Reviewer's report

Title: Cost-effectiveness of MRI compared to mammography for breast cancer screening in a high risk population

Version: 7 Date: 2 October 2008

Reviewer: Jeremy Goldhaber-Fiebert

Reviewer's report:

The authors have addressed a majority of the comments in the previous review. One important general comment outstanding is that, as the use of discounting has shifted the results such that they appear to go fairly strongly against MRI, the reporting of the results and their interpretation in the paper need thorough updating. In their current state, the reporting of the results is at times confusing and occasionally includes statements (potentially from past versions) that appear to be contradicted by the numeric results now reported.

Major essential comments/revisions

1) The paper reports net benefits. It seems that “net benefits” here is net health benefits. If so, then the willingness to pay threshold used to calculate these results should be reported whenever net health benefits are reported (abstract, results, discussion section where this appears). Also, the term “Net benefits” should be replaced throughout the text with “Net health benefits” if this is the case.

2) It also appears that the net health benefits reported in the abstract are from the previous version and do not match the net health benefit results presented either on page 9 and 10. The first sentence of the discussion also appears to be referring to the old abstract as the net health benefit is negative in the new analysis.

3) The last sentence of the results (page 10) suggests that the two strategies are comparable at $100,000/QALY. However, it seems that the net health benefit is still negative at this threshold. The exact threshold for equivalence should be reported instead.

4) As discounting appears to shift the results rather strongly, discount rate of 0 to 5% should be included on the Tornado diagram and mentioned as a sensitive parameter in the analysis (It would be very illuminating to see 3% discounting as that is commonly used).

Minor essential comments/revisions

1) The tornado diagram should use as its upper cutoff a number smaller than $2Million (perhaps $500,000) so that the lower end (0-$200,000) can be more easily seen. This answers the important question: how much does a technology need to be improved in order for it to approach the WTP threshold?
**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests.