Reviewer's report

**Title:** Longitudinal Numbers-Needed-To-Treat (NNT) For Achieving Various Levels of Analgesic Response and Improvement with Etoricoxib, Naproxen, and Placebo in Ankylosing Spondylitis

**Version:** 2  **Date:** 24 March 2011

**Reviewer:** H Groen

**Reviewer's report:**

**General**

This is an interesting and well-written report of an analysis of response to anti-inflammatory drugs in Ankylosing Spondylitis using NNT. Although the authors claim that it is an exploratory evaluation of the value of NNT analysis in this patient group, it is difficult to regard it completely separate from a comparative evaluation of effectiveness of the drugs that were used.

**Major compulsory revisions**

1. The statement that the PGART scores are U-shaped is not supported by the data in figure 1. The left leg of the U-shape consists entirely of placebo scores, of which the relevance in this respect can be argued. Moreover, it is unclear why the five response categories were reduced to three.

2. In the NNT data presented, the most relevant comparison from a clinical point of view has been omitted, i.e. the comparison between naproxen and etoricoxib. If the use of NNT is to provide a basis for clinical decision regarding treatment, it should also offer that for the evaluation of etoricoxib versus naproxen.

3. The authors suggest that NNT results should be presented alongside group mean results. However, the disadvantage of NNT is that it is presented as a single value without any uncertainty. How could this be overcome?

4. Is the period of 6 weeks sufficient to evaluate, as the authors state, "the influence of various time points as well as various thresholds of response, on the responder proportions and associated NNTs, in an AS population"?

**Minor Essential Revisions**

4. I would suggest superimposing the distribution of changes in BASDAI scores at 6 weeks on the barchart in figure 1 to allow a comparison of the two outcomes.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a
statistician.

Declaration of competing interests:

I declare that I have no competing interests