

WSC 2017-2018 Conference 6

Case 1 – Tissue from a guinea fowl.

MICROSCOPIC DESCRIPTION: Feathered skin: Diffusely expanding the dermis and surrounding, separating and rarely infiltrating feather follicles, nerves, and bands of skeletal muscle, **(1pt)** there is a nodular, densely cellular, unencapsulated, infiltrative round cell neoplasm. **(2pt)** Neoplastic cells are arranged in sheets **(1pt)** on a pre-existent stroma. **(1pt)**. Neoplastic cells have indistinct cell borders with a small amount of homogenous eosinophilic cytoplasm. **(2pt)** Nuclei are irregularly round with coarsely clumped chromatin and indistinct nucleoli. **(2pt)** Mitotic figures average 4-5 per 400X field. **(2pt)** Numerous heterophils are scattered throughout the neoplasm. **(1pt)** There are occasional areas of necrosis of neoplastic cells scattered randomly through the mass. **(1pt)** There is multifocal ulceration **(1pt)** of the overlying epidermis with scattered heterophilic pustules, edema, and multifocal keratinocyte necrosis, as well as segmental serocellular crusts. **(1pt)** There is diffuse mild parakeratotic hyperkeratosis.

MORPHOLOGIC DIAGNOSIS: Feathered skin: Lymphoma **(4pt)**

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

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Case 2 – Tissue from a chicken.

**MICROSCOPIC DESCRIPTION:** Liver: Affecting approximately 33% of the section are random **(1pt)**, often coalescing areas of necrosis **(1pt)** characterized by dissociation of hepatic cord architecture with loss of hepatocytes **(1pt)** and replacement by eosinophilic cellular and karyorrhectic debris, small to moderate numbers of heterophils **(1pt)**, fibrin and hemorrhage. Areas of lytic necrosis are bounded by either individual necrotic hepatocytes with hypereosinophilic cytoplasm and pyknotic nuclei or degenerate **(1pt)** hepatocytes with pale cytoplasm and cytoplasmic vacuolation. Frequently, degenerate hepatocytes contain round, amphophilic to basophilic **(1pt)** smudgy intranuclear **(2pt)** inclusion bodies that fill and expand the nucleus up to 20 um in diameter **(1pt)**. Multifocally portal areas are expanded by moderate numbers of heterophils, lymphocytes, fewer macrophages, and plasma cells. **(1pt)**

**MORPHOLOGIC DIAGNOSIS:** Liver: Hepatitis, necrotizing **(1pt)**, multifocal to coalescing, marked, with numerous intranuclear viral inclusions. **(1pt)**

**CAUSE:** Avian adenovirus group 1 **(3pt)**

**NAME AN ASSOCIATED SYNDROME WITH THIS AGENT:** Hydropericardium syndrome **(2pt)**

**NAME A POTENTIAL CO-INFECTING AGENT:** Avian birnavirus or avian circovirus **(2pt)**

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

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Case 3 – Tissue from a turkey.

MICROSCOPIC DESCRIPTION: Skeletal muscle: Approximately 33% **(2pt)** of the myofibers exhibit one or more of the following changes: swelling with compression of adjacent fibers **(1pt)** hypereosinophilic **(1pt)**, hyalinization **(1pt)**, loss of cross-striations **(1pt)**, vacuolation and granularity of cytoplasm **(2pt)**, contraction band formation **(2pt)**, and pyknosis, rhexis, and loss of satellite nuclei. **(1pt)** Multifocally, especially at the ends of myofibers, there is a bluish discoloration of the sarcoplasm as a result of deposition of granular mineral. **(1pt)** There is multifocal mild to moderate hemorrhage and/or edema between myofibers throughout the section, and rare necrotic myofibers are infiltrated by low numbers of macrophages. **(1pt)**

MORPHOLOGIC DIAGNOSIS: Skeletal muscle, myocytes: Degeneration and necrosis, multifocal, moderate. **(2pt)**

CAUSE: Ionophore toxicity **(3pt)**

IS THIS A MONOPHASIC OR POLYPHASIC INSULT? Monophasic **(1pt)**

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

Case 4 – Tissue from a peacock.

**MICROSCOPIC DESCRIPTION:** Trachea **(1pt.)**: The tracheal mucosa is diffusely lost **(1pt.)** and replaced by a thin layer of attenuated epithelium of 1-2 cell layers thick **(1pt.)**. The submucosa is expanded by moderate numbers of heterophils **(1pt.)**, lymphocytes **(1pt.)** and macrophages **(1pt.)** admixed with fewer plasma cells, edema, and cellular debris, and submucosal vessels are diffusely dilated. Overlying the mucosa is an exudate **(1pt.)** composed of numerous sloughed epithelial cell, macrophages **(1pt.)** and heterophils admixed with hemorrhage, fibrin, and cellular debris, **(1pt.)** and it forms a small coagulum within the lumen. Scattered within this exudate, there are low numbers of multinucleated viral syncytia **(2pt.)** with up to five nuclei. Within these cells, the nuclear chromatin is peripheralized by a single homogenous eosinophilic viral inclusion **(1pt.)**. Similar inclusions are occasionally present within sloughed uninucleate mucosal epithelium as well as rare remaining viable mucosal epithelium. **(1pt.)**

**MORPHOLOGIC DIAGNOSIS:** Trachea: Tracheitis, necrotizing **(1pt.)**, circumferential, severe, with lymphohistiocytic tracheitis **(1pt.)**, multinucleated viral syncytia, and intranuclear eosinophilic viral inclusions. **(1pt.)**

**CAUSE:** Avian infectious laryngotracheitis virus (Gallid herpesvirus type 1) **(3pt.)**

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