WSC 2025-2026
Conference 21, Case 1
Tissue from a ferret.

MICROSCOPIC DESCRIPTION: Vertebra and spinal cord with nerve roots **(1pt)**: Effacing the medullary cavity and lamellar cortical bone of the vertebral body **(1pt)**, extending into and effacing epaxial musculature and extradural space (the spinal cord is not evident in these sections) **(1pt)** there is a multilobulated, unencapsulated, well-demarcated, infiltrative, densely cellular neoplasm **(1pt)**. The neoplasm is composed of sheets **(1pt)** of round cells **(1pt)** on a fine pre-existent fibrovascular stroma. **(1pt)** Neoplastic round cells have distinct cell borders, a moderate amount of basophilic cytoplasm, and often a variably size perinuclear hoff **(1pt)**. Nuclei are round, often excentric, with coarsely clumped and often peripheralized chromatin and 1-2 basophilic nucleoli. **(1pt)** Anisocytosis and anisokaryosis is moderate, occasional bi- and multinucleated forms are present **(1pt)** , and mitoses average 5 per 2.37mm^2field. **(1pt)** There is marked bony lysis of the vertebral body **(1pt)** and there is multifocal periosteal woven bone proliferation **(1pt)**. In areas of bony proliferation, there is fibrosis and resulting atrophy of epaxial musculature. **(1pt)** Bone marrow within the transverse processes of the affected vertebra is mild to moderately hyperplastic. **(1pt)**

MORPHOLOGIC DIAGNOSIS: Vertebra, spinal canal, and epaxial musculature: Myeloma. **(4pt)**.

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

WSC 2025-2026
Conference 21, Case 2
Tissue from a rat.

MICROSCOPIC DESCRIPTION: Urinary bladder: Approximately 50% of a bladder mass is submitted for examination. Extending downward from the ulcerated urothelium **(1pt.)**, and extending transmurally through the wall of the bladder **(1pt.)** and into the underlying pelvic fat **(1pt.)**, there is an unencapsulated, infiltrative, poorly demarcated, moderately cellular neoplasm. **(1pt.)** The neoplasm is composed of neoplastic urothelial cells **(1pt.)** arranged in trabeculae **(1pt.)** and nests and rare glands **(1pt.)** which contain eosinophilic secretory material within their lumina. on a dense fibrous stroma. **(1pt.)**Neoplastic cells have indistinct cell borders and a moderate amount of homogenous eosinophilic cytoplasm. **(1pt.)** Nuclei are irregularly round with finely stippled chromatin and 1-2 small basophilic nucleoli. **(1pt.)** Anisocytosis and anisokaryosis is mild and mitoses average 4 per 2.37mm^2 field. **(1pt.)** Approximately 60% of the central region of the tumor has undergone coagulative necrosis **(1pt.)** and/or fibrosis. Within fibrotic areas, neoplastic glands are ectatic and contain moderate numbers of foamy macrophages and cellular debris..

Kidney: A convex section of kidney is submitted for examination. There is marked dilation of the renal pelvis**(1pt.)** which is no longer lined by urothelium. The medulla is profoundly atrophied **(1pt.)** with loss of tubules, tubular atrophy, few ectatic tubules containing brown granular protein **(1pt.)** and small amounts of debris, and marked fibrosis. Similar but slightly less severe changes are present in the overlying cortex as well. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: 1. Urinary bladder: Urothelial carcinoma. **(3pt.)**
2. Kidney: Hydronephrosis **(1pt.)**, diffuse, severe with cortical and medullary atrophy.

WSC 2025-2026
Conference 21, Case 3.
Tissue from a common marmoset

MICROSCOPIC DESCRIPTION: Liver and gallbladder: One section of liver and gallbladder is submitted for examination. The wall of the gallbladder is markedly thickened due to profound inflammation and necrosis. **(1pt.)** The gallbladder lumen contains abundant hemorrhage, cellular debris, necrotic and viable neutrophils, sloughed epithelial cells, and admixed with numerous aggregates and individualized 2-3um bacilli. **(1pt.)** The gallbladder mucosa is predominantly necrotic and often lost; remnant mucosa is mildly hyperplastic with cytoplasmic vacuolation. **(1pt.)** Approximately 90% of the mucosa is lost and effaced by innumerable necrotic and few viable neutrophils. **(1pt)** admixed with abundant cellular debris, **(1pt.)** hemorrhage **(1pt.)**, polymerized fibrin, and innumerable aggregates of bacilli. Mural vessels are markedly congested and multifocally contain fibrinocellular thrombi, **(1pt.)** and the walls occasionally are hypereosinophilic, and contain necrotic neutrophils admixed with cellular debris (vasculitis). **(1pt.)** Inflammatory cells and bacilli efface the gallbladder submucosa and infiltrate the underlying muscular wall and extend into the adjacent edematous fibrous connective tissue separating the gallbladder from the adjacent liver. **(1pt.)** The necrosis extends along the bile ducts **(1pt.)** nto the adjacent hepatic parenchyma, resulting in similar necrosis within these areas. There are scattered areas of coagulative necrosis within the parenchyma **(1pt.)** which are in proximity to portal veins which contain fibrinocellular thrombi. **(1pt.)** Within these areas, hepatocytes are anucleate and have lost differential staining. Diffusely, hepatocytes often contain one or more discrete clear vacuoles. **(1pt.)** Sinusoids contain numerous rounded fragments of effete hepatocytes. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: 1. Gallbladder: Cholescystitis, **(1pt.)** necrosuppurative , **(1pt.)** diffuse, severe, with vasculitis **(1pt.)** and innumerable bacilli. **(1pt.)**
2. Liver, portal areas: Cholangiohepatitis, **(1pt.)**necrosuppurative, multifocal to coalescing, with portal vein thrombi, periportal hepatocellular infarcts **(1pt.)**, and innumerable bacilli.

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

WSC 2025-2026
Conference 21, Case 4.
Tissue from an African green monkey.

MICRSCOPIC DESCRIPTION: Subcutis, site unspecified: Two sections of subcutaneous fat and skeletal muscle are submitted for examination and both are similar. Predominantly effacing subcutaneous fat **(1pt)**, but multifocally extending into the subjacent skeletal muscle, there are irregularly shaped **(1pt)** combinations and concentrations of fibrous connective tissue **(1pt)**, mineral **(2pt)**, osteoid matrix **(2pt)**, and woven bone **(1pt)**. Areas of this mineralized matrix are surrounded by loosely arranged fibrous connective tissue **(1pt)** which are populated by large numbers of epithelioid macrophages **(1pt)**, densely packed hyalinized fibrous connective tissue admixed with hemorrhage **(1pt)**. In the section containing skeletal muscle, myofibers are infiltrated by mature adipocytes as well as the mineralized and ossified matrix. In this area, there is multifocal myofiber atrophy **(1pt)**, and expansion from edema, maturing fibrous connective tissue and numerous fibroblasts. **(1pt)**

MORPHOLOGIC DIAGNOSIS: Subcutaneous fat and skeletal muscle: Dystrophic calcification **(1pt),** focally extensive, severe, with granulomatous inflammation **(1pt)** and metaplastic bone **(1pt)**

NAME THE CONDITION: Calcinosis circumscripta **(3pt)**

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