

WSC 2014-2015, Conference 4

Case 1. Tissue from a rabbit.

MICROSCOPIC DESCRIPTION Haired skin, presumably eyelid: Expanding the dermis, and elevating the overlying and markedly hyperplastic epidermis is an unencapsulated, infiltrative, well-demarcated, moderately cellular neoplasm. **(1pt)** Neoplastic cells are arranged in short streams and bundles **(1pt)** on a moderate collagenous stroma. Neoplastic cells are plump, spindle to elliptical, with moderate to abundant finely granular amphophilic cytoplasm. **(1pt)** Nuclei are irregularly round to oval with finely stippled chromatin and 1-3 variably sized basophilic nucleoli. **(1pt)** There is marked anisokaryosis and anisocytosis. **(1pt)** Mitotic figures average 1-2/400x HPF. **(1pt)** Many neoplastic cells contain one or multiple 2-4µm round intracytoplasmic **(1pt)** viral inclusions **(1pt)**. The stroma is infiltrated with low to moderate numbers of heterophils, and contains low to moderate numbers of individualized, shrunken, atrophic skeletal muscle cells. **(1pt)** The epidermis overlying the epidermis is markedly hyperplastic **(1pt)** and with marked spongiosis up to 6 cell layers thick, which forms deep rete ridges. There is hypergranulosis and numerous mitotic figures within the basal layer. Keratinocytes within the stratum spongiosum and corneum are multifocally swollen with cleared, microvacuolated cytoplasm **(1pt)** (ballooning degeneration) **(1pt)** and contain 1 or multiple 2-6µm brightly eosinophilic intracytoplasmic viral inclusions. **(1pt)** There is multifocal dyskeratosis within the stratum corneum and overlying parakeratotic hyperkeratosis. The adjacent dermis is markedly edematous with dilated lymphatics and aggregates of low numbers of lymphocytes and rare plasma cells, and there is rare hemorrhage in the superficial dermis. **(1pt)**

MORPHOLOGIC DIAGNOSIS: Haired skin, eyelid: Atypical mesenchymal proliferation, focally extensive, with epithelial hyperplasia, ballooning degeneration, and numerous epithelial and mesenchymal intracytoplasmic viral inclusions. **(3pt)**

NAME THE CONDITION: Shope fibroma **(1pt)**

CAUSE: Leporipoxvirus **(1pt)**

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

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Case 2. Tissue from a deer.

MICROSCOPIC DESCRIPTION: Haired skin: Diffusely, the epidermis is covered by an up to 3 mm **(1pt)** thick, laminated serocellular crust composed of parakeratotic hyperkeratosis **(1 pt.)** and abundant serocellular debris **(1 pt.)**. Multifocally within the crust are linear bands of degenerate neutrophils **(1 pt.)** and cellular debris (intracorneal pustules) **(1 pt.)**, serum, and hair shafts. At all levels throughout the crust, there are innumerable 1-2 um, paired bacterial cocci **(1 pt.)** (zoospores) **(1 pt.)** haphazardly arranged in rows and forming long, branching, filaments **(1 pt.)**. The epidermis is diffusely moderately hyperplastic **(1 pt.)**, characterized by acanthosis and elongate rete ridges, and keratinocytes, especially in the stratum spongiosum are often swollen with cleared cytoplasm (intracellular edema). The epithelium is infiltrated by low to moderate numbers of viable and degenerate neutrophils. Within the superficial dermis at the bottom edge of the crust, , follicles are outlined, distended, and occasionally effaced by large numbers of viable and degenerate neutrophils **(1 pt.)**, admixed with necrotic follicular epithelium, cellular and keratin debris and the occasional remaining hair shafts (folliculitis and furunculosis) **(1 pt.)**. Often, follicular epithelium is necrotic or attenuated, and some follicles contain rows of zoospores admixed with cellular debris. The superficial dermis, primarily within dermal pegs, is expanded by perifollicular and periadnexal aggregates of moderate numbers of macrophages and lymphocytes, with fewer neutrophils and plasma cells **(2 pt.)** Multifocally, superficial dermal vessels are congested.

MORPHOLOGIC DIAGNOSIS: Haired skin: Dermatitis, folliculitis and furunculosis, , subacute and suppurative, diffuse, moderate, with marked epithelial hyperplasia, parakeratotic hyperkeratosis, and filamentous bacteria **(3 pt)**

CAUSE: *Dermatophilus congolensis* **(3 pt)**

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

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Case 3. Tissue from a dog.

MICROSCOPIC DESCRIPTION: Liver: Diffusely, there is moderate bridging fibrosis **(2pt)** which connects central veins **(1pt)** and surrounds, separates, and replaces centrilobular hepatocytes. **(2pt)** In areas in which the fibrosis exceeds the limiting plate, entrapped hepatocytes are shrunken (atrophy) **(1pt)**. Diffusely, hepatocytes contain abundant brown granular pigment **(1pt)** (hemosiderin) **(2pt)** which is concentrated toward the center of the lobule **(2pt)**. Areas of fibrosis between central veins contain large numbers of hemosiderin-laden macrophages **(1pt)** admixed with fewer lymphocytes and rare neutrophils, and rare Kupffer cells contain hemosiderin granules as well. There are scattered shrunken, hypereosinophilic hepatocytes with pyknotic nuclei (apoptosis) **(1pt)**. There is minimal biliary hyperplasia within portal areas, and scattered individual megakaryocytes are present within sinusoids.

MORPHOLOGIC DIAGNOSIS: Liver, hepatocytes: Siderosis, periportal, diffuse, severe, with peripherolobular hepatocellular loss and bridging portal fibrosis. **(4pt)** (NOTE: These three items can actually be placed in any order...)

NAME THE CONDITION: Hemochromatosis **(2pt)**

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

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Case 4. Tissue from a dog.

MICROSCOPIC DESCRIPTION Lung: Effacing pulmonary parenchyma, and abutting the pleura, is a 1cm diameter, nodular, densely cellular, unencapsulated, infiltrative neoplasm **(2pt)** composed of two cellular populations **(2pt)** of neoplastic epithelial cells. The neoplasm is composed of papillary projections **(1pt)** which border irregular branching acini resembling bronchioles **(1pt)** with densely cellular fibrous cores **(1pt)**. The first population, which lines the acini, are columnar **(1pt)**, with indistinct cell borders and abundant granular eosinophilic cytoplasm **(1pt)**. Rarely, the cytoplasm contains abundant mucus **(1pt)**. Nuclei are irregularly round with finely stippled chromatin and 1-2 small basophilic nucleoli, and often apically **(1pt)** located. There is often loss of polarity **(1pt)** and in some areas, cells may pile two or three layers thick. Within this population, mitotic figures **(1pt)** are rare. The second cellular population fill and expand the stalks of the papillary projections and are polygonal **(1pt)** with indistinct cell borders. Nuclei are similar to those seen in the cells lining the population. Mitotic figures are also rare. **(1pt)** Papillary projections are separated by spaces which contain large numbers of viable and degenerate neutrophils **(1pt)** and abundant cellular debris which occasionally infiltrates necrotic areas of the neoplasm. There are focal areas of coagulative necrosis scattered throughout the neoplasm. **(1pt)**

MORPHOLOGIC DIAGNOSIS: Lung: Complex pulmonary carcinoma. **(2pt)**

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