Reviewer’s report

Title: Analysis of Genetic Copy Number Changes in Cervical Disease Progression

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Reviewer: Michael Kilpatrick

Reviewer’s report:

It is now clear that, while infection with high-risk strains of HPV is the most important factor in the initiation of cervical carcinogenesis, additional genetic events are necessary for a pre-cancerous lesion to progress to malignancy. This paper investigates the genetic changes that are present in cervical biopsy specimens, identifying those chromosomal gains that are most common. Following an initial evaluation of some 35 regions of the genome, selected based on a review of the literature, for gain or loss in the development of cervical cancer, the authors selected six candidate loci for further investigation. These six loci were studied both in paraffin-embedded tissue sections and for prevalence of gain in a series of cytological specimens ranging from within normal limits to high grade.

The manuscript is well written and, although a number of such investigations have been undertaken in recent years, provides valuable information for those in the field.

The study was undertaken well and the methods are adequately described.

I have a few comments for consideration for minor revisions:

I can find no mention of whether IRB approval for the study was sought or obtained.

In the absence of any figures showing FISH images, table 1 could probably be excluded.

With the exception of figure 4, I find the figures, although comprehensive, somewhat overwhelming. The authors might want to consider if figure 1 is necessary in addition to table 2 or whether table 2 alone will suffice.

Similarly, in figures 2 and 3 I am not sure that the histograms are necessary in addition to the tabulated percentages.

The observation of abnormality of 3q26/8q24 in close to 10% of the cells in the normal cytology specimens deserves discussion.

Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

Ikonisys has an interest in cervical cancer diagnosis