

WSC 2025-2026
Conference 19, Case 1
Tissue from a rat.

MICROSCOPIC DESCRIPTION: Liver: Two sections of liver are submitted for examination and both are similar. Portal veins **(1pt.)** and sinusoids **(1pt.)** contain moderate numbers of neoplastic round cells **(2pt.)** with distinct cell borders and a small amount 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 are rare. **(2pt.)** Within the liver, there is loss of centrilobular hepatocytes resulting in expanded lumina of centrilobular veins **(1pt.)** and occasional hyaline eosinophilia, contraction, and loss of nuclei (necrosis) of centrilobular hepatocytes. **(2pt.)** Adjacent hepatocytes contain one or more discrete lipid vacuoles within their cytoplasm. **(1pt.)** Kupffer cells within centrilobular areas contain abundant lipofuscin granules in their cytoplasm. **(1pt.)** Multifocally, there is biliary hyperplasia with proliferation of well-formed bile ducts adjacent to portal areas. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Liver: Large granular cell leukemia (mononuclear cell leukemia) **(5pt.)**

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

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Conference 19, Case 2

Tissue from a rhesus macaque.

MICROSCOPIC DESCRIPTION: Kidney: Diffusely, there are changes at all levels of the nephron. **(1pt)** Scattered through the cortex, predominantly within distal convoluted tubules and collecting ducts, **(1pt)** tubules are dilated and demonstrate one or more of the following changes: cytoplasmic vacuolation **(1pt)**, cellular swelling **(1pt)** (degeneration) **(1pt)**, pyknosis, fragmentation and loss **(1pt)** of individual and small segments of lining epithelium **(1pt)** (necrosis) **(1pt)** and a cuboidal appearance with moderate amounts of basophilic cytoplasm (regeneration). **(1pt)** Rare mitotic figures are present within tubular epithelium. Tubular lumina contain variable combinations and concentration of pink protein **(1pt)**, sloughed epithelium and occasional neutrophils, erythrocytes, and aggregates of brightly eosinophilic crystalline shard-like protein **(1pt)** (hemoglobin casts.) **(1pt)** Diffusely, glomeruli are mildly enlarged and the walls of glomerular capillaries are mildly expanded by a small amount of pink hyaline basement membrane **(1pt)**, are mildly hypercellular **(1pt)**, and there is moderate hypertrophy of parietal epithelium **(1pt)**. There are rare fibrin thrombi within glomerular capillaries. There is mild multifocal interstitial fibrosis, often adjacent to damaged tubules.

MORPHOLOGIC DIAGNOSIS: 1. Kidney, distal convoluted tubules and collecting ducts: Degeneration necrosis and regeneration **(1pt)**, multifocal, marked with tubular ectasia and hemoglobin casts. **(1pt)**
2. Kidney: Glomerulonephritis, membrproliferative **(1pt)**, diffuse, mild. **(1pt)**

O/C - (1pt)

CAUSE: Tacrolimus toxicosis (no point as it very difficult to get here from these lesions).

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Conference 19, Case 3.
Tissue from a dog.

MICROSCOPIC DESCRIPTION: Liver: There is diffuse massive **(1 pt.)** necrosis **(1 pt.)** of hepatocytes throughout the section. In all sections of the hepatic lobule **(1 pt.)**, there is loss of normal plate architecture with dissolution of hepatic cords **(1 pt.)**, with disassociation, individualization and rounding up of hepatocytes. **(1 pt.)** Hepatocytes are hypereosinophilic with vacuolated cytoplasm, mildly shrunken, and contain either karyolytic or pyknotic nuclei or lack nuclei Sinusoids are moderately to severely dilated **(1 pt.)** with marked congestion and hemorrhage **(1 pt.)** within centrilobular and midzonal areas **(1 pt.)**. There is moderate diffuse oval cell hyperplasia **(1pt.)**. There are large numbers of macrophages, (often with cellular debris or hemosiderin within their cytoplasm) **(1 pt.)** and fewer neutrophils **(1 pt.)** scattered amongst the necrotic hepatocytes. In some lobules, portal hepatocytes remain, and are swollen, often disassociated and contain numerous discrete lipid vacuoles in their cytoplasm. **(1 pt.)** Portal areas, when identifiable, contain hemorrhage, low numbers of macrophages and neutrophils, and cellular debris, few lymphocytes and plasma cells **(1 pt.)**. Portal and subcapsular lymphatics are often dilated (edema). **(1 pt.)**

MORPHOLOGIC DIAGNOSIS: Liver, hepatocytes: Necrosis **(1 pt.)**, massive **(1 pt.)**, diffuse, acute, with hemorrhage, oval cell hyperplasia and stromal collapse.

NAME THREE POSSIBLE CAUSES: Cycad toxicity (that's what it is - but other toxins that can cause massive acute necrosis would be acceptable - amanitin, microcystin, imidocarb, xylitol, acetaminophen toxicosis, mebendazole) **(3 pt.)**

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

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Conference 19, Case 4.

Tissue from a 129S/SvEv mouse.

(Not enough points to grade out, so just note the entity and move along.

MICRSCOPIC DESCRIPTION: Eyelid: A transverse section of the head, to include the eyes is submitted for examination. Unilaterally, the epithelium of the upper and lower lids is moderately hyperplastic with acanthosis extending down into hair follicles. The hyperplastic epidermis is covered by a thick serocellular crust of densely packed lamellar keratin, edema, and cellular debris. There are low to moderate numbers of lymphocytes and plasma cells in the underlying dermis which extend into the underlying Meibomian glands as well as mild pigmentary incontinence. Small numbers of neutrophils, and lymphocytes also infiltrate the overlying conjunctival epithelium in small numbers. There is infiltration and effacement of approximately 5% of the underlying Meibomian gland adenomeres by the inflammatory infiltrate. There is a moderate amount of porphyrin pigment within the Harderian gland.

MORPHOLOGIC DIAGNOSIS: Eyelid and bulbar conjunctiva: Blepharoconjunctivitis, lymphocytic and neutrophilic, chronic, diffuse, mild to moderate with epidermal hyperplasia, serocellular crusting, and focal lymphoplasmacytic Meibomian adenitis.