Reviewer’s report

**Title:** The science of clinical practice: disease diagnosis or patient prognosis? Evidence about “what is likely to happen” should shape clinical practice

**Version:** 3  **Date:** 10 December 2014

**Reviewer:** Andrew Vickers

**Reviewer’s report:**

The authors have, in general, done a good job of responding to the reviewer comments and revising the article. I don’t agree with everything in the paper, but think that is fine for a paper of this sort. There is one error, however, that does need to be addressed. On page 9, the authors appear to assume that all prostate cancer is pretty benign (“a high probability that [cancer] will not affect life expectancy”). This is not only misleading but actually works against the authors argument. The authors should instead refer to risk stratification of prostate cancer based on stage and grade. Low risk cancer certainly does have “a high probability of not affecting life expectancy”; high risk cancer should be treated. So this example should instead be:

1) a man is diagnosed with prostate cancer
2) whether he should be treated depends on his expected outcome with and without treatment (i.e. prognosis)
3) low risk and high risk prostate cancer are the same diagnosis, but should be treated differently.

If you want evidence on how the effects of treatment on prostate cancer are affected by baseline risk, see http://www.ncbi.nlm.nih.gov/pubmed/22541389

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

none