Horn (the Netherlands), December 14th 2014.

Dear Editor in Chief,

We are submitting to Thorax the original article entitled “Cluster analysis of physical activity in chronic obstructive pulmonary disease: a multicenter study”, by Rafael Mesquita, Gabriele Spina and a multinational research team of 63 authors, comprising co- and senior authors. This manuscript includes published and unpublished objectified physical activity data from 1001 patients with COPD from 10 countries (the United Kingdom, Ireland, the Netherlands, Germany, Switzerland, Italy, Spain, the United States of America, Brazil, and Australia). Ethics Board approval was obtained from the local ethics committees, except for the data from Italy (n=23), which was obtained as part of routine clinical assessments. The Italian data, however, was de-identified to protect patient information confidentiality. Only part of the data included in this study (data from Leicester, in the United Kingdom) was funded by the National Institute for Health Research (NIHR), but then ‘Yes’ was answered to the question ‘Does your funder require you to publish under a CC BY license?’ during the manuscript submission process. We would like to respectfully request to disqualify Dr. Thierry Troosters from Katholieke Universiteit Leuven, in Leuven, Belgium, as a possible reviewer, due to potential conflicts of interest. Dr. Troosters was approached to join this initiative and he refused as his team was working on something similar.

With this study we have shown that daily physical activity measures and hourly patterns were found to vary considerably depending on the clinical characteristic. Compared with healthy subjects, patients spent not only less time in higher intensities of physical activity, but also more time in lower intensities. Five clusters of patients were identified, each with distinct physical activity measures and hourly patterns. Compared to four other clusters, cluster 1 (the most inactive) spent less time in higher intensities and more time in lower intensities, whilst presenting with higher body-mass index, worse airflow limitation and disease severity, and more dyspnea. The present data show that outcome measures need to be clearly delineated when evaluating interventions aiming to promote physical activity in patients with COPD.

No overlapping analyses exist between this manuscript and previous reports. References of all previous reports can be found in the online supplement. Supporting sources had no involvement in study design; in the collection, analysis, and interpretation of data; in the writing of the report; or in the decision to submit the report for publication.

The manuscript has been seen and approved by all co-authors, and there are no papers closely related to the submitted manuscript that had been published or submitted for publication elsewhere. We hope this manuscript is able to provide useful information to researchers and clinicians.

Yours sincerely,

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