Reviewer’s report

Title: Faecal immunochemical tests (FIT) can help to rule out colorectal cancer in patients presenting in primary care with lower abdominal symptoms: A systematic review conducted to inform new NICE DG30 diagnostic guidance

Version: 0 Date: 27 Jun 2017

Reviewer: Alfredo Di Leo

Reviewer’s report:

The Authors performed a systematic review on the diagnostic accuracy of Faecal immunochemical tests (FIT) to rule out colorectal cancer (CRC) in patients presenting in primary care with lower abdominal symptoms. They found that FIT could correctly rule out CRC and avoid colonoscopy in 75 to 80% of symptomatic patients, using a cut-off of 10 μg Hb/g faeces.

This is a well-written paper with very interesting results. However, some revisions are required:

1. In the "Results" section of the Abstract (on page 3), the abbreviations "FIT" (line 41), "CRC" (line 43) and "HRA" (line 48) should be explained when they are used for the first time;

2. In the "Introduction" section (on page 5), two abbreviations have not been explained, i.e. "GP" (line 69) and "NHS" (line 70);

3. The authors report, in the "Introduction" section (on page 7, line 108), that "This systematic review analysed the clinical and cost effectiveness of FIT". However, no analysis of FIT costs has been provided in the "Results" section. Please clarify if no data was available from included studies to perform a cost evaluation;

4. Maybe the name of the FIT assay "OC sensor" is missing in the "Methods" section (on page 9, line 147) before "(Eiken Chemical Co. Ltd, Tokyo, Japan, supplied in UK by MAST Group Ltd., Bootle, Merseyside)";

5. In the "Methods" section (on pages 9-10, lines 158-162 and 176-177), the authors report that the processes of study selection, data extraction and quality assessment were performed by one reviewer and checked by a second one. Why were these processes not performed independently by two reviewers, as the process of study screening and as suggested by the Cochrane Collaboration? Moreover, the authors should explain how disagreements were resolved in the processes of study selection and data extraction;

6. The Authors did not provide any information on the evaluation of publication bias in the "Methods" and "Results" sections. Was it assessed? If low power of statistical methods to detect this type of reporting bias was assumed, due to the low number of studies included in each analysis, it should be stated in the text;
7. The cross-sectional study design provides the highest quality of evidence to answer diagnostic questions. The authors report in the "Results" and "Discussion" sections that the included studies were all cohort studies. Were they cross-sectional studies or no study with this type of design was available? In the latter case, this point should be discussed under study limitations;

8. In Table 3 (on page 22), the upper limit of the specificity 95% CI, i.e. 83%, should be expressed using 1 decimal place, for consistency with all the other values in the table;

9. In the "Discussion" section, the quality of included studies should be considered in formulating the conclusions of the systematic review;

10. In Figure 1, the authors should clarify the reasons for exclusion after full-text analysis. Indeed, for 77 out of 92 it is only reported "Full-text articles excluded". Moreover, it is not clear how they get 9 included studies (26 publications) after the full-text analysis of 113 articles and the exclusion of 92 out of them.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:
1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal