Reviewer's report

Title: Human papillomavirus prevalence amongst Indigenous and non-Indigenous Australian women prior to a national HPV vaccination program

Version: 1 Date: 4 April 2011

Reviewer: Silvia Franceschi

Reviewer's report:

Major Compulsory Revisions

This is a very interesting piece of work that shows lack of substantial difference in HPV prevalence between indigenous and non-indigenous women in Australia despite a several-fold difference in cervical cancer incidence between the two groups.

The present findings seem to agree with a pooled analyses of international HPV prevalence surveys and case-control studies carried out at IARC (Franceschi et al, Brit J Cancer, 101, 865-870, 2009) that suggested that low education level (as a proxy for socio-economic status) was associated with increased cervical cancer risk but not with higher HPV prevalence. In addition to different screening uptake, substantial part of the difference in cervical cancer risk by education level in the paper by Franceschi et al (2009) was explained by earlier age at first sexual intercourse and first birth and by higher parity in the least educated women. The authors should consider that paper and check whether similar differences in age at first sexual intercourse and first birth and parity existed between indigenous and non-indigenous women in Australia. To a large extent, the present findings by Garland et al, similarly to those by Franceschi et al, challenge the concept that an association of low socio-economic class or ethnic group explain to any great extent differences in cervical cancer risk.

Another aspect the authors should address is whether the recruitment modality (i.e., through community-based clinics rather than GPs) might have led to a substantial difference in the selection of indigenous and non-indigenous women (e.g., selection of non-indigenous women at higher risk for STIs).

In tables 1 and 2 it would be interesting to add, in addition to age at first sexual intercourse and first birth and parity, time since last smear, if the information is available.

Tables 3, 7, etc: I strongly recommend to always adjust for age and ignore crude ORs.

MOST IMPORTANT: authors should be extremely careful in overinterpreting differences in the prevalence of HPV types between cancer-free indigenous and non-indigenous women in Australia as evidence of different HPV 16/18 vaccine efficacy. They should clearly state that HPV 16/18 vaccine efficacy is ultimately due the ability of the vaccine to prevent cervical cancer and, therefore, the most important thing would be to compare the distribution of HPV types in cervical...
cancer in the two groups.

Minor Essential Revisions

Abstract: give age range

page 12-13: please clarify the use of AMPLICOR: it seems to me that eventually both AMPLICOR-positive and AMPLICOR-negative women were genotyped using LA.

page 9: specify if +/-5% refres to the aboslte percent.

Discretionary Revisions

Omit, please, the first 3 lines of the Introduction.

By and large, I believe that there are some repetitions in the text and in tables that should be avoided for brevity sake. Table 1 and 2 may be merged. Table 4b can be eliminated.

Quality of written English: Acceptable

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

Declaration of competing interests:

I declare that I have no competing interests