Reviewer’s report

Title: Comparison of the performance of carcinogenic HPV typing of the Roche Linear Array and Qiagen LiquiChip HPV assays

Version: 2 Date: 2 July 2013

Reviewer: Magdalena Grce

Reviewer’s report:

The revised manuscript is presented more clearly now, however there are still some issues to be clarified:

- How and where the histology was performed? I guess in respective collaborating centres but it has to be specified.

- The median age of 36 (18-79) of the study population is close to 40 therefore delete the sentence in line 83-84. Table 1 should be completed accordingly, add or replace mean age by median age.

- Line 80: replace HRHPV by HR-HPV

- Although the authors made an effort to present the discrepancies between tests they did not provide a plausible explanation for such extreme differences, they gave just hypothesis. In addition, the authors are comparing their findings by those of Godinez et al 2011, that are not quite similar, as they state, regarding discrepant findings between test. The only solution to clarify this issue is by using an alternative more specific genotyping test, i.e. type specific PCR for at least HPV types 35, 53, 59 and 73, or PGMY PCR product sequencing (not suitable for multiple HPV infection that are apparently very common in ASCUS specimens) that the authors should do and as such bring something novel in this study.

- The authors did not show the concordance of multiple HPV infections between tests. From these findings one can speculated about the cross-reactivity of particular probes, but not otherwise. Still the extreme differences have to be elucidated as mentioned above.

- Lines 184-185: Avoid repeating, so delete the first sentence of the discussion.

- Lines 190-191: Start the sentence “HPV negative results using Roche LA assay were found in 4 (1%) cases, compared with 24 (8%) for Qiagen LQ assay.” With “Although all samples were HCII positive,... “ Only from this finding the author should be more critical toward the LQ test and not vice versa.

- Lines 191-194: This sentence is unclear and should be rephrased.

- Lines 64 and 205: replace then by than. – The whole manuscript should be revised by a native English speaker.

- Line 219 and elsewhere: Use the LA and LQ abbreviation all along the manuscript without additional specification.
- Line 225: replace RLB by LA. RLB abbreviation is not necessary in this study.
- Table 1: add or replace mean age by median age. How many cancer cases in each group there is if the percentage is negative? If there is one cancer then the percentage is 0.3. The tile should be Key characteristics of the study population. Insert a row with the HCII results.
- Table 2: Delete the 5th and 6th empty columns or insert Specificity (%) and PPV (%) values.
- Insert a new Table showing multiple HPV infections found by each test.
- The legend of Fig. 1 and Fig. 2 should be identical, with or without lines.
- Figure 2: Shouldn’t the second columns correspond to HPV16-/HPV18+ instead of HPV16-/HPV18-, or is it HPV16-/HPV18-/other HR-HPV+? Anyhow, it is not clear what “various combination of HPV types” stand for? It should be clarified. In addition, as there is no statistical difference between CIN 2+ and CIN 3+, the A and B should be combined into one figure or simply deleted as Figure 1 is sufficiently showing the contribution of particular HR-HPV types.
- Competing interests: The authors declared no conflict of interest, while Qiagen is providing the reagents for this study, therefore, the authors are supported by Qiagen to perform this study and they should declare it as such.

Briefly, the papers in the present form in not suitable for publication.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

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

**Declaration of competing interests:**

I declare that I have no competing interests.