Reviewer's report

Title: Levels of activated platelet-derived microvesicles in patients with soft tissue sarcoma correlate with an increased risk of venous thromboembolism

Version: 0 Date: 01 Feb 2017

Reviewer: Claudia Fredolini

Reviewer's report:

In the study "Levels of activated platelet-derived microvesicles in patients with soft tissue sarcoma correlate with an increased risk of venous thromboembolism", the authors described the results of their investigation on plasma levels of microvesicles in sarcoma patients with and without history of VTE.

The information provided is interesting; but I have some suggestions for revision.

Major comments

1. About the samples. Further clinical information could help in deepen discussion and conclusions. For example levels of D-Dimer (Did patients had actually VTE or just history?); the history of VTE is important but also the individual genetic risk factors such as Factor V Leiden, hereditary antithrombin deficiency should be considered.

2. The number of samples compared is low and includes several subtypes; this is understandable due to the expected difficulties in collecting a larger cohort.

   Nevertheless, information available could be used further to understand the meaning of the levels observed. Are some of the subtypes driving more levels increase than other? Suggestion: use different dots color for different subtypes the plots.

3. About the method, author could explain in the discussion their choice of not purify the microvesicles by ultracentrifugation. In the landscape of microvesicles studies, do they have a specific reason to choose that approach? Do they have some advantages/disadvantages? Will be the microvesicles more diluted or on the opposite lost? (See for example Jayachandran et al J Immunol Methods. 2012 Jan 31;375(1-2):207-14.)
4. In the method section a brief description about the control should be included as well.

5. Even if knowing that high level of platelet microvesicles in sarcoma patients is an added information with possible prognostic value (higher risk of VTE and complications), the therapeutic value of thromboprophylaxis in cancer patients is controversial (see Lee and Levine Circulation. 2003;107;I-17-I-21). This point may deserve a discussion, in the light of this and more recent reviews/article about the topic, to discuss the clinical value of the discovery.

Minor comments

1. Please specify somewhere that pre-operative samples have been compared with metastatic and controls.

2. Additional tables with demographic would benefit of a re-organization, for example order patients by subtypes. Moreover, could additional table 1 and 2 be one? It is confusing in this format.

3. It would make the plots easily readable if the order of x axes was kept always the same (controls-M1 inverted)

4. When refer to blood counts in the text it would be nice to specify which counts(even if it may be obvious)

5. Page 10, line 11 "ubiquitous" may be substituted with a word as "common".

6. In the abstract:"to assess the prognosis", do the author meant "prognostic value"?
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.

Yes

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