



# ECVP/ESVP Summer School in Veterinary Pathology

## Summer School 2016 – Carcinogenesis

E 2721 / 16, tissue from a horse:

Lymph node and surrounding fibro-adipose tissue:

Infiltrating, separating, and surrounding follicular and sinusoidal lymphoid structures is an unencapsulated, poorly circumscribed 1.6 x 2.3 cm mass. It is formed by nests of round cells with distinct cell borders and moderate to high amounts of amphophilic cytoplasm that occasionally contains small basophilic granules. Nuclei are centrally located, mostly round with finely stippled chromatin and indistinct nucleoli. Mitotic rate is low with less than one mitotic figure in ten high power fields (400x). Mast cell islands are separated by abundant fibrovascular stroma with thick bundles of collagen and high numbers of variably sized eosinophilic granulomas. Granulomas are characterized by central accumulation of partly degenerate eosinophils and peripherally bordered by few macrophages, variable numbers of fibroblasts / fibrocytes, abundant collagen fibers and few lymphocytes and plasma cells. Occasionally multinucleated giant cells (foreign body type) with up to 6 haphazardly arranged nuclei are present and some collagen bundles are hyalinized (collagenolysis). Intermingled between mast cell islands and granulomas are high numbers of viable eosinophils and fewer extravasated erythrocytes (hemorrhage). Sections of neighbored smaller lymph node contain few mast cells and moderate numbers of eosinophils in the subcapsular and medullary sinus.

### **Histomorphologic Diagnosis:**

Lymph node: Metastasis of a cutaneous mast cell tumor

*Cave:* Although obviously correct from the histo point of view, there appears to be a discrepancy with what we know of equine cutaneous mast cell tumors. Based on current knowledge, they do not normally metastasize. THIS tissue was obtained as a single mass on the midline dorsal area of the nose / cutis / subcutis that had very slowly developed over two years. No doubt, there should be no regular lymph node in this area! Therefore, the lymphatic tissue seen here is most likely a secondary lymphofollicular hyperplasia due to chronic inflammation (our best guess). In that case, can we still consider this a metastatic disease? The single mass was fully excised and never recurred, the horse became quite old.