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The difference between groups and individuals

To the Editor:

We are in complete agreement with de Blic et al¹ regarding the need to explore noninvasive methods of assessing structural airway changes in asthma. This need is greatest in children, given that bronchoscopy with endobronchial biopsy (EB) is an invasive procedure.² However, we would urge caution in the interpretation of the findings presented in the authors' recent article.

In their study, de Blic et al¹ demonstrated a weak but statistically significant correlation between bronchial wall thickening (BWT) on high-resolution computed tomography (HRCT) and reticular basement membrane (RBM) thickness in EB. Thus, they showed an association between BWT score and RBM thickness for the group of subjects studied. However, examination of the data in Fig 1 of their article, illustrating the relationship between BWT score and RBM thickness, shows that subjects with a similar BWT score (eg, 10) may have very different values for RBM thickness (ranging from 5 to 11.5 μm). Similarly, subjects with a similar RBM thickness (eg, 6 μm) may have a BWT score anywhere between 2 to 25. Therefore, while there may be an association between BWT and RBM thickness for the group, the data demonstrate that BWT score is a poor predictor of RBM thickness for an individual. It is worth reiterating the general

point, often disregarded, that the requirements are much more stringent for a measurement to be useful in the management of an individual than to be of possible interest in demonstrating mechanistic associations.

The authors conclude that more sophisticated HRCT scanners may prove to be more useful in the future. This could be the case, but critical examination of their data is not encouraging. As things currently stand, we would urge caution in using BWT score on HRCT scan as a surrogate marker for RBM thickness measured in EB.

*Sejal Saglani, MB, ChB
Andrew Bush, MD
Donald Payne, MD*

From Respiratory Paediatrics, Imperial College, Royal Brompton Hospital, Sydney Street, London, SW3 6NP, United Kingdom.

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