Reviewer's report

Title: Erythropoietin, uncertainty principle and cancer related anaemia

Authors:

Otavio A C Clark (clark@evidencias.com)
Jared R Adams (j-adams4@nwu.edu)
Charles L Bennet (cbenne@northwestern.edu)
Benjamin B Djulbegovic (djulbebm@moffitt.usf.edu)

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Reviewer: Prof Jos Kleijnen

Level of interest: A paper of considerable general medical or scientific interest

Advice on publication: Accept after discretionary revisions

I think the paper has improved now. I have had a more detailed look at the analysis. A very good thing is this paper is that the authors provide enough details so that the reader can check nearly all analyses which is great.

1. (compulsory) There are two errors in the sensitivity analyses of relative risk (figure 3). "Ad alloc conceal" should read 0.35 (0.25 to 0.49) and not 0.46 (0.35 to 0.60). "Placebo trials" is wrong as well, I leave it to the authors to calculate the correct values.

2. (discretionary) The estimates for low or high Hb levels are somewhat different (bottom of figure 3), which may explain some heterogeneity. Based on the data provided we also did a meta-regression analysis. Surprisingly, we found 4 variables significant or borderline significant univariately. These were: academic funding, concealment, solid tumors and Hb. In the multivariate meta-regression model, HB and concealment explained nearly all heterogeneity. I would be interested in your response.

3. (discretionary) Another interesting aspect is that removal of the Porter study makes that the OR and RR meta-analyses yield virtually identical Chi-square statistics for heterogeneity (no statistical heterogeneity exists anymore). I wonder whether the authors are willing to speculate that given the fact that all but one patient in that study received a transfusion, it looks like an odd one out. In addition, it is the smallest study which included only 10 patients in each group. Maybe there are also other obvious reasons for which this study may be different, which I can't point out because I have not read that article.

4. (compulsory) A few editorial comments: the 2nd sentence on page 14 doesn't read well. Do you mean "control groups" in stead of "adverse events" at the end of that sentence? On page 15, first sentence, "earlier" would read better than "before"

Competing interests:

None declared.