

**NEOPLASIA II: Benign and malignant neoplasms in squamous epithelium
(and other tumours) – Examples in Veterinary Medicine**

SQUAMOUS EPITHELIAL NEOPLASMS

While papilloma viruses can cause benign tumours of the squamous epithelium (papillomas or warts) in animals, these are usually of the alimentary tract rather than cervical lesions as seen in humans. In some cases, particularly cattle fed on certain plants, viral-induced papillomas may undergo malignant transformation into malignant squamous cell neoplasms – squamous cell carcinomas (SCCs).

It is important to note that SCCs can arise from other underlying causes.

Squamous cell carcinomas may rise in different organs. In cats and dogs, SCCs are the most frequently reported malignant epithelial neoplasm, arising from keratinocytes of the epidermis. As seen in the pictures below, SCCs are more common in unpigmented or depigmented skin and long exposure to UV light from the sun.



SCC on nose of cat



SCC of ear of cat

Both pictures above show erosive SCCs with crusting, ulceration and haemorrhage. Histological examination of skin biopsy is required for diagnosis. SCCs are invasive and many spread via regional lymph nodes and the bloodstream.

SCCs also occur in horses, where they are more common in grey horses. The picture below shows a SCC around the anus. SCCs of the 3rd eyelid can occur in cattle, particularly breeds such as the Hereford (white face).

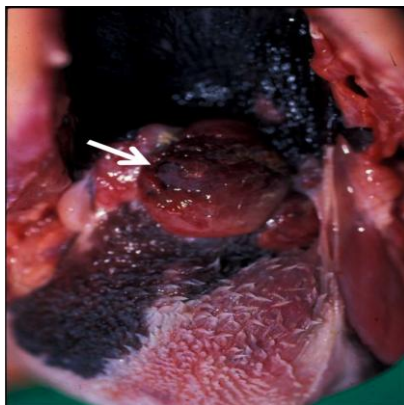


SCC around anus of horse

Squamous Cell Carcinoma: S2008-140A

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Note that not all SCCs are erosive. The picture below shows a SCC of tonsillar epithelium in a dog. These generally cause discrete masses (arrow). Tonsillar SCCs are highly malignant, are locally invasive and rapidly metastise to local lymph nodes and more distant sites.



LYMPHOMAS are one of the most common malignancies affecting dogs and cats, and less common in other species as cattle and horses. These tumours represent a good animal model for human non-Hodgkin, lymphoma. Note that lymphoma is the term given to solid lymphoid tumours in tissues; leukaemia means the presence of neoplastic white blood cells (lymphoid or myeloid) in the circulating bloodstream.

Lymphomas are often discrete masses, but in the intestine can be more diffuse, as shown below, causing generalised thickening of the intestinal wall and diarrhoea. Solitary tumours in the intestine can cause obstruction.



Classification of lymphomas in veterinary medicine can be complex. A simplistic way is to classify them depending site of location e.g. splenic, thymic, cutaneous, alimentary. Lymphomas can be of B cells or T cells, or less commonly non-B, non-T cells. Another system used is the working formulation, primarily orientated towards the clinical outcome and less on cellular criteria.

Describe the picture and decide whether is a neoplasm, or an inflammatory process.



Examine the scanned slide provided and give a diagnosis.

Lymphoma: PM2007-135F
PM2008-29D

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Lymphoma: PM2008-29D	Lymphoma: PM2008-29D