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## Reply to Thomson, to Neder *et al.*, and to Wouters

From the Authors:

Thank you for the opportunity to respond to the recent letters to the editor “Asthma with a Smoking History and Pre-Chronic Obstructive Pulmonary Disease” from Dr. Neil Thomson, “Exposing Pre-Chronic Obstructive Pulmonary Disease: When Physiology Matters!” from Dr. Alberto Neder and colleagues, and “Pre-Chronic Obstructive Pulmonary Disease: Towards the Limits of the Spirometric Funnel” from Dr. Emiel Wouters on our original article “From GOLD 0 to Pre-COPD” (1). In his letter, Dr. Thomson addresses the point that individuals with asthma and a smoking history should be considered as at risk for developing chronic obstructive pulmonary disease (COPD). We thank Dr. Thomson for highlighting this important group who may develop COPD. At the point that these individuals develop symptoms such as persistent dyspnea or rapid lung function decline, they would be included in our proposed definition for pre-COPD.

The letter from Dr. Neder and colleagues expands on the type of physiologic abnormalities that may be seen among at-risk individuals before a reduced FEV<sub>1</sub>/FVC ratio develops. These abnormalities include reductions in DL<sub>CO</sub> as well as increased residual volume/TLC ratio, and the authors further expand on their potential mechanisms. We thank Dr. Neder and his colleagues for their insights. Although the purpose of our review was not to explain mechanisms but rather to focus on studies conducted to determine development of COPD, such discussions highlight the need for more data on which type of physiologic abnormalities are best suited for identifying patients with pre-COPD in clinical practice.

Dr. Wouters correctly identifies many of the issues that we struggled with in coming to a consensus for this Pulmonary Perspective. He questions the classification for chronic respiratory diseases in general and whether the definition for COPD itself should be reconsidered to extend beyond spirometry. We agree that there are limitations with spirometry. However, its benefits include widespread availability, low cost, and good specificity. As Dr. Wouters points out,

understanding how features derived from computed tomography, for instance, would further enhance this definition and the operational thresholds to be used remain important priorities for future research. Additional evidence is certainly needed before adopting a new taxonomy for airways disease.

We appreciate the enthusiasm from the academic community on these concepts and look forward to continued discussions. ■

**Author disclosures** are available with the text of this letter at [www.atsjournals.org](http://www.atsjournals.org).

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