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: 25 April 2011

Reviewer: Elisabeth Lie

Reviewer’s report:

This paper includes an alternative presentation of results from a randomized trial comparing naproxen, placebo and two different doses of etoricoxib for ankylosing spondylitis (AS), from which the results were originally published in 2005. The authors argue that results for spine pain and BASDAI are better expressed as percentages achieving improvement of a certain size and numbers needed to treat (NNTs) for these responses rather than mean changes, and they explore this for different levels of response at 2, 4 and 6 weeks. Since this report is based on rather old trial data, there is nothing new and surprising about the results. However, the paper is generally well written and contains some interesting points. Although the NNT concept is relatively well-known and well-established, it is probably not as widely employed as it should be. The results from this paper could encourage inclusion of NNTs as an outcome in other studies reporting on pain responses in AS. Also, the background section is of potential educational value for the less experienced reader. Considering the explorative nature of these analyses, it is appropriate that no statistical testing has been applied.

I have a few minor comments:

Minor essential revisions:

1. In the abstract conclusion it is stated that the NNT for a 30% improvement or more in BASDAI and spine pain is 3-4 for naproxen. From the results presented, I would say that it is more correct to say that the NNT was approximately 3 as the slightly higher NNTs at 2 weeks is the exception while the 4- and 6-week NNTs for BASDAI were considerably lower at 2.7.

Discretionary revisions:

2. The abstract comes across as a bit too lengthy – this is mainly due to the extensive background section of the abstract which should preferably be shortened and made more concise.

3. All the results in this paper are presented in figures, and this paper contains 13 figures in total. If space is an issue, the NNT data could as effectively been presented in a table.

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