WSC 2025-2026
Conference 2, Case 1
Tissue from a pony.

MICROSCOPIC DESCRIPTION: Skeletal muscle: At the frayed edge of this single section of skeletal muscle, there is an extensive area in which muscle fibers and infiltrating inflammatory cells demonstrate a loss of differential staining but maintenance of architecture **(1pt.)** (coagulative necrosis) **(1pt.)**. There are scattered small colonies of bacilli within this area of necrosis. **(1pt.)** At the periphery, the normal architecture is effaced by aggregates of large numbers of necrotic and fewer viable neutrophils **(1pt.)**, macrophages **(1pt.)**, lymphocytes **(1pt.)** and plasma cells **(1pt.)** enmeshed in variably mature fibrous connective tissue **(1pt.)**, cellular debris, and plump fibroblasts. Blood vessels in this necrotic area are often necrotic and contain fibrinocellular thrombi. **(1pt.)** Within the area of coagulative necrosis and its periphery, there are moderate numbers of scattered amebic trophozoites **(1pt.)** which measure 12-15um in diameter **(1pt.)**with a thin cell membrane, a granular cytoplasm **(1pt.)**, and a nucleus with a prominent 3um karyosome. **(1pt.)** The area of inflammation and necrosis is surrounded by a dense fibrous capsule **(1pt.)** with perivascular aggregates of lymphocytes and plasma cells, and numerous plump fibroblasts which extend into, separate and surround adjacent muscle bundles, expanding the epimysium and perimysium. **(1pt.)** In areas of endomysial expansion, skeletal muscle fibers are shrunken and hypereosinophilic (atrophic) **(1pt.)**, and are occasionally surrounded by low to moderate numbers of lymphocytes and plasma cells. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Skeletal muscle: Rhabdomyositis **(1pt.)**, necrotizing **(1pt.)**, chronic-active, focally extensive, severe, with numerous amebic trophozoites. **(1pt.)**

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

WSC 2025-2026
Conference 1, Case 2
Tissue from a rhesus macaque.

MICROSCOPIC DESCRIPTION: Prostatic urethra **(1pt.)**: One section of ventral prostate with the urethra is submitted for examination. Occluding the markedly dilated **(1pt.)** urethra is a non-attached plug **(1pt.)** composed of spermatids **(1pt.)** enmeshed in a brightly eosinophilic proteinaceous plug. The plug is composed of lamellations of eosinophilic and amphophilic protein **(1pt.)**, islands of viable spermatids, dense polymerized fibrin **(1pt.)**, numerous macrophages **(1pt.)** and sloughed urothelium **(1pt.)** at the periphery. The urothelium of the surrounding prostatic uretha is moderately hyperplastic **(1pt.)**, and there are low numbers of neutrophils **(1pt.)**, eosinophils **(1pt.)**, lymphocytes, and plasma cells in the underlying lamina propria. The urethral skeletal muscle is multifocally and mildly atrophic **(1pt.)**, with shrunken myofibers surrounded by an enlarged endomysium. There is mild glandular atrophy of the adjacent prostate. **(1pt.)** Prostatic glands contain variable combinations and concentrations of proteinaceous material which occasionally forms spherical corpora amylacea **(1pt.)**, sloughed and necrotic glandular epithelium, and rare hemorrhage.

MORPHOLOGIC DIAGNOSIS : Prostatic urethra: Urethral seminal plug **(1pt.)**, with numerous, mild chronic neutrophilc and eosinophilic urethritis **(1pt.)** with smooth muscle atrophy **(1pt.)**.

NAME THE CONDITION: Retrograde ejaculation **(2pt.)**

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

WSC 2025-2026
Conference 2, Case 3.
Tissue from a hedgehog.

MICROSCOPIC DESCRIPTION: Sections of liver, kidney, and lung are submitted for examination and a similar process is ongoing in each tissue.

Liver: Expanding the portal areas and to a lesser extent the hepatic sinusoids, there is a poorly demarcated, infiltrative, unencapsulated, densely cellular, nodular neoplasm **(1pt.)**. The neoplasm is composed of sheets **(1pt.)**of neoplastic eosinophils **(1pt.)** on a pre-existent stroma **(1pt.)**. Neoplastic cells are also circulating within hepatic vessels in moderate numbers. **(1pt.)** Neoplastic eosinophils have distinct cell borders with large numbers of brightly eosinophilic cytoplasmic granules **(1pt.)**, and their size ranges up to three times the size of an erythrocyte. **(1pt.)** Nuclei are peripheral, and range from round (less mature neoplastic cells) to bilobed (more mature neoplastic cells). **(1pt.)**Mitotic figures average 2 per 400X field **(1pt.)**Hepatocytes are swollen by cytoplasmic accumulation of lipid within their cytoplasm, **(1pt.)** which often results in a single clear cytoplasmic vacuole. There is mild hyperplasia of the biliary ductules within the portal areas. **(1pt.)**

Kidney: Circulating within interstitial vessels within the cortex and medulla, expanding the adventitia of corticomedullary vessels and extending along the interstitial collagen into the adjacent cortex and medulla, and expanding the pelvic interstitium **(1pt.)**, as well as circulating within glomerular capillaries, are neoplastic eosinophils as previously described. Cortical tubules are multifocally ectatic with attenuated epithelium and contain small protein casts. There is a linear area of fibrosis within the medula and extending into the overlying cortex in which tubules are atrophic. **(1pt.)** Remnant tubules are lined by attenuated epithelium and often contain protein casts. **(1pt.)** (There aren't any infiltrating cells in this area – maybe its because they are collapsed due to fibrosis).

Lung: Neoplastic eosinophils as previously described are circulating in large numbers within pulmonary veins and septal capillaries. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: 1. Liver, kidney, lung : Eosinophilic leukemia (chloroleukemia). **(3pt.)**
2. Liver, hepatocytes: Lipidosis, diffuse, severe. **(1pt.)**

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

WSC 2025-2026
Conference 2Case 4.
Tissue from a cat

MICROSCOPIC DESCRIPTION: Eyelid **(1pt)** : Two sections of eyelid are submitted for examination and both are similar. The conjunctival epithelium is diffusely hyperplastic **(1pt)** and segmentally eroded/ulcerated **(1pt)** and in areas covered by attenuated epithelium **(1pt)** . The lamina propria and submucosa are markedly expanded by two inflammatory processes. The more superficial aspect **(1pt)** of the lamina propria is diffusely infiltrated by large numbers of lymphocytes **(1pt)** and plasma cells **(1pt)** , which in deeper areas surround vessels. The deeper aspects of the edematous **(1pt)** lamina propria are markedly expanded by clear spaces **(1pt)** ranging up to 2mm in diameter **(1pt)** and contain few macrophages, lymphocytes and plasma cells admixed with cellular debris. **(1pt)** The intervening stroma is markedly expanded by moderate numbers of vacuolated epithelioid macrophages **(1pt)** (lipophages) and occasional foreign body type giant cell macrophages **(1pt)** admixed with fewer lymphocytes and plasma cells. Vessels within this region as well are also cuffed by moderate numbers of lymphocytes and plasma cells. **(1pt)**

MORPHOLOGIC DIAGNOSIS: Eyelid: Blepharitis **(1pt)** , lipogranulomatous **(1pt)** and lymphoplasmacytic, diffuse, marked. **(1pt)**

NAME THE CONDITION: Feline lipogranulomatous conjunctivitis **(2pt.)**

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