



ECVP/ESVP Summer School in Veterinary Pathology



Marie Curie Training Courses

Summer School 2006 – Mock Exam Case 1

1. Tissue from a DOG

DESCRIPTION OF THE HISTOLOGICAL FINDINGS

Testis. There is no normal seminiferous tubule left. The testicular architecture is severely distorted by the presence of a diffuse, unencapsulated, highly cellular, infiltrative neoplasm.

In most areas, pluristratified tubules with peripheral palisading of neoplastic cells and central accumulation of an eosinophilic secretion product are scattered within an abundant collagenous stroma. Neoplastic cells are cylindrical and cohesive, 30 micrometers in length, with ill-defined margins and a moderate amount of poorly stained, usually macrovacuolated, cytoplasm. The nucleus is triangular and basal, hypochromatic, with a one-micrometer diameter eosinophilic central nucleolus.

There are also neoplastic cells arranged into dense sheets within a sparse fibrovascular stroma. Neoplastic cells are round, independent, 20 to 25 μm in diameter, with distinct margins, a very high nuclear:cytoplasmic ratio, a low amount of basophilic cytoplasm and a 20- μm -diameter round central hypochromatic nucleus with finely stippled chromatin and 1 or 2 prominent eosinophilic nucleoli.

Cell atypias are severe (anisocytosis and anisokaryosis, bi- and multinucleate cells). The mitotic index averages 2 per high-power field. Apoptotic figures are numerous. Lymphatic and venous emboli are common. A slight multifocal accumulation of lymphocytes occurs in the stroma.

Other minor changes: extravasated red blood cells within lymphatic vessels; hemorrhages and hemosiderin-laden macrophages within the stroma; multifocal moderate interstitial edema.

MORPHOLOGIC DIAGNOSIS/DIAGNOSES

Mixed germ cell- sex cord stromal tumor (3).

Or: Testis, intermingled Sertoli cell tumor (2) and seminoma (1).

MARKS

Testis.....	1
Diffuse involvement, or: absence of seminiferous tubule left.....	1
Collagenous stroma	1
Tubes	1
Cylindrical cells + vacuolated cytoplasm	2
Basal nucleus + eosinophilic nucleolus	2
Non-cohesive cells + 20-25 micrometers in diameter.....	2
High nucleocytoplasmic ratio.....	1
Anisokaryosis, severe.....	1
Mitotic index, 1 or 2 per HPF	1
Emboli	1
Lymphocytes within the stroma	1
Morphologic diagnosis.....	3
Design	2