Université Paris-Sud, Le Kremlin Bicêtre, France ; ¹¹ Pulmonary Department, Heart Institute, University of São Paulo Medical School, São Paulo, Brazil ; ¹² Department of Pulmonary Circulation and Thromboembolic Diseases, Center of Postgraduate Medical Education, ECZ-Otwock, Poland and ¹³ Division of Pulmonary & Critical Care Medicine, University of California, San Diego, United States .

Body: Macitentan's effect on 6MWD and the association between 6MWD and the long-term outcome of PAH-related death or hospitalisation (PAHDH) were explored in SERAPHIN (NCT00660179) where 742 PAH patients were randomised to placebo, macitentan 3 or 10mg q.d. Repeated measures analysis was performed on 6MWD changes from baseline (BL) at Months 3, 6, 12. In patients with available data for 6MWD at Month 6, hazard ratios measured associations between interquartile ranges of BL 6MWD, 6MWD changes, or Month 6 values (\pm adjustment for significant covariates) and the risk of PAHDH from Month 6. 6MWD benefit was sustained with macitentan vs placebo over 12 months (3mg: +21.5m [95%CI 10.0–33.0]);

P=0.0003 and 10mg: +25.4m [95%CI 13.8–37.0]; P<0.0001). Lower BL 6MWD and Month 6 values were associated with PAHDH risk. Absolute value at Month 6 lost its association when adjusted for BL 6MWD and sex. Neither adjusted nor non-adjusted changes in 6MWD from BL to Month 6 were associated with PAHDH risk.

Association of 6MWD with PAHDH risk

6MWD	Interquartile ranges (m)				Hazard ratio* (95%) CI		
	Q1	Q2	Q3	Q4	Q2vsQ1	Q3vsQ1	Q4vsQ1
Baseline	≤300	>300-≤372	>372-≤430	>430	0.56 (0.39-0.79)	0.39 (0.27-0.57)	0.23 (0.15-0.36)
Changes at Month 6	≤-9	>-9-≤20	>20-≤57	>57	1.02 (0.60-1.72)	1.01 (0.59-1.73)	1.37 (0.83-2.27)
Changes at Month 6†	≤-9	>-9-≤20	>20-≤57	>57	0.96 (0.57-1.62)	0.76 (0.44-1.32)	0.82 (0.48-1.04)
Absolute at Month 6	≤348	>348-≤400	>400-≤455	>455	0.55 (0.35-0.87)	0.40 (0.24-0.64)	0.33 (0.19-0.55)
Absolute at Month 6†	≤348	>348-≤400	>400-≤455	>455	0.73 (0.44-1.20)	0.63 (0.35-1.13)	0.60 (0.30-1.20)

*Using Cox proportional model; †Adjusted for baseline 6MWD and sex