Reviewer's report

Title: Molecular characterization of EGFR, PDGFRα and VEGFR-2 in cervical adenosquamous carcinoma

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Reviewer: Gabor Kari

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Comments to the Authors:

In their manuscript Longatto-Filho A. et al described a comprehensive immunohistochemical and genetic characterization of an infrequent cancer, adenosquamous carcinoma (ASC) of the uterine cervix. They characterized three important tyrosine kinase receptors (RTK): EGFR, PDGFR-a and VEGFR2. In their study they revealed that although EGFR was overexpressed in 43% of cases (17 out of 30) no activating mutations were identified. PDGFR-a staining was positive in all cases, but only silent or intronic mutations were found. Interestingly they described that VEGFR2 overexpression correlated with decreased prevalence of metastasis.

Authors clearly stated the significance of their work and their conclusions are clearly supported by their findings. In their analysis the targets are well chosen, all of which are major objects of interest and much research. Existing (monoclonal antibodies) or newly emerging (small molecule inhibitors) therapeutic agents are being identified, increasingly used or evaluated in clinical trials. Therefore, genetic profiling of these RTK-s is essential in a multitude of cancers.

Specific comments:

1. Authors should include a description of the type of statistical analysis used to determine the significance (and lack of) in Table 3, in the Materials and methods section.

2. Figure 1 would improve from the presence of immunohistochemistry images of control, non-positive slides.

3. Authors could elaborate more on the possible importance of the presence of the same silent mutation of EGFR in 17 out of 30 cases.

4. The manuscript and figure legend 1 would benefit greatly from some grammatical as well as spelling corrections.

5. Although, it is not the goal of the manuscript, a summary table describing the clinico-pathology might also be of some benefit.

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