Reviewer's report

Title: Predictors of response and drug survival in ankylosing spondylitis patients treated with infliximab

Version: 3 Date: 25 March 2015

Reviewer: Angelo Gaffo

Reviewer's report:

The manuscript is improved since its initial version. However, I still do not think it is ready for final publication

Major compulsory

- The concept to treatment response, and the definition of "responders" and "non-responders" is confusing. This should be very well defined in the outcome measures. After carefully studying the manuscript I inferred that the authors' definition of "responder" is entirely based on the fact of whether the participant was able to stay on infliximab for the 5 years of follow-up. This should be clearly stated in the methods.

- Following on the previous point, this definition is of limited value. The authors are calling "non-responders" participants who could not continue taking infliximab not because of a lack of response, but because of an adverse event. Other participants had an initial response but then the drug lost efficacy. These are usually considered to have secondary loss of efficacy. The authors are lumping all of these into the "non-responder" category which to me is of limited value. The authors main analysis concentrates on drug survivability at 5 years, which is a different concept than efficacy or response.

Minor essential:

- Although the English language quality has improved, several sentences in the manuscript remain difficult to understand:

  1) Please thoroughly review the abstract, e.g. "high levels of inflammatory" (inflammatory what?)

  2) Background: "While single center studies.......at least one confounding factor" (Which factor?)

- At the end of the discussion: "Our results have confirmed that when first line treatment fails switching to another ....drug can be an effective solution"

This is not supported by the authors' current analysis but by the authors' previous study

- What happened to the study participant who could not remain on infliximab? Where they still followed by this study or for the 5 years? Where they offered an
alternative therapy?

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

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

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

**Declaration of competing interests:**

None