Reviewer's report

Title: A comparative study between mixed-type tumours from human salivary and canine mammary glands

Version: 1 Date: 15 January 2007

Reviewer: Laura Peña

Reviewer's report:

General
The approach is not correct.
Many obsolete references.
The references are not used properly. In many occasions the statements do not correspond with the indicated reference.
Inadequate methods.
Conclusion too ambitious and not demonstrated.

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

INTRODUCTION
There are many mistakes in the introduction in relation to canine mammary tumors and their similarity with the human salivary gland tumors.
- It is not in the literature that both types of tumors share epidemiological and behavioural characteristics.
- The cited references (2-5) are old and compare human and canine BREAST tumors.
- In the introduction, the authors state that pleomorphic adenoma and carcinomas ex-pleomorphic adenomas of the human salivary glands are histologically similar to benign mixed tumors and to "metaplastic carcinomas" of the canine mammary gland, according to their interpretation of the bibliography. In the cited references does not exist such affirmation. Moreover, the malignant mixed tumors of the canine mammary gland, according to the actual WHO's classification are carcinosarcomas, which is not comparable to the human salivary malignant counterpart.
- The references 21-25 used in the introduction to compare human and canine tumors are only references of human salivary gland tumors.
- The fact that the frequency of malignant tumors is inversely proportional to the size of the affected gland is only found in human salivary gland tumors. This is untrue in the canine mammary tumors. Also, the reference 27 does not indicate this fact.

METHODS
The selection of canine tumor cases is poor described.
The age of the animals and humans used is not indicated.
The clinical study is very poor: lack of information about characteristics of the tumors or patients (size of the tumor, ulceration, previous or actual metastasis/recurrences, affected lymph nodes...)

In this study, it is not used a defined histological classification of the canine mammary gland tumors. Are carcinosarcomas included?. Are there osteosarcomas?. Which are the criteria for including a case as benign or malignant?: malignant epithelial, malignant and mesenchymal, mesenchymal alone? The actual WHO`s classification of canine malignant mixed tumors included these cases as carcinosarcomas. Carcinosarcomas are not similar to Ca-ex PA.

The method of age comparison is not congruent with the study and does not fit with the comparison of the human salivary and canine mammary tumors. For example: 10 years in a dog corresponds with 56 years in a woman. The concern is that hormonal status is very important in the development mammary gland tumors and it is not comparable in both species by the system used. A 56 years old woman is menopausal and menopausia does not occur in a 10 years old bitch. The method is not valid for this study.
Considering the relevance of the hormonal status for the development of mammary gland tumors, it is not correct to compare male and female human salivary tumors with only female canine mammary tumors. Even more when the purpose is also to compare the estrogen receptor expression.

Also, the breed is important to compare age: Larger breeds of dogs have a shorter life span and smaller
dogs have a longer one. Even if they are mixed dogs can be classified as large or small.

The classification method of the size of mammary glands in the dog used in this study is not properly described. How many bitches were used. Were they alive?. Where are the measures…? etc. Moreover the larger size of the inguinal mammary glands is attributed mainly to the adipose tissue. This is not comparable with the differences in size in human salivary glands.

The immunohistochemistry is in general well described but lack of suitable positive controls in the canine tissues.

RESULTS AND DISCUSSION
Considering the previous concerns respect to the approach and the methods used in the study, the results are not reliable and useful. The conclusion is too ambitious and is not demonstrated in the present study.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
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Discretionary Revisions (which the author can choose to ignore)

What next?: Reject because scientifically unsound

Level of interest: An article of insufficient interest to warrant publication in a scientific/medical journal

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