WSC 2025-2026
Conference 3, Case 1
Tissue from a cat.

MICROSCOPIC DESCRIPTION: Lung: One apical section of lung is submitted for examination. Markedly expanding and effacing multiple airways **(1pt.)** and spilling over into the adjacent alveolar parenchyma **(1pt.)**, there are innumerable foamy macrophages **(1pt.)** and viable and degenerate neutrophils **(1pt.)** admixed with cellular debris. There is extensive septal necrosis **(2pt.)** within coalescing areas of inflammation. Peripheral to this, alveoli are filled with similar inflammatory cells **(1pt.)**, and remaining septa are further expanded by fibroplasia **(1pt.)**. There is marked lymphoid hyperplasia around the affected airways **(1pt.)** as well as mild hyperplasia of submucosal glands. Nodular aggregates of lymphocytes and plasma cells are scattered peripherally to areas of necrosis. **(1pt.)** Similar, though less severe inflammation expand the subpleural alveoli diffusely throughout the section **(1pt.)**, with vacuolated macrophages predominating. The inflammation extends throughout the mildly fibrotic **(1pt.)** pleura, with numerous macrophages and epithelioid macrophages **(1pt.)** admixed with fewer neutrophils, lymphocytes and plasma cells which occasionally form aggregates, small to moderate amounts of cellular debris, hyperplastic mesothelium, and variably-sized rod-shaped to filamentous bacilli **(1pt.)**, which are occasionally phagocytosed by macrophages. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Lung: Bronchopnemonia **(1pt.)**, necrotizing **(1pt.)** and pyogranulomatous **(1pt.)**, focally extensive, severe, with diffuse moderate pyogranulomatous pleuritis **(1pt.)** and mixed bacilli. **(1pt.)**

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

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

MICROSCOPIC DESCRIPTION: Diffusely, the hyperplastic **(1pt.)** epidermis is thickened up to 0.4mm and characterized by marked acanthosis with anastomosing rete ridge formation and diffuse severe lamellar orthokeratotic and parakeratotic hyperkeratosis **(1pt.)** ranging up 5mm thick. Occupying the keratin layer, and to a lesser extent within the stratum corneum and downward into the stratum spongiosum, there are numerous adult arthropods **(1pt.)** which are ovoid, 200-300 x 100-150 um in diameter, and possess a spiny chitinous exoskeleton **(1pt.)**, jointed appendages **(1pt.)**, striated muscle **(1pt.)**, a body cavity (hemocoel), and intestinal and reproductive structures. Within the keratin scale, there are numerous intracorneal pustules **(1pt.)** containing degenerate neutrophils **(1pt.)** and fewer eosinophils, necrotic cellular debris and proteinaceous fluid, as well as numerous colonies of cocci and entrapped plant material. Diffusely the superficial dermis (most prominently the dermal pegs) is mildly edematous and the dermis contains moderate numbers of lymphocytes **(1pt.)**, plasma cells **(1pt.)**, eosinophils and fewer macrophages and neutrophils, primarily in perivascular locations. **(1pt)** Apocrine glands are mildly dilated **(1pt.)** and there is a mild to moderate periadnexal and perifollicular infiltrate of lymphocytes and plasma cells., and apocrine glands are often surrounded by abundant amphophilic ground substance **(1pt.)**. Approximately 50% of hair follicles lack hair shafts.

MORPHOLOGIC DIAGNOSIS: Haired skin: Epidermal hyperplasia and hyperkeratosis **(1pt.)**, diffuse, severe, with numerous intracorneal adult and nymphal mites **(1pt.)** and eggs, intracorneal pustules **(1pt.)**, colonies of cocci, and mild lymphoplasmacytic dermatitis **(1pt.)**.

CAUSE: *Sarcoptes scabei* var *suis*. (There is also *Staph hyicus* in here, but corneal pustules are also seen in sarcoptic mange, so full points for *Sarcoptes scabei* only) **(2pt.)**

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

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

MICROSCOPIC DESCRIPTION: Lung: Approximately 66% of the section is composed of multifocal to coalescing areas of eosinophilic and granulomatous inflammation which are centered on and within airways **(1pt.)** and which extend outward into the adjacent alveolar parenchyma **(1pt.)**. Airways of all sizes are dilated and filled with innumerable eosinophils **(1pt.)** and large numbers of macrophages and neutrophils **(1pt.)** admixed with abundant cellular debris. Affected airways are often segmentally to circumferentially devoid of lining epithelium **(1pt.)**, and in these regions are infiltrated by inflammatory cells as previously described which extend into the adjacent fibrotic alveolar parenchyma. Adjacent airway epithelium is attenuated. The remainder of the airway epithelium is hyperplastic **(1pt.)** and often infiltrated by eosinophils, lymphocytes, or neutrophils. There is multifocal hyperplasia of bronchiolar associated lymphoid tissue, and larger vessels are also cuffed by lymphocytes and plasma cells. **(1pt.)** Within the adjacent parenchyma, alveoli are filled **(1pt.)** by varying combinations and concentrations of eosinophils, foamy alveolar macrophages **(1pt.)**, and fewer neutrophils, lymphocytes, plasma cells and few multinucleated giant cell macrophages, admixed with moderate amounts of hemorrhage and moderate amounts of brightly eosinophilic edema **(1pt.)**, and lesser abounts of hemorrhage with polymerized fibrin. and cellular debris. Alveolar septa within these areas are often lost (septal necrosis). **(1pt.)** In more severely affected areas of parenchyma, septa are expanded by Type II pneumocyte hyperplasia **(1pt.)**, fibroblasts, and mature collagen. **(1pt.)** Inflammatory changes are also present within subpleural areas (and inflammatory cells migrate into and expand the pleura.

MORPHOLOGIC DIAGNOSIS: Lung: Bronchitis and bronchiolitis, **(1pt.)** eosinophilic **(1pt.)** and granulomatous **(1pt.)**, chronic, multifocal to coalescing, severe with bronchiectasis **(1pt.)**,necrotizing alveolitis, fibrosis, and Type II pneumocyte hyperplasia.

CONDITION: Eosinophilic bronchopneumopathy **(2pt.)**

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

WSC 2025-2026
Conference 3, Case 4.
Tissue from a dog

MICROSCOPIC DESCRIPTION: Kidney**:** A section of a hematoxylin and safranin stained section of kidney is submitted for examination. Diffusely, Bowman's capsules are markedly ectatic **(1pt)** up to 0.5mm **(1pt)** in diameter, and only a portion (or in some cases, none) of the glomerular tuft is visible. **(1pt)** Bowman's space is often filled with a flocculent amphophilic fluid **(1pt)** and sloughed (presumably refluxed) epithelium **(1pt)** . Glomerular tufts are often adhered to Bowman's capsule **(1pt)** , and there is multifocal glomerluar fibrosis **(1pt)** . Tubules exhibit one or more of the following changes: epithelial swelling and vacuolation (degeneration) **(1pt)** , epithelial necrosis **(1pt)** with sloughing **(1pt)** , attenuation of tubular epithelium, and protein casts within the lumen **(1pt)** . The renal interstitium is diffusely expanded by fibrous connective tissue **(1pt)** and scattered interstitial aggregates of lymphocytes and plasma cells. **(1pt)**

MORPHOLOGIC DIAGNOSIS: Kidney: Glomerulocystic change **(1pt)** , chronic diffuse, severe, with glomerular fibrosis **(1pt)** , tubular degeneration **(1pt)** , necrosis, and proteinosis, and diffuse lymphocytic interstitial nephritis. **(1pt)**

NAME THE CONDITION: Glomerulocystic disease **(2pt.)**

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