

Metastasis of a malignant Leydig cell tumour – an unusual presentation

Testicular tumors are common in aged dogs, being the Seminoma, Sertoli and Leydig cell tumors the most frequent testicular neoplasms in this species. Most of them are benign and metastases are rarely reported. This particular case describes a multiple cutaneous metastases of a malignant testicular Leydig cell tumor in a male dog. Inhibin- α (INH- α) and Calretinin antibodies further confirmed the Leydig origin of the cutaneous tumor cell population.

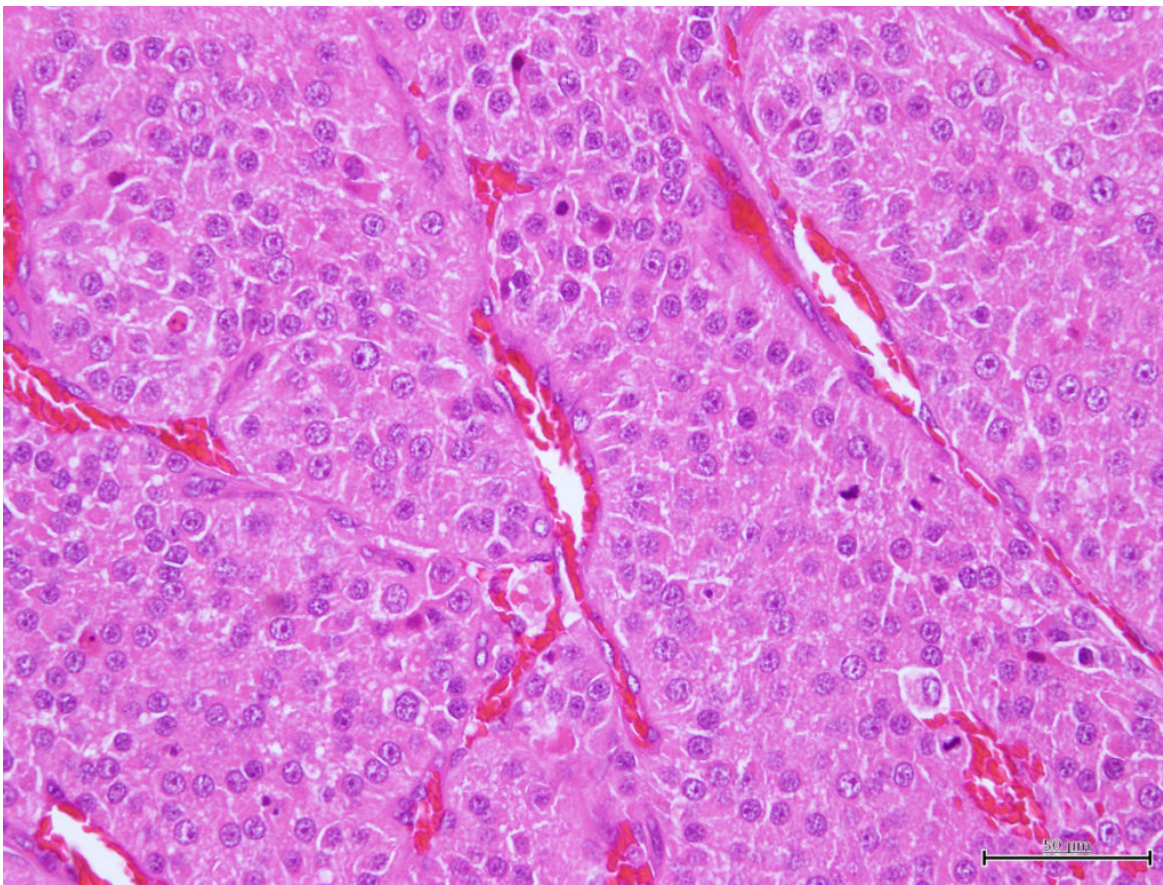


Fig. 1. Testicular tumour with a solid-diffuse pattern of growth. Mitotic figures are common. HE. Bar, 50 μ m.

The animal, an 11-year-old Golden Retriever, was presented to the clinician with an enlarged testis and three cutaneous nodules. The lesions were surgically removed, and submitted for histopathological examination. Gross examination of the testis revealed a coalescent and protruding multinodular mass which replaced all testicular parenchyma. Cutaneous lesions revealed brown to red areas of soft and friable tissue, and one of the lesions had extensive ulceration. Samples selected during gross examination, were embedded in paraffin and sections of 4 μ m were cut and stained with routine heamatoxylin and eosin (HE) for histopathological examination. A monomorphic neoplastic population arranged in a solid pattern or radially around blood

vessels was present. Numerous cysts or angiomatoid areas were frequent, along with hemorrhage and necrosis. Most of the tumor cells presented a round, cuboidal to columnar morphology, with small, round to oval hyperchromatic nuclei containing single and prominent nucleoli. Cytoplasm, acidophilic, with ground-glass appearance, was usually filled with granular content or lipid vacuoles. Mitotic figures, including atypical forms were identified and vascular invasion was present in multiples areas of testicular parenchyma. The tumor was classified as a malignant interstitial or Leydig cell tumor – with both solid and cystic-vascular type with the suspicion of a cutaneous metastatic process involved. To determine the cutaneous cell phenotype, it was performed IHC techniques and sections were prepared by standard methods using INH- α (monoclonal) and calretinin (polyclonal) anti-human antibodies. Appropriate positive and negative controls were included in each slide run.

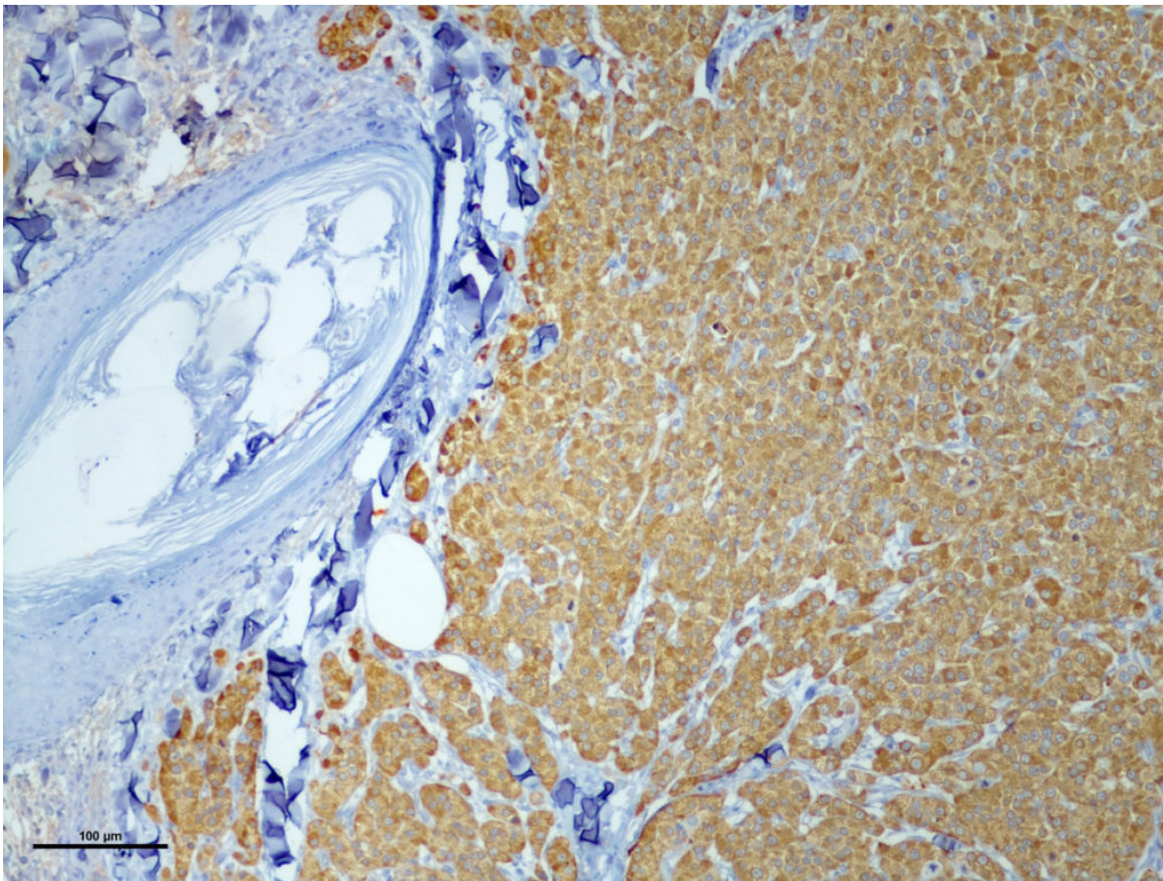


Fig. 2. Cutaneous metastasis. INH- α labelling showing strong cytoplasmic immunoreactivity. IHC. Bar, 100 μ m.

INH- α and Calretinin showed a satisfactory expression in normal testis, namely in Leydig cells. Both antibodies revealed a strong and consistently cytoplasmic expression for INH- α and a moderate to strong cytoplasmatic and nuclear expression for Calretinin, in all tumor cells (testis and all cutaneous lesions).

Three-months after surgical excision, the dog exhibit clinical and radiological signs of progressive neoplastic disease with a highly infiltrative cutaneous mass and radiologic evidence of pulmonary metastases. By that time, the dog's condition deteriorated and euthanasia was requested by the owner.

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Publication

[Multiple Cutaneous Metastasis of a Malignant Leydig Cell Tumour in a Dog.](#)

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