WSC 2025-2026
Conference 8, Case 1
Tissue from a cat.

MICROSCOPIC DESCRIPTION: Globe: Expanding and effacing the choroid and uvea and elevating the markedly atrophic retina, ciliary body, occluding the drainage angle and extending along the anterior surface of the iris, there is a well-demarcated, unencapsulated, infiltrative, moderately cellular neoplasm. **(1pt.)** The neoplasm is composed of elongate polygonal cells**)**, which are arranged in broad trabeculae **(1pt.)** on a fine fibrovascular stroma. Neoplastic cells have indistinct cell borders and a small amount of basophilic cytoplasm **(1pt.)**, palisade along the basement membrane, **(1pt.)** and often form Flexner-Wintersteiner rosettes **(1pt.)** with a clear central lumen, and Homer-Wright rosettes **(1pt.)** with eosinophilic filamentous processes within the lumen. Nuclei are oval to elongate with coarsely stippled chromatin and one to three small basophilic nucleoli. **(1pt.)** Anisocytosis and anisokaryosis are moderate, mild, and mitoses average 8 for 2.37 mm^2 fields. **(1pt.)** Neoplastic trabeculae are separated by elongate spindle cells with indistinct cell borders and a moderate amount of finely vacuolated eosinophilic cytoplasm **(1pt.)**. There is erosion and ulceration of the central cornea, corneal edema, vascularization, and infiltration of low to moderate numbers of neutrophils, and fewer macrophages and lymphocytes infiltrating the corneal stroma. **(1pt.)** There is a fibrovascular membrane extending in front of the advancing edge of the tumor along Descemet's membrane along the limbal cornea. **(1pt.)** The tumor carpets the anterior surface of the iris and infiltrates the iris stroma on one side and effaces the iris on the other. **(1pt.)** The neoplasm effaces the drainage angle. **(1pt.)** The anterior lens epithelium extends around the periphery of the lens (cataractous change). **(1pt.)** The atrophic retina **(1pt.)** is present within the vitreous and adheres to the posterior aspect of the lens. The detached retina demonstrates pallor and diffuse loss of nuclei and nerve fibers in all layers of the retina. **(1pt.)** The neoplasm elevates and infiltrates the tapetal choroid **(1pt.)** and reflective rodlets are entrapped within the neoplasm. The neoplasm infiltrates the optic nerve **(1pt.)** resulting in marked loss of nerve fibers with the optic cup, and axonal loss and collapse of pial trabeculae in more distal aspects of the optic nerve.

MORPHOLOGIC DIAGNOSIS: Globe, choroid, uvea, ciliary body, and iris: Medullepithelioma **(2pt.)**

WSC 2025-2026
Conference 8, Case 2
Tissue from a dog.

MICROSCOPIC DESCRIPTION: Femur: Affecting 50% of the epiphysis **(1pt.)**, extending from the subchondral aspect of the articular cartilage to the physis **(1pt.)**, is a focally extensive area of osteonecrosis **(1pt.)** characterized by brightly eosinophilic, fragmented bony trabeculae **(1pt.)** lacking osteocytes and lining osteoblasts **(1pt.)** (osteolysis). The intertrabecular spaces contain a marked fibroblastic proliferation **(1pt.)** within loosely arranged myxomatous to collagenous matrix **(1pt.)**with numerous variably sized capillaries (neovascularization) **(1pt.)**. There is multifocal accumulation of eosinophilic necrotic cellular debris **(1pt.)**, moderate numbers of macrophages **(1pt.)**, scatted neutrophils, multinucleated osteoclasts, and mild hemorrhage, fibrin, and edema. **(1pt.)**Trabeculae adjacent to the affected area have peripheral, scalloped, intensely basophilic reversal lines **(1pt.)** (resorptive activity) and are lined by numerous active osteoblasts and woven bone. (remodeling) **(1pt.)**. There is artifactual fragmentation and loss of overlying articular cartilage. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Femur, epiphysis: Osteonecrosis **(1pt.)**, focally extensive, with osteolysis **(1pt.)**, fibrosis **(1pt.)**, neovascularization, and bony remodeling.

NAME THE CONDITION: Aseptic necrosis of the femoral head (Legg-Calves-Perthes Disease) **(2pt.)**

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

WSC 2025-2026
Conference 8, Case 3.
Tissue from a cat.

MICROSCOPIC DESCRIPTION: Globe: A section of a subjectively enlarged globe with diffusely thinned fibrous tunics are submitted for examination. **(1pt.)** At subgross magnification, the lens is largely missing with the anterior lens capsule and some adherent lens fibers. On the ventral side of the globe, the anterior uvea, choroid, inner retinal surface ciliary body and base of the iris **(1pt.)** is expanded, infiltrated, and carpeted **(1pt.)** by a multilobular, moderately cellular poorly demarcated neoplasm. **(1pt.)** Neoplastic epithelium is arranged in nests, packets and trabeculae **(1pt.)** on a dense fibrous stroma. Neoplastic epithelial cells have variably distinct cell borders which often demonstrate desmosomes **(1pt.)** and intercellular edema and a moderate amount of homogenous to vacuolated eosinophilic cytoplasm. **(1pt.)** Nuclei are irregularly round with finely stippled chromatin and typically one basophilic nucleolus. Anisocytosis and anisokaryosis is mild, and Mitoses average 8 per 2.37mm^2 field. **(1pt.)** In areas in which the iris and ciliary body are carpeted by the neoplastic cells, neoplastic cells are arrayed in multiple layers with an attempt to recapitulate normal maturation of squamous epithelium. **(1pt.)** On one side, the neoplasm effaces the drainage angle. **(1pt.)** The anterior chamber is filled with protein and fibrous strands and few intact neutrophils. **(1pt.) (1pt.)** One leaflet of the iris is covered by a fibrovascular membrane on its anterior surface, and the drainage angle is open on this side. There are focal aggregates of lymphocytes and plasma cells within the uvea caudal to the occluded drainage angle. The lens is fragmented with only the anterior capsule and a few polar fibers remaining. **(1pt.)**The posterior chamber also contains protein, fibrin strands and low numbers of viable neutrophils, **(1pt.)** The ventral retina (on the side of the infiltrative tumor) is underrun and carpeted on one side by the neoplasm and detached **(1pt.)** with moderate atrophy and loss of nuclei and nerve fibers **(1pt.)** in all three layers. There are dilated axon sheaths within the optic nerve, loss of fibers, and collapse of pial trabeculae. **(1pt.)** There are also tumor emboli within scleral vessels.

MORPHOLOGIC DIAGNOSIS: Globe: Metastatic squamous cell carcinoma. **(2pt.)**

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

WSC 2025-2026
Conference 8, Case 4.
Tissue from a dog.

MICROSCOPIC DESCRIPTION: Lung: Five sections of lung are submitted for examination. There is mild atelectasis. **(1pt.)** Within all sections, there is diffuse thickening of the alveolar septa. **(1pt.)** Alveolar septa are hypercellular**(1pt.)** with increased numbers of hypertrophied septal macrophages **(1pt.)**, and recruitment of additional macrophages **(1pt.)**within the septa. There are also moderate numbers of neutrophils **(1pt.)** presumably circulating within capillaries but within the adjacent hypercellular alveolar septa. There is diffuse moderate alveolar congestion, edema, and occasionally fibrin thrombi. Alveolar lumina are filled with varying combinations and concentrations of granular proteinaceous material (edema) **(1pt.)**, foamy alveolar macrophages **(1pt.)**, and occasional neutrophils and rare eosinophils. Airways contain refluxed elements from adjacent alveoli. **(1pt.)** There is moderate perivascular edema. **(1pt.)** Occasionally, there are punctate **(1pt.)** round dark 2-3 um cytoplasmic inclusions/projections **(1pt.)** within circulating erythrocytes **(1pt.)**.

MORPHOLOGIC DIAGNOSIS: Lung: Pneumonia, interstitial, **(1pt.)** subacute, diffuse, moderate, with intraerythrocytic **(1pt.)** intracytoplasmic **(1pt.)** protozoans **(1pt.)**.

CAUSE: *Babesia* sp. **(2pt.)**

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