Reviewer's report

Title: Optimization of the diagnostic work-up in patients with suspected obstructive lung disease.

Version: 4 Date: 20 July 2010

Reviewer: Steven Kesten

Reviewer's report:

Manuscript: Optimization of the diagnostic work-up in patients with suspected obstructive lung disease
Authors: Visser et al.

Major Compulsory Revisions:

1. I understand the authors' perspective on acute reversibility testing; however, the international community has clearly judged this otherwise. Nevertheless, this dispute can be resolved by adding balance into the Discussion section noting the limitations of this approach and acknowledgement that international guidelines and several national guidelines do not recommend reversibility testing to distinguish asthma from COPD, other than when lung function returns to normal limits. There should be an acknowledgement that the threshold of 9% predicted is not a commonly accepted threshold for distinguishing asthma from COPD. Quoting a paper that states that 9% is the threshold for distinguishing normal from obstructive lung disease is not the same as distinguishing asthma from COPD. As I stated previously, while the objectives of the study are admirable, this clinically important issue renders the study limited in terms of meaningful conclusions.

2. I still question the issue of IRB review. I have had experience with IRBs in The Netherlands and they have been quite sophisticated for many years. When was the study conducted? I would leave this issue to the editorial staff as to whether they are satisfied in terms of publication of a trial that appeared not to have been submitted for IRB approval and for which informed consent was not obtained.

3. Page 3 – it still appears that the reversibility protocol was not standardized (“…. after beta-2 agonists and / or anticholinergics...”). This is followed by what appears to be a somewhat contradictory statement of “..patients on reversibility testing were tested for both bronchodilators.”

4. New text is introduced into the Discussion (last paragraph page 11 to midway through page 12). Behaviour of physicians appeared to be non-standardized and changing during the trial period. This potentially brings with it significant confounding that may bias the results and render the results difficult to interpret.

Minor Essential Revision:
1. There is a statement of an objective being “cost effectiveness”; however, cost effectiveness was not assessed in the true sense of the definition and accepted approach.

**Level of interest:** An article of limited interest

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests.