LETTER

Longitudinal change of prebronchodilator spirometric obstruction

We read with interest the article by Probst-Hensch et al about longitudinal changes of prebronchodilator spirometric values. They reported a non-persistent obstruction rate of 20.9% and concluded that prebronchodilator spirometry values only might misclassify chronic obstructive pulmonary disease (COPD). We are surprised by this high non-persistence rate and we believe that there are some issues that have to be taken into account regarding the obtained lung function values, irrespective of the quality control. First, we noticed that ~40% of the non-persistent subjects were never-smokers and that the age range of subjects included was large: 18–62 years. COPD screening is not efficient in never-smokers and subjects under 40 years of age. In such subjects normal age-related decline is expected, and non-persistent obstruction could indicate erroneously lowered baseline forced expiratory volume in 1 s (FEV₁) or follow-up forced vital capacity (FVC). We wonder whether exclusion of never-smokers would have given a lower rate. Secondly, there is no explanation provided for the high number of never-smokers that develop airway obstruction and health outcomes: results from the NELSON study, a lung cancer screening trial; see table 1. We found a non-persistence rate of 7.0% (52/741) which is far less than the 20.9% reported by Probst-Hensch et al. We believe this rate is of more interest because it is based on high-risk subjects all heavily exposed to tobacco smoking and subsequently at risk to develop COPD. The 3-year follow-up time was shorter than the 11 years in the SAPALDIA study, but in theory this should have led to higher non-persistence rates in our cohort.

<table>
<thead>
<tr>
<th>Table 1 Demographics of subjects in the NELSON study</th>
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<tr>
<td>Age (SD)</td>
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<td>Follow-up years*</td>
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<tr>
<td>Pack-years (SD)</td>
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<tr>
<td>FEV₁/FVC &lt;0.70 (%)</td>
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<tr>
<td>Smoking status</td>
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<td>Current smoker (%)</td>
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<td>Former smoker (%)</td>
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</table>

*Median (IQR). FEV₁, forced expiratory volume in 1 s; FVC, forced vital capacity. Finally, if one treats the results as correct, it remains unknown whether post-bronchodilator values would have led to lower non-persistence rates because this was not formally investigated in the study, nor supported by previous studies.

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Competing interests None.

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REFERENCES
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