Reviewer's report

Title: Periostin is up-regulated in high grade and high stage prostate cancer

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Reviewer: Ben Vainer

Reviewer's report:

In this manuscript, V. Tischler et al. reports a large study of immunohistochemical detection of periostin in prostate cancer. The background for studying periostin is that this protein is an indicator of epithelial-mesenchymal transition in cancer. The study is nicely performed with a training set and a test set of prostate cancer tissue specimens arranged in tissue micro arrays. Nevertheless, I have some concerns about the written manuscript with especially concerns about the result and the discussion sections.

Major compulsory revisions:
1) In the Result section, the results of the training set and of the test set is somewhat mixed and it may be difficult to distinguish the two results.

2) I do not understand the inclusion of kappa values on the immunohistochemical staining. The staining is first evaluated by two pathologist, coming to an agreement on how to interpret each tissue core staining. This consensus is to be viewed as a "gold standard". A third assessment can be compared to this "standard" by computing of sensitivity, specificity, and predictive values, but not of kappa values.

Minor Essential Revisions:
3) I am concerned that using one core each of 0.6 mm or 1.0 mm in tissue microarrays might not be representative of the entire cancer, and several papers have demonstrated that 3-4 cores of 1 mm should be applied. The authors should include a discussion of the consequences of using only one core of each cancer specimen.

4) There are a few language errors, especially in the discussion (e.g. p. 9, line 5 "EMT is correlated with tumor progression represents..."; p. 10, l. 7-8 "even if a prognostic value of periostin was existent...")

5) Please explain the sentence (p. 10, l. 6-7) "Given th p-value of <0.05 it was not surprising that there was no effect in the test cohort."

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