

WSC 2022-2023
Conference 25, Case 1
Tissue from a dog.

(I don't think this is a fair slide for a test without more clinical information – so I'm not grading it out.)

MICROSCOPIC DESCRIPTION: Epididymis: Expanding and effacing 50% of the epididymis, there is a mixed cellular infiltrate composed primarily of macrophages, with fewer lymphocytes, neutrophils and plasma cells admixed with small amounts of cellular debris. Macrophages range up to 15um in diameter with indistinct cell borders and a moderate amount of granular amphophilic to eosinophilic cytoplasm and range from polygonal to spindle. There is moderate anisokaryosis, and occasional mitoses are present. Epididymal tubules are absent.

MORPHOLOGIC DIAGNOSIS: Epididymis: Epididymitis, granulomatous, diffuse, moderate.

NAME THE CONDITION: Systemic histiocytosis (I don't think you can get to this without a lot more information)

O/C:

WSC 22-23
Conference 25, Case 2
Tissue from a cat.

MICROSCOPIC DESCRIPTION: Lung: Approximately 80% of alveoli in this section are filled with histiocytes **(1pt.)** with indistinct cell borders, and a moderate amount of granular eosinophilic cytoplasm **(1pt.)** and have a tendency to stream **(1pt.)**. Nuclei are irregularly round **(1pt.)**, with a prominent single nucleolus. Throughout most of the section, these cells are admixed with small amounts of fibrin, and in some alveoli are admixed with variable combinations and concentrations alveolar macrophages, neutrophils and cellular debris. **(1pt.)** Alveoli without these cells contain and are expanded by expanded by foamy alveolar macrophages. **(1pt.)** At the edges of the section, alveoli are emphysematous. **(1pt.)** Alveolar septa markedly expanded by congestion, edema, a fibrous connective tissue **(1pt.)** and/or type II pneumocyte hyperplasia **(1pt.)**. Airways are occasionally ectatic and often filled with refluxed histiocytes and inflammatory cells as previously described. **(1pt.)** and there is marked smooth muscle hyperplasia. **(1pt.)** There is multifocal expansion of intralobular septa by mature collagen which extends into the surround alveolar parenchyma. **(1pt.)** There is mild to moderate hyperplasia of peribronchiolar lymphoid tissue **(1pt.)**, and aggregates of moderate numbers of lymphocytes and lesser plasma cells are scattered throughout the section. There is moderate hyperplasia of pleural mesothelium. **(1pt.)**

MORPHOLOGIC DIAGNOSIS:

Lung: Histiocytosis **(1pt.)**, alveolar, **(1pt.)** chronic, diffuse, severe, with type II pneumocyte hyperplasia and bronchiolar smooth muscle hyperplasia. **(1pt.)**

NAME THE CONDITION: Pulmonary Langerhans cell histiocytosis **(2 pts)**

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

WSC 2022-2023
Conference 25, Case 3
Tissue from a dog.

MICROSCOPIC DESCRIPTION: Eye: Expanding the anterior uvea and infiltrating the iris, ciliary body and sclera, **(1pt)** there is an unencapsulated, infiltrative, moderately cellular, multilobular and poorly demarcated neoplasm. **(1pt)** The neoplasm is composed of poorly defined streams **(1pt)** of variably sized polygonal to spindle cells **(1pt)** on a fine fibrous matrix. Neoplastic cells are often separated by a fine homogenous eosinophilic (osteoid) matrix **(1pt)**. which is most prominent in the ciliary body. In areas of tumor necrosis, there is mineralization of the osteoid matrix. In the ciliary body, there are small foci of cartilage **(1pt)** as well. Neoplastic cells have indistinct cell borders with a small to moderate amount of granular basophilic cytoplasm. **(1pt)** Nuclei are round with finely stippled chromatin and prominent basophilic nucleoli. There is moderate anisokaryosis and anisocytosis. Mitoses average 25 per 2.37mm² field. **(1pt)** There are numerous areas of coagulative necrosis **(1pt)** scattered throughout the neoplasm and numerous apoptotic individual cells. Pigmented cells from the ciliary body and iris are scattered throughout the neoplasm **(1pt)**. Islands of neoplastic cells are present within scleral vessels **(1pt)**. There is bilateral anterior synechia **(1pt)** of the expanded iris which includes the filtration angle **(1pt)** and well as posterior synechia to the anterior surface of the lens. There is abundant hemorrhage and small amounts of fibrin in the anterior chamber. **(1pt.)** There is a post-iridal membrane. A small fragment of retina is present at the periphery and the remainder of the retina is missing. There is mild hypertrophy of the retinal pigment epithelium. **(1pt)**

MORPHOLOGIC DIAGNOSIS: Eye, anterior uvea, iris, ciliary body and sclera: Osteosarcoma. **(3pt)**

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

WSC 2022-2023
Conference 25, Case 4.
Tissue from an ox.

(I don't think there are enough points here, but it is a great lesion that is in all the books but you rarely get to see a slide of. Make sure to check out the gross image on the web site.)

MICROSCOPIC DESCRIPTION: Partial section (2), globe. Two sections of the anterior segment of the eye are submitted for examination. Within the scleral tissue and iris, there are several round apicomplexan cysts measuring 250-400 μm in diameter, which often effaces normal dermal structures and adnexa. Cysts have a 10-30 μm thick, hyaline pink fibrous capsule that surrounds a 5-10 μm thick rim of host cell cytoplasm with multiple enlarged but flattened nuclei which in turn surround a parasitophorous vacuole containing numerous, densely packed crescentic 3-5 μm bradyzoites. All cysts are intact; rarely there are low numbers of neutrophils and macrophages adjacent to the cysts. The remainder of the structures within these sections are considered within normal limits.

MORPHOLOGIC DIAGNOSIS: Eye, sclera and iris: Multiple apicomplexan cysts

CAUSE: *Besnoitia besnoitii*