Reviewer’s report

Title: Specific Genotypes of Human Papillomavirus in 125 High-grade Squamous lesions and Invasive cervical cancer cases from Congolese Women

Version: 2
Date: 17 September 2014

Reviewer: Paolo Giorgi Rossi

Reviewer’s report:

Major compulsory

Abstract
1. Results, please report absolute numbers, in particular for adenocarcinomas.

Background
2. Lines 92-93: only one vaccine is targeted at four types, the second is against only two hr types.
3. Lines 95-99: the sentence is a little confusing, the variability is higher for types circulating in the general population, while the distribution in high risk lesions and in cancer is more constant worldwide. This does not mean that it is not worth to be studied, particularly places where there is not previous information; simply it means that we expect small differences between different areas. The reference is not the most appropriate for geographic differences in type distribution, see the paper by Clifford and Franceschi about the age and geographic distribution in general population, for age and geographic type distribution in cancers see the deSanjosé paper on Lancet Oncology 2011 and the authors’ replay in 2012 about the same paper.

Methods:
4. Please report if the 125 cases are all cases, consecutive cases in a given period or a sample of available cases; in the second case please report how they were selected or sampled. In line 183 I read “randomly” but there is no mention of how the sample was drawn and how many were all the eligible. Furthermore it sound strange to ascertain all the eligibility criteria before sampling, usually part of the eligibility criteria are assessed after sampling (is more efficient). If so it should be showed how many excluded cases did you have.
5. Please report confidence intervals for percentage at least for the firsts three types.
6. Please report a sample size calculation: what was your precision for types frequent 40%, 20 and 10%? What is the power to detect at least one case of type that is responsible for 2% or 5% of the cases?
7. Lines 111-113: “…confirmation of a primary invasive cervical cancer or a High grade lesion of epithelial origin in the specimen,…”
8. Does it mean that a new slice has been cut and evaluated to confirm that the neoplastic tissue was still available in the sample or it was evaluated on previously cut and stained slices? In the second case how did the author check for the presence of neoplastic tissue in the paraffin left? This is a critical point to evaluate the proportion of positive sample (that actually is quite high in your study and it is not a matter of concern).

Discussion

9. Discussion can be shortened, the methods and the results should not be repeated in the discussion.

10. Lines 204-205: “These findings indicating a very high prevalence of HPV in women living southwestern Congo”

11. Please specify that this is the prevalence of HPV in women with HISL and cancer; I preafer to say the proportion of cases that are positive, and not prevalence that is an epidemiological measure of disease occurrence in a population.

12. Line 224: in your sample 1 out of 4 ADK was infected with HPV18 not 1.7%. Furthermore HPV 18 is more frequent in ADK than in squamous, but is always less frequent than HPV 16 in ADK too.

13. Lines 231-233: your estimate of 1.7% for HPV35 is based on one case, if had two it was exactly the expected prevalence: please comment your results taking into account random fluctuations.

14. Lines 234-236: you found HPV69 in HSII and not in cancer, you should not infer about cancer.

Table

15. Table 2 please check the percentages: I suggest to report the column percentage when analysing the type proportion also in sub groups. Furthermore if the percentage in brackets near the total represents the proportion of HPV positive in the first line it should be tha same also in the sub-groups (i.e. 100% for ADK and 98.2% for squamous)

Minor essential

1. Lines 44-45: May be is “viral epidemiology”?

2. Lines 117-118: the sentence in brackets is not complete.

3. Line 181: “were more representative…” I do not understand more than that: are you comparing your study with another study in Congo?

Level of interest: An article of importance in its field

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'