Reviewer's report

Title: Emerging therapies for 'treatment resistant' asthma

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Reviewer: Riccardo Polosa

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The authors have done a great job by packing a lot of information in 1486 words.

I am a little worried about the use of the term "treatment resistant" asthma without a clear definition. In principle, the definition of "difficult/therapy-resistant asthma" (as used by the ERS taskforce in 1999) is too broad. This term was used to describe patients with poorly controlled asthma despite prescription of a reasonable dose of ICS and included not only patients with truly severe asthma, but also those in whom asthma management is difficult due to poor adherence, incorrect inhaler technique, psychological problems and co morbidities. More recent definition of chronic severe asthma distinguished patients with ?severe asthma? from those with ?difficult to treat asthma?, the latter presenting with uncontrolled asthma due to other factors than asthma itself, and therefore not being candidates for immune suppressive or innovative therapies.

The ability of omalizumab for a significant systemic steroid sparing effect remains to be established, given that omalizumab was studied mainly as add-on therapy in moderate and severe asthma patients not routinely receiving oral corticosteroids. To the best of our knowledge, only one study to date has specifically investigated the effectiveness of omalizumab in allergic patients with steroid-dependent asthma (Domingo and coll. Curr Med Res Opin 2011;27:45?53).

I would like to see mentioned the effect of anti-CD25 mAbs.

I would tone down the role of bronchial thermoplasty (BT) in chronic severe asthma. Also, figure 3 shows a very marginal (and probably clinically irrelevant) role for BT. I would deleted it out.

Declaration of competing interests:

RP has received grant support from CV Therapeutics and NeuroSearch A/S; has served as a speaker for CV Therapeutics, Novartis, Merck & Co., and Roche; has served as a consultant for CV Therapeutics, Duska Therapeutics, NeuroSearch A/S; and Boehringer-Ingelheim; has received payment for development of educational presentations (including service on speakers?
bureaus) from MSD Pharma and Pfizer; and has had travel/accommodations expenses reimbursed by CV Therapeutics, NeuroSearch A/S, MSD Pharma, and Pfizer.