Reviewer’s report

Title: Optimal schedule of Bacillus Calmette-Guerin for non-muscle-invasive bladder cancer: A meta-analysis of comparative studies

Version: 1 Date: 18 January 2013

Reviewer: Claire Vale

Reviewer’s report:

Major Compulsory Revisions

1. I am unclear why the authors have chosen to combine RCTs with other study designs in this meta-analysis. There are good, methodological reasons why pooling RCTs with non-randomised study results may be inappropriate, yet the authors have not provided a clear rationale for so doing in this review. My concern is that the inclusion of the non-randomised trials may be inappropriately inflating the power of the analyses and thus overplaying the reliability of the results. Furthermore, in a number of the meta-analyses presented, the estimate of effect associated with the non-randomised studies is greater than that of the RCTs therefore exaggerating treatment effect sizes. They do present results based only on the RCT in the sensitivity analysis section however, my preference would have been for these to be the main findings. Whilst this may lead to an inevitable reduction in power and precision in the meta-analysis, I think the findings would be more readily interpretable and less prone to bias.

2. There is significant heterogeneity associated with the estimates of treatment effect that the authors should pay more consideration to both in the text of the results sections and in the discussion.

3. The authors have excluded 19 studies on the basis of their reports being in languages other than English. Whilst it is unclear whether all 19 would have been eligible for inclusion, this needs some consideration. It would seem unreasonable to exclude so many eligible studies for language only reasons. Whilst there is little evidence of publication bias reported (using the Egger test) then I believe this test is of limited use where there are relatively small numbers of trials. It is important to include all eligible studies once identified.

4. There are some paragraphs in the introduction and discussion in particular where the messages of the authors are unclear. These need to be addressed prior to publication.

5. It would be useful to see the full search strategies used to identify studies from the major bibliographic databases - perhaps as appendices in the supplementary section. It is unclear whether sensitive evidence based strategies for identifying RCT study designs (or other study designs) such as those developed by the Cochrane Collaboration have been used.
Minor essential revisions

1. It would be useful to see Tables of study characteristics would be better presented as part of the main manuscript rather than as supplementary materials.

2. The results section and figure legends refer to figures 1A and B, 2A and B etc whereas the figures are labelled 1,2,3,4 etc

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests