Reviewer’s report

Title: The costs of offering HPV-testing on self-taken samples to non-attendees of cervical screening in Finland

Version: 2 Date: 12 June 2015

Reviewer: Jesper Bonde

Reviewer’s report:

Major Compulsory Revisions

Modifications of current organised or opportunistic cervical cancer screening programs are needed to improve efficacy and efficiency. HPV Self-sampling either targeting non-responders or instead of mailed reminders offer such an opportunity, and the current manuscript adds a cost-effectiveness perspective to previous Finnish studies utilising self-sampling and HPV testing.

The work has high importance in the chain of evidence leading to evidence based changes in, especially, the organised screening programs of north European countries. Unfortunately, the current version of the manuscript, however well written, is a tough read.

Firstly, the tables are almost incomprehensible to the average reader, and a number of the assumptions in the model are either not up to date or not explained. The Tables should be redone in a publication friendly format and supported by explanatory flow diagrams showing how the composite cost prices have been reached. This at should be done with Table 1 at a minimum, but the top section of Table 3 could also be visualized in a flow diagram facilitating easier understanding.

Secondly, I have open questions: the cost assumption unit price is “1” for a mailed invitation letter. However the same unit cost for a reminder or invitation for self sampling is stipulated at 0.75. Why? I can think of a number of options to explain this, I can not however read it from the Tables or the text.

Thirdly, the cost price of HC2 testing is set at 20 Euro. Even modelled at 30 Euro. Yet, the price of HPV testing using HC2 or similar test systems typically is around 14-16 euro in the Scandinavian countries, and with the high throughput of tests in the new Turkish screening program I believe the EU tender price ended at 4.65 Euro. This makes a major difference for the strength of the conclusions, and I assume the authors estimated the HPV test price as in a study, not in full roll out?? Nonetheless, given that the test prices world-wide are decreasing irrespectable of HPV test system I strongly feel that the authors should recalculate the costs by assuming an HPV price of, say, 15 Euro as this will be a highly likely price in the Scandinavian markets.

Fourth, what monetary unit do the authors use. In the text Euros are mentioned, but in the Tables, no such stipulations are made.
Fifth, clean up the commas and decimals in the Tables to make the appearance uniform, please.

I propose to implementing the above made suggestions, in order to make the manuscript easier to read and understand.

Best Wishes

Jesper Bonde

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

Jesper Bonde used to serve as a paid advisor to Roche, is a paid advisor to Genomica, and received honoraria from Hologic, Roche, QIAGEN, Genomica, and BD Diagnostics for lectures. He is principal investigator on studies funded by BD Diagnostics.