

WSC 2023-2024
Conference 3, Case 1
Tissue from a horse

MICROSCOPIC DESCRIPTION: Haired skin: Effacing the deep dermis and subcutis is an unencapsulated, poorly circumscribed, infiltrative, moderately cellular neoplasm **(1pt.)**, composed of sheets **(1pt.)** of neoplastic mast cells **(1pt.)** on a dense fibrous stroma **(1pt.)**. Neoplastic cells are round with distinct cell borders, moderate amounts of amphophilic cytoplasm **(1pt.)** that often contain fine basophilic granules **(1pt.)**, and centrally located, oval nuclei with coarsely stippled chromatin and 1-4 small blue nucleoli. **(1pt.)** Anisocytosis and anisokaryosis is mild, and mitoses are rare. **(1pt.)** Sheets of neoplastic mast cells are widely separated by thick bands of collagen **(1pt.)** and are infiltrated by innumerable eosinophils **(1pt.)**, with fewer histiocytes, lymphocytes and plasma cells. Scattered throughout the section are multiple large, irregular, up to 5mm diameter granulomas **(1pt.)** centered on necrotic areas composed of brightly eosinophilic cellular and karyorrhectic debris, which are surrounded by a layer of activated macrophages **(1pt.)** and fewer multinucleated foreign body type macrophages, and in turn, circumferential bands of mature collagen containing low numbers of lymphocytes and plasma cells. **(1pt.)** In the adjacent fibrous connective tissue, perivascular areas contain low numbers of lymphocytes, plasma cells, eosinophils, and macrophages. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Haired skin: Mast cell tumor. **(5pt)**

O/C: **(1pt.)**

WSC 2023-2024
Conference 3, Case 2
Tissue from a cat.

MICROSCOPIC DESCRIPTION: Haired skin, subcutis, and underlying skeletal muscle: There is diffuse infarction of this segment of haired skin, with much of the epidermis and underlying dermis retaining architecture but having loss staining affinity. There is diffuse epidermal necrosis **(1pt.)** without ulceration and overlying mild to moderate hyperkeratosis. There are rare areas in which remnant epithelial cells are swollen with cytosolic edema (ballooning degeneration) **(1pt.)**. Scattered throughout the necrotic epidermis, there are numerous large polygonal uni- and multinucleated viral syncytia **(1pt.)** within keratocytes which range up to 30um **(1pt.)** and contain one or more brightly eosinophilic intracytoplasmic inclusions **(1pt.)** ranging up to 8um in diameter. Similar inclusions are present within keratinocytes of normal size as well. There are low numbers of infiltrating necrotic neutrophils, cellular debris, and hemorrhage within the epidermis. **(1pt.)** Similar changes extend into the hair follicles **(1pt.)** and there are no remaining sebaceous glands. The dermis and subcutis is diffusely and markedly expanded by abundant hemorrhage and edema **(1pt.)**, and scattered low number of necrotic neutrophils and cellular debris. Within the dermis and subcutis, walls of small arteries and some veins are expanded by variable combinations and concentrations of smudgy pink extruded protein **(1pt.)**, neutrophils, and cellular debris, with pyknosis of smooth muscle cells with arteriolar walls (vasculitis) **(1pt.)**. There is often fibrin thrombi occluding inflamed vessels. Remnant endothelial cells within affected vessels occasionally contain cytoplasmic inclusions. **(1pt.)**

MORPHOLOGIC DIAGNOSIS : Haired skin and subcutis: Vasculitis **(1pt.)**, necrotizing **(1pt.)**, diffuse, severe, with cutaneous infarction **(1pt.)**, epithelial ballooning degeneration **(1pt.)**, numerous epithelial viral syncytia, numerous epithelial and endothelial intracytoplasmic inclusions **(1pt.)** and marked dermal hemorrhage and edema.

Cause: Bovine poxvirus **(2pt.)**

O/C: **(1pt.)**

WSC 2023-2024
Conference 3, Case 3.
Tissue from a minipig.

MICROSCOPIC DESCRIPTION: Ear, pinna **(1pt.)**: Four sections of pinna are submitted, which vary in degree of lesion severity. In several of the sections, there are discrete areas of coagulative necrosis **(2pt.)** of the epidermis which extends down into hair follicles **(1pt.)**. There is maintenance of cellular architecture throughout the structures of the ear tip, but there is loss of stain affinity **(1pt.)** (infarct). There is marked congestion of small vessels in the superficial dermis and perivascular edema. Deeper **(1pt.)** Within the dermis, small and medium-caliber arterioles are variably occluded by fibrin thrombi **(1pt.)** and their walls contain variable degrees of smooth muscle cell vacuolation, symmetric and asymmetric intimal hyperplasia **(1pt.)** and small amounts of adventitial fibrosis. **(1pt.)** Rarely, arteriolar walls contain variable combinations and concentrations of exuded pink protein **(1pt.)**, necrotic neutrophils **(1pt.)**, cellular debris **(1pt.)**, and endothelial and smooth muscle nuclei are pyknotic (arteritis/periarteritis).

MORPHOLOGIC DIAGNOSIS: Ear tip, small and medium-caliber arterioles: Arteriosclerosis, multifocal, moderate, with thrombosis, occasional arteritis and periarteritis, and focally extensive cutaneous infarction. **(1pt.)**

Name the condition: Thrombocytopenic purpura of Gottingen minipigs **(2pt.)**

.

O/C: **(1pt.)**

WSC 2020-2021
Conference 3 Case 4.
Tissue from a dog.

MICROSCOPIC DESCRIPTION: Periorbital tissue: Multiple fragments of a glandular **(2pt.)** neoplasm are submitted for examination. Effacing normal tissue **(1pt.)**, there is an encapsulated **(1pt.)**, expansile, moderately cellular multilobular **(1pt.)** neoplasm **(1pt.)**. A thin capsule of fibrous connective tissue surrounded the periphery of the neoplasm. The neoplasm is composed of neoplastic epithelial **(1pt.)** cells arranged in nests and packets **(1pt.)** on a fine fibrovascular stroma **(1pt.)**. Epithelial cells have distinct cell borders **(1pt.)** and a moderate amount of granular cytoplasm **(2pt.)**. Nuclei are round with moderately stippled chromatin with 1-4 basophilic nucleoli. **(1pt.)** Anisokaryosis and anisokaryosis is minimal and mitoses are rare. **(1pt.)** Interstices between neoplastic cells are either clear or filled with basophilic proteinaceous fluid. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Periocular tissue: Canine orbital lobular adenoma **(5pt.)**

O/C: **(1pt)**