

WSC 2024-2025

Conference 19, Case 1

Tissue from a green anaconda.

MICROSCOPIC DESCRIPTION: Lung: Two sections of lung are submitted for examination. Multifocally and randomly, alveolar septa (**1pt**) are expanded by one or multiple well-formed granulomas (**2pt**) composed of a central amphophilic coagulum of cellular debris (**1pt**) surrounded by multiple layers of epithelioid macrophages (**1pt**), with fewer largely degenerate heterophils (**1pt**), lymphocytes (**1pt**), and plasma cells (**1pt**), enmeshed in lamellae of fibrous connective tissue. Rarely visible within the center of scattered granulomas are numerous branching (**1pt**), septate (**1pt**) fungal hyphae (**1pt**) and occasional arthroconidia (**1pt**). There are aggregates of heterophils, lymphocytes, and plasma cells at the periphery of the granulomas (**1pt**). The adjacent septa are also expanded by mild edema and rare hemorrhage, and occasionally smooth muscle and fibrous connective tissue. There is diffuse septal congestion and multifocal hyperplasia of septal epithelium. (**1pt**) Interfaveolar spaces regionally contain lightly eosinophilic edema fluid and fibrillar material. (**1pt**)

MORPHOLOGIC DIAGNOSIS: Lung: Granulomas (**1pt**), multifocal, marked with numerous fungal hyphae (**1pt**) and arthroconidia.

CAUSE: *Ophidiomyces ophiodiicola* OK) (**3pt**)

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

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Conference 19, Case 2

Tissue from a bearded dragon

MICROSCOPIC DESCRIPTION: Stomach **(1pt)**: Arising within the muscularis **(1pt)** and markedly expanding the muscularis and serosa **(1pt)** and extending into the omentum **(1pt)**, there is an unencapsulated, infiltrative, well-demarcated, moderately cellular neoplasm. **(1pt)** The neoplasm is composed of polygonal cells **(1pt)** arranged in sheets **(1pt)**, nests, and occasional rosettes and pseudorosettes **(1pt)** on a fine fibrous stroma **(1pt)**. Neoplastic cells are polygonal with small amounts of granular eosinophilic cytoplasm **(1pt)**. Nuclei are irregularly round with coarsely stippled chromatin and 1-3 small basophilic nucleoli **(1pt)**. Anisokaryosis and anisocytosis are mild and mitoses average 22 per 2.37mm field. **(1pt)** There is widespread apoptosis **(1pt)** and large areas of coagulative necrosis. **(1pt)** Superficial lymphatics within the muscularis are markedly dilated and contain rafts of neoplastic cells. **(1pt)**

MORPHOLOGIC DIAGNOSIS : Stomach: Neuroendocrine carcinoma. **(3pt)**.

NAME AN APPROPRIATE IMMUNOSTAIN: Somastatin, chromogranin A, synaptophysin **(1pt)**

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

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Conference 19, Case 3.

Tissue from a great blue heron.

MICROSCOPIC DESCRIPTION: Proventriculus **(1pt)**: Expanding the serosa, there is a poorly formed granuloma **(1pt)** which is centered on cross- and tangential section of a large adult nematode measuring 7mm **(1pt)** in diameter. The nematode has a thick, eosinophilic, smooth cuticle; polymyarian-coelomyarian musculature; a pseudocoelom; a ventral nerve cord; a glandular esophagus with associated pseudomembranes; one or more cross-section of testis; and an intestinal tract lined by tall columnar cells which contains hematin pigments. **(2pt)** Surrounding the nematode is abundant eosinophilic, granular and necrotic debris mixed with degenerate eosinophils and heterophils. The wall of the granulomas is lined by a single layer of foreign body type multinucleated macrophages**(1pt)** and multiple layers of epithelioid macrophage with fewer lymphocytes and plasma cells enmeshed in lamellations of fibrous connective tissues. The adjacent serosa is expanded by numerous macrophages **(1pt)**with granular eosinophilic cytoplasm and adipose tissue is markedly atrophied and there are aggregates of moderate numbers of lymphocytes, plasma cells, macrophages and fewer heterophils. In the adjacent section of proventriculus, one of the proventricular glands is markedly dilated and contains a cross section of an adult female nematode. **(1pt)**The nematode is 3mm in diameter **(1pt)**, a thin and smooth cuticle, polymyarian-coelomyarian musculature, a pseudocoelom that contains abundant homogenous, brightly eosinophilic fluid, a tri-radiate esophagus, a digestive tract lined by many uninucleate cuboidal cells with a prominent brush border that contains abundant brown pigment, uteri containing numerous 25 x 50µm, oval, thick shelled, embryonated spirurid eggs, and variably sized ovaries with ova. **(2pt)** Multifocally within the lamina propria, are several aggregates of lymphocytes and rare heterophils. **(1pt)**

Ventriculus: A section of ventriculus extends from one of the ventricular sections described above. Within the muscularis, there is a section of the adult nematode previously described in the proventricular serosa. The nematode in this section is surrounded by abundant macrophages, lymphocytes, plasma cells, heterophils, and maturing fibrous connective tissue.

MORPHOLOGIC DIAGNOSIS: 1. Proventriculus: Serositis, granulomatous **(1pt)**, diffuse, marked with adult male strongyle. **(1pt)**
2. Proventricular gland: Glandular ectasia **(1pt)**, focal, moderate marked, with intraglandular adult female spirurid **(1pt)** nematode, and mild lymphocytic proventriculitis.
3. Proventriculus, omentum: Fat atrophy, diffuse, marked. **(1pt)**

CAUSE: *Eustrongylides ignotus* **(1pt)** and *Tetrameres americanum* **(1pt)**

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

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Conference 19 Case 4.

Tissue from a budgerigar.

MICROSCOPIC DESCRIPTION: Kidney **(1pt)**: 95% of the kidney is effaced **(1pt)** by an infiltrative, unencapsulated, moderately cellular, well-demarcated neoplasm. **(1pt)** The neoplasm is composed of two morphologies of the same cell type. The predominant appearance (by area) (66%) is of nests and packets **(1pt)** (and some of this may be due to autolysis or poor fixation, truth be told), and within the remaining 33% of the tumor is composed of variably sized tubules **(1pt)**, with the neoplastic cells forming intricate papillary projections **(1pt)**. Neoplastic cells are present on a variably dense stroma. **(1pt)** Dilated tubules range up to 1mm in **(1pt)** diameter and in addition to neoplastic cells, contain abundant eosinophilic to amphophilic proteinaceous fluid. **(1pt)** Neoplastic cells are polygonal to cuboidal with indistinct cell borders and a moderate amount of finely granular eosinophilic cytoplasm. **(1pt)** Nuclei are irregularly round with coarsely stippled chromatin and 1-3 small basophilic nucleoli. **(1pt)** Anisokaryosis and anisocytosis is overall mild, but rare cytomegalic neoplastic cells are present, and mitoses average 10 per 2.37mm² field. **(1pt)** There is multifocal coagulative necrosis scattered throughout the neoplasm. **(1pt)** The neoplasm compresses a small rim of normal cortex which is mildly fibrotic in proximity to the neoplasm. **(1pt)**. There is a single gout tophus surrounded by foreign body macrophages in one section.

There are two sections of testis which are essentially normal (mildly autolytic).

Morphologic Diagnosis: 1. Kidney: Renal adenocarcinoma. **(4pt)**

2. Kidney: Gouty tophus, focal. **(1pt.)**

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