Reviewer’s report

Title: Prevalence of HPV16, 18, 52, 58 and 59 in cervical cancer in Sichuan province, China

Version: 1 Date: 11 April 2008

Reviewer: Paul K Chan

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1. p.7: the 'appropriate viral DNA" used as positive controls should be specified.
2. There is a major caveat in the study design. The main outcome of this study is the frequency distribution of HPV genotypes among cancer specimens. However, the set of tumour specimens (n=190) were tested by a combination of 3 methods, with 2 of them applied only to a fraction of the specimens. Specifically, 20 specimens positive by MY09-PCR but negative by single-round type-specific PCR, were typed by sequencing; whereas the 145 specimens positive by single-round type-specific PCR were typed by the type-specific PCR but not sequencing. The problem here is that the sequencing approach cannot differentiate and identify co-infections, whereas the type-specific PCR can.
   Another problem is that the nested PCR was only applied for specimens negative by the single-step PCR. The results of these nested- and single-step PCR cannot be pooled together. This is because when co-infection occurs, one of the co-infecting types could well be existed in a lower quantity which may only come up in the second round of PCR. Based on the overall results, it seems that HPV52/58/59 existed in a much lower viral load as a majority of them were only detected by nested PCR. Therefore, whether these types were existed in coinfection becomes an important issue as this may have an impact on assessing their oncogenic role.
   Given the denominator is very important in prevalence and frequency distribution study like this; it is advisable to test all specimens with the nested PCR. Nevertheless, if this is done, it should be reminded that the study is confined to types being covered in the PCR.
3. This is an important piece of study as it may reveal the suboptimal protection of the current vaccines for parts of China where the distribution
of HPV genotypes are different the rest of the world. On the hand if the data are precise enough, it may create a false impression and jeopardize the value and acceptance of HPV vaccines.

Level of interest: An article of importance in its field

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

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

Declaration of competing interests: I declare that I have no competing interests.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions