Reviewer's report

Title: Eosinophil-cationic protein - a novel liquid prognostic biomarker in melanoma

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Reviewer: Mary Aronow

Reviewer's report:

The authors investigate eosinophil-cationic protein (ECP) as a prognostic biomarker in metastatic melanoma. The work is interesting and the manuscript is well written. Several areas should be addressed.

1. It is difficult to know what to make of the results as there is no multivariate analysis here. There are basically 2 groups (high ECP and low ECP) but we do not know about other potential contributing variables, including whether one group underwent a substantially different therapy, or one group had more advanced disease to start with, etc.

2. A cut-off value of 16 ng/ml for serum ECP is used. The 2 groups are then dichotomized at 10 ng/ml. How did the authors arrive at these cut-off values? Generally, there is statistical analysis that goes into determining cut-off values.

3. Page 7, It is stated that patients who received to immunotherapy were compared to those who did not, and no difference was found. Then it is stated that these data were not shown. Why not?

4. Table 1. Rather than show the overall characteristics of the group, there should be a comparison table of high ECP and low ECP and the demographic/clinical characteristics of each group, with p-values included. We want to see if the groups were similar in terms of age, gender, treatment, etc.

5. How do the authors explain the unexpected result- high ECP correlates with poorer overall survival?
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?  
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?  
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?  
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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