Reviewer's report

Title: The expression and clinical significance of extracellular matrix protein 1 in the lymphatic metastasis of human breast cancer

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Reviewer: Ferdinando Mannello

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Wu et al_BMCCancer1899149268567887

The ms investigates the protein and molecular expression pattern of ECM1 in human breast cancer, and its correlations with the clinicopathological characteristics and lymphangiogenesis.

The authors analyzed 41 patients and found that both protein and mRNA of ECM1 were higher in BC tissues respect to epithelial tissues and lymph nodes. Moreover, they found that ECM1 positively correlated with the status of ER and LMVD, but did not find correlation to the status of lymph node metastasis.

The authors concluded that ECM1 may facilitate lymphangiogenic progression and be a considerable marker that forecast lymphatic infiltration of breast cancer in clinical use.

Major Compulsory Revisions

The paper deals with an interesting topic and related to debated results of the actual literature.

I believe that are some limitations for this study, which may may weaken the results obtained.

ECM1 alone is not sufficient to facilitate lymphangiogenesis, which may require multiple lymphangiogenic factors. The authors only demonstrated that a correlation exists, and these findings supported a role for ECM1 in the lymphatic progression of breast cancer, an area that will require further study to assess the broader applicability of their preliminary data.

So, the Authors may increase the number of subjects before to conclude that ECM1 "is a marker that forecast lymphatic infiltration of breast cancer in clinical use". Moreover, according to the debated and contrasting results of literature (due also to the different Abs and specimens used in the different studies), the authors should increase the BC patients correlating their results with more specific lympoangiogenic factors, actually totally neglected (like VEGF-A/VEGFR-2, PDGF-AA/PDGFR-alfa, VEGF-C/VEGFR-3, FGF-2, etc).

Actually they should also soften their conclusions, avoiding the actual phrase stating "ECM1 as a marker which facilitate lymphangiogenic progression and
plays a significant role in the lymphatic metastasis of human breast cancer”.

**Level of interest:** An article whose findings are important to those with closely related research interests

**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’