

THE IMPORTANCE OF TUMOUR MARKERS IN VETERINARY ONCOLOGY

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Summary

Present subject is almost unknown in veterinary medicine from our country and few used in other countries, but in Romania carcinosis frequency in pets is extremely high on behalf a major reason of mortality. Tumour markers entry becomes a priority for diagnosis and appreciation of carcinosis process in dog and cat. Being a breaking new ground for us, this new inquiry technology, we will brief this work only to the theoretical presentation of the introduction of these investigations beside all that diagnosis methods done in veterinary oncology.

Tumoural markers practice technology for carcinosis investigation in human became a current test as far back as last decade. This takes part and parcel on methodology regarding cancer diagnosis (the diagnosis of malignant tumours) with certain localization and what we call post-therapeutic state in following carcinosis course. This investigation methodology of tumour markers had to be seen as an important complementary methodology with other methods of making evident the carcinomatosis in human.

Tumour markers are proteins induced by organism cells or organism cells affected by cancer (cells immunity system) or by tumour cells themselves. Tumour markers could offer real information regarding genesis, pathogenesis and curative result.

Nowadays it doesn't exist a perfect tumour marker with 100% specificity, but known tumour markers have a specificity between 40-80%. However, spectrum of tumour marker activity has to be very large with permanent activity maintenance not under 75-80% specificity.

Tumour marker activity consists of diagnosis methods, differential diagnosis, prognosis and post-curative course. All obtained results give us information about used tumoural markers; results that can be comparing (associate) with all others pathologic anatomy investigation methods used in veterinary practice.

The main tumour markers categories, which we will use in future regarding carcinosis situs in veterinary oncology (with all clinical and paraclinical exams), are as follow:

- mammary gland – CEA will be used (carcino embryonic antigen);
- nasal cavity – both CEA and SCC will be used (squamos cell carcinoma antigen);

- testicle – we will use AFP (alphafetoprotein) and ACG (chorionicgonadotrofin);
- prostate gland – PSA will be used (prostatic specific antigen) and also PAP (prostatic acid phosphatin).

These tests have a high level of specificity and a certain aim, both of organ and histopathological form.

From now on, for monitoring each dog and cat with malignant tumours, regardless of localization or citohistopatologic form, we will use CEA tumoural marker (carcino-embryonic antigen) because CEA has a high sensitivity for many solid tumours, fact that made CEA to be compared to other new markers appeared. We chose these tumour markers because medical literature gave us further information regarding the use of these in different solid tumors in dog (pancreatic, hepatic and breast tumors).

In conclusion we want to emphasize the special contribution and the benefit of introduction tumour markers inquiry in veterinary oncology practice. Tumour markers give us answers to at least two questions regarding carcinosis course in animals and for which not any other investigation methodology could not give us a correct answer. These are as follow:

- The identification of first dissemination process changes for non-malignant tumours or for a recurrent chronic inflammatory process.
- Originate moment in local recurrence or post-therapy metastasis.

We think that these two answers clear a lot tumour markers introduction to medical veterinary practice.

References

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