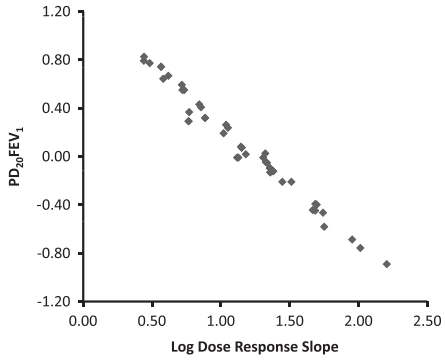

Figure 1 Log dose–response slope and log$PD_{20}FEV_1$ in 41 subjects with asthma after histamine challenge ($r=-0.97$, $p<0.0001$). Data from these subjects have been reported previously.[2]

Thirdly, there are inconsistencies in the data in their figure 2.[1] Seven subjects have PD_{20} values close to zero (possibly 0.1 μmol?), and therefore should have DRS values of ~200 (ie, 20% fall/0.1 μmol) and CIR values of ~2.3 (ie, log 200). These subjects do not appear in figure 2B,C. Furthermore, the distribution of AQLQ differs between figure 2A and B.

The advantage of a continuous measure of airway responsiveness such as DRS, rather than PD_{20}, is not that DRS provides qualitatively different information but rather that it yields an estimate of airway responsiveness in all subjects, not just the subset with AHR. Airway responsiveness is a continuum, with the cut-off point for AHR defined arbitrarily. However, AHR can be normalised with inhaled corticosteroid therapy,[3] and subjects with asthma can move in and out of the abnormal range. A more appropriate interpretation of the difference between PD_{20} and 'reactivity' in their relationships with AQLQ reported by Cisneros *et al*[1] would be that quality of life is worse in subjects with AHR, but does not worsen with increasing severity of AHR.

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Authors' response

We read with great interest the comment by Salome and coworkers on our recently published article.[1] We are grateful for their interest in our work, although they attribute to us a conclusion that does not appear in our paper. We conclude that bronchial reactivity indices are independent predictors for the health-rated quality of life of patients with asthma and we propose that they might be of use in clinical practice. In our conclusion, however, no comparison is established between bronchial reactivity and sensitivity.

We agree that the analysed indices of bronchial reactivity represent different expressions of the slope of the dose–response curve. Certainly, the differences in their relationship with the Asthma Quality of Life Questionnaire are attributable to changes in shape or linearity due to the mathematical transformation applied in their calculation.

Nevertheless, we do not agree with the assimilation between the provocative dose causing a 20% fall in forced expiratory volume in 1 s (FEV_1) (PD_{20}) and dose–response slope (DRS). Both parameters seem to be qualitatively different since the dose–response curves plotted in their determination are also different. PD_{20} is obtained from curves plotted on a semilogarithmic scale whereas DRS is obtained from a linear dose axis. Moreover, the calculation of PD_{20} uses the fall in FEV_1 between the last and penultimate doses while, for DRS determination, the fall in FEV_1 is considered that between the last dose and the post-diluent baseline value. These different approaches provide necessarily different values. In fact, and in contrast to Salome and coworkers, in our patients with asthma the relationship between PD_{20} and DRS is slight ($r=0.416$, $r=0.042$).

We therefore believe that DRS and PD_{20} are not completely equivalent. DRS allows for airway responsiveness to be assessed in all individuals, including those who do not reach the threshold PD_{20}. Several studies, including some of their own group,[2] have already shown that DRS to methacholine or histamine is associated with asthma diagnosis and symptoms. Moreover, DRS allows for a better separation of patients with and without asthma than PD_{20}.[3] It has recently been shown that adolescents with asthma remission had a significant decrease in speed of bronchial constriction (bronchial reactivity) whereas the threshold of methacholine (bronchial sensitivity) was not altered.[4]

Finally, and in agreement with Porsbjerg *et al*,[5] we consider that the differences in the estimation procedure and the non-censored character of the DRS, continuous index of responsiveness and bronchial reactivity index should justify their stronger relationship with health-related quality of life than PD_{20}.

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Outcome after bronchiolitis depends on disease definition

Sigurs *et al* recently published their 18-year prospective controlled follow-up study of 47 subjects hospitalised for respiratory syncytial virus (RSV) bronchiolitis at age <12 months.[1] In the cohort the prevalence of wheezing and asthma was higher than in population-based controls at 3, 7 and 13 years of age.

Asthma was present, depending on definition, in 33–39% of 46 study subjects and in 7–9% of 92 controls,[1] in line with an asthma prevalence of 9.5% in Swedish young adults.[2] The risk of adulthood asthma after