

ACVP 2026 Infectious Disease Mystery Slide Session

Case #1: Peruvian Paso Colt (*Equus caballus*)

History:

- 4-Day-Old foal with a history of complete failure of passive transfer, with plasma IgG concentration <400 mg/dL, and was presented was dull, weak, recumbent, and comatose, with nystagmus and hypoglycemia.
- Initial venous blood gas analysis revealed mild acidosis, marked hyperlactatemia, and mild hypernatremia.
- Follow-up testing demonstrated progressive acidosis with persistent marked hyperlactatemia, persistent hypernatremia, hyperchloremia, mild azotemia, and mild hypobicarbonatemia.
- Complete blood count revealed leukopenia characterized by neutropenia with a left shift and hyperfibrinogenemia.

Gross pathology:

- Numerous slightly raised, white-to-tan, 2-mm-diameter nodules were present throughout the renal capsular surfaces and the cortices of both kidneys.
- Multiple joints contained increased volumes of synovial fluid with large fibrin strands.

Case #2: Lgr4-Flox; PomC-Cre mouse

History:

- A male 2-month-old male Lgr4-Flox; PomC-Cre mouse with no further reported experimental manipulation on immune system or neoplastic development, presented with small body size, straining to defecate, and mild loose stool.
- The animal was euthanized due to lack of response to treatment.

Gross pathology:

- Unremarkable.

Case #3: American black bear cub (*Ursus americanus*)

History:

- A wild female American black bear cub (*Ursus americanus*), estimated 2-3 months old, was found without its mother and transported to a wildlife rehab facility for care.
- The cub was weak and anemic and received a blood transfusion but died within 48 hours of intake.

Gross pathology:

- The mucous membranes, muscles, and viscera were diffusely markedly pale, and the subcutis was wet and slippery.
- The lymph nodes throughout the body were moderately to markedly enlarged, with the axillary nodes the largest.
- The lungs were dark pink to red, collapsed, soft and slightly wet.
- The liver was diffusely bronze-orange, subjectively enlarged, and slightly soft.
- The long bones (femurs, humeri) on cut section had circumferentially thickened, yellow, crumbly periosteum.

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Case #4: Adult yellow mealworms (*Tenebrio molitor*)

History:

- Adult yellow mealworms were submitted following episodes of increased mortality associated with progressive cuticular darkening and multifocal exoskeletal loss.
- Hemolymph smears did not demonstrate significant cytologic abnormalities.

Gross pathology:

- Grossly, affected insects exhibited multifocal to coalescing cuticular melanization associated with multifocal areas of exoskeletal loss.
- Lesions primarily affected the elytra and appendages and varied in severity among individuals.
- In advanced cases, the normally concave ventral abdomen became distinctly convex.

Case #5: Red panda (*Ailurus fulgens*)

History:

- A 14-year-old male red panda (*Ailurus fulgens*) from a zoological collection had a chronic history of hindlimb gait abnormalities, including favoring and intermittent non-weight-bearing of the right pelvic limb, suspected to be secondary to osteoarthritis.
- The animal also exhibited a persistent gradual decline in quality of life, including dental disease, as well as a chronically declining body condition.
- Due to a continued decline in overall welfare and minimal response to intervention, the animal was humanely euthanized.

Gross pathology

- The whole body of a male red panda (*Ailurus fulgens*) in good body condition and good post-mortem condition was submitted.
- Multifocal pale tan areas bulge slightly above the capsular surface on the kidney. When sectioned, these regions extended into the cortex.

Case #6: Holstein-Friesian (FI) heifer (*Bos taurus taurus*)

History:

- 9-month Holstein-Friesian heifer euthanized following a five-day history of recurrent fever, inappetence, and cloudy eyes with acute vision loss.

Gross pathology:

- Conjunctivas were bilaterally dark red and injected.
- Corneas were bilaterally cloudy blue (corneal edema) and the interior portion of the globe could not be visualized.
- Carcass was in poor nutritional condition with reduced fat deposits and protrusion of bony structures (e.g. spine, ribs, and points of hips).
- Generalized tackiness of the tissues was consistent with moderate to severe dehydration.
- There was a linear focus of ulceration and deposition of pale yellow fibrillar material along the arytenoids. Petechiae was noted on the epicardium of the heart.

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- Multiple lymph nodes in the head and neck (including the retropharyngeal and submandibular lymph nodes) were enlarged and dark red on cut section.