Reviewer’s report

Title: Sialyl Lewis x expression in canine malignant mammary tumours: correlation with clinicopathological features and E-Cadherin expression

Version: 1 Date: 14 February 2007

Reviewer: cinzia benazzi

Reviewer’s report:

General
The aim of the study is interesting, even if the results are not always discussed clearly. A lot of the data is presented without an explanation and should be more precise. In my opinion the paper should be re-submitted with major revision.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Pg6. Introduction.
Line 5 “sLex and E-cadherin,.....” needs to be supported by a citation.
Line 8. does the cooperation exists only in Inflammatory carcinoma of the human breast?
Line 16. the terms “in a large series” should be better specified. Large is too vague, especially because the number of each tumor type is not specified in the text other than in table 1.
Line 20. “The relation between the expression of the ......”. The reader could expect immunohistochemical results that are not reported for E-cad in any part of the paper.

Pg. 7. M&M
Line 2. how many lymph nodes were excised?
Line 10. lymph node immunohistochemistry is based only on cytokeratin. Specify which. The many cytokines known can provide good information concerning the origin of epithelial tumor cells. Comment on this in the discussion.

Pg 9.
The methods on this page refer only to sLex. What method was used for E-cad?
Scoring method. The authors have used a subjective instead of an objective method based on the employment of an image analiser, even if the sections were scored by three people

Pg 11. Microscopy and image processing
why two different microscopes were employed? The images are not comparable this way

Pg 12. Results
What types of tumors showed lymph node metastases? And were there any distant metastases? Have metastatic cells the features of the primary tumor or do they show a higher grade of pleomorphism? Are the animals with lymph node metastases still alive after the follow-up period or they died? Provide the reason for eventual death.

Pg. 13.
Line 5. what type of positivity should be expected: a cytoplasmic, nuclear or membranous? As sLex is a surface molecule, it should be expressed only by the cell membrane. In my opinion its expression is connected with the malignancy of the tumor. Could you explain more clearly.
Line 6. why sLex was less intensely expressed? comment needed.

Pg 16.
Line 4. what is the connection between the rate of malignancy in the tumor reported in the paper and squamous metaplasia?
In my opinion the role of E-cad and sLex should be explained from the biochemical point of view.

Pg 20. List of abbreviations: DAPI is missing

table 1: why the figures referring P value are not shown, even if not significant? please, add the P values.
what type of tumors were those with the 11 lymph nodes showing metastases?

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
Pg. 7 M&M.
Line 7. refraise the sentence.

Pg. 8.
Line 2. months instead of month.
Line 4. please, provide the number of dogs dead or alive at the end of the follow-up period, and for those which died, provide the cause (if due to the tumor or not).
Line 9. an “and” is missing

Pg 10.
Line 17. chose instead of choose

Pg 11. microscopy and image processing
Immunostained slides were examined under….

Pg 12. Results.
Line 19. refraise the sentence

Pg 13.
Line 2. Indicate the method used (immunohistochemistry, immunofluorence)

Pg 14.
Control the tenses

Pg 15. Discussion
Shorten the page avoiding repetitions. For instance, the paragraph concerning the presence of sLex is better in the introduction.

Pg 17.
Line 1. …progression and metastases (citation needed).

Pg 18.
Line 4. …to vascular endothelial cells (citation needed).

Pg 19.
The first sentence recalls what is known, without adding anything new.
Line 7. this sentence should be in the conclusions.

Pg. 19. Conclusions: the findings of this investigation should be better pointed out.

Pg. 22. References.
Point 18 on the list. Substitute _ with-

Figure 1. as two different tumor types are provided, the magnification should be the same in both figures

Figure 2. the positivity is faint and appears cytoplasmic. could you explain why not membranous as it should be expected?

Figure 3. the result was the same with IHC and IF?
Figure 4. both sLex and E-cad are located on the cell membrane of epithelial cells. why do the two methods stain different cells?

Discretionary Revisions (which the author can choose to ignore)

**What next?:** Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

**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:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests