Neoplasia II: Benign and malignant neoplasms in squamous epithelium and haematopoietic tissue – Examples in Veterinary Medicine

Answers:

Squamous epithelial neoplasms

Squamous Cell Carcinoma – NDP Image: S2008-140A

Q1 Examine the scanned slide provided, identify the pathological process and give a diagnosis

A1 Within the haired skin overlying the ear cartilage is a small, focal, non-encapsulated area of epithelial cell proliferation, which is expanding the epidermis. Small clusters of neoplastic cells are present adjacent to the deep border of the epidermis. The lesion is composed of neoplastic keratinocytes that lack polarity, are polygonal and have relatively indistinct cell margins with a small to moderate amount of eosinophilic cytoplasm. The nuclei are round with lightly stippled chromatin and have single or indistinct nucleoli

Diagnosis: Squamous cell carcinoma

Q2 Unknown mass: Describe the picture and decide whether the mass is a neoplasm, or an inflammatory process.

A2 This mass was on the ventral aspect of the tongue of a 10 1/2 years old, male (entire) cross breed dog. The dog underwent a partial glossectomy. The sample submitted to the pathologist was of a 7.2 x2.6 x4.5 cm (average) length of tongue with a 4.5 x 3 x 2 cm mass on its ventral aspect. The mass had an irregular ulcerated surface, brown to yellowish in colour. On cutting the mass, an exophytic, white firm mass was revealed; the mass appeared to be moderately well demarcated from the tongue tissue but showed partial infiltration into the underlying tissue. Most of the cut surface appeared homogenous in appearance.

Diagnosis: This mass was shown histopathologically to be a squamous cell carcinoma.

Q3 Examine the scanned slide provided, identify the pathological process and give a diagnosis (mass – NDP Image: PM2007-135F)

A3 The normal lymph node architecture is effaced by a neoplastic cell population – a densely cellular neoplastic mass. The neoplastic cells are arranged in sheets supported by a fine collagenous stroma. The neoplastic cells are round, with predominantly distinct cell margins and a very small amount of eosinophilic cytoplasm. The nuclei are round and prominent with densely stippled to condensed chromatin and predominantly indistinct nucleoli. The mitotic rate is 20 per 10 high power fields.

Diagnosis: Lymphoma