Reviewer’s report

Title: HPV testing for cervical cancer screening: technical improvement of laboratory logistics and good clinical performance of the cobas 6800 in comparison to the 4800 system.

Version: 0 Date: 26 Jul 2018

Reviewer: Collette Bromhead

Reviewer's report:

Whilst this paper details an adequate comparative study between two molecular assays for HPV on liquid based cytology samples, the design of the trial and the samples tested are not sufficient to lead to the conclusion given that the 6800 cobas HPV assay is suitable for use in large centralised laboratories i operating in population based cervical cancer screening programs, particularly not in this setting of HPV Primary screening. There is no mention of comparison to the Meijer criteria. There is no consideration for prediction of clinical disease, ie CIN2, CIN3. And there is no examination of the difference in viral load assessed between the two assays, which some of your discordant results suggest may be considerable. I agree your results show promise and that the utility of the new automated system in the clinical laboratory is a big advantage over the cobas 4800 system which is highly manual by comparison. A higher quality study would have made this paper of considerable significance to laboratory users around the world who are facing the transition to HPV Primary screening and the increasing workload that entails. Unfortunately it seems the 6800 assay is quite different to the 4800 HPV test that achieved FDA approval for HPV Primary Screening off the back of the large Athena Trial in the USA. More work is needed to validate this new assay.

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

No

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

No

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

No

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.

No
I recommend additional statistical review

**Quality of written English**

Please indicate the quality of language in the manuscript:

Acceptable

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