



# The Work-Up

**Diagnostic Services Unit | Issue 20 - November/December, 2025**

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SPECIAL EDITION: Cats

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## DSU Announcements

### Holiday Closures:

Remembrance Day: Tuesday, November 11, 2025

Christmas Break: Wednesday, December 24, 2025 @ 12pm to Thursday, January 1, 2026

Welcome to the following new DSU team members: Dr. Kylie Pon, Ashi Kaur, Shanhas Najimu-deen, Sydney Fischer, Reham Abdelsalama, Rafael Liao, and Julie Lawrence!

Please use the most up-to-date DSU submission forms from the [DSU website](#) when submitting samples to the DSU.

The DSU Cytology Service is closed until further notice. All cytology submissions will be sent out during this time.

## SPOTLIGHT

Karan completed his BSc in Microbiology from Mehsana Urban Institute of Sciences, Ganpat University, India in 2018. After working in Healthcare solutions for the United States, Karan obtained his post-secondary diploma in Bioscience Technology in 2021 from Saskatchewan Polytechnic, Saskatoon. He started his career as a Microbiology Laboratory Technologist by joining Prairie Diagnostic Services Inc., University of Saskatchewan in 2021. With the experience he gained in diagnostic bacteriology and poultry fluff/colostrum sample testing, Karan joined the Diagnostic Services Unit as a Bacteriology Technician in 2022.



### Highly pathogenic avian influenza

(HPAI) was the cause of neurologic signs and pneumonia necessitating euthanasia of a wild mature bobcat. An injured bobcat presented with nystagmus, muscle fasciculation, tachycardia, tachypnea, and obtunded mentation. Gross necropsy revealed mottled, red, wet lungs and fluid in the trachea, suggestive of an underlying pulmonary pathology and prompting testing for AI. On histology, the bobcat had a significant meningoencephalitis and broncho-interstitial pneumonia, features common in mammalian cases of HPAI. PCR was positive for HPAI. This bobcat likely acquired HPAI through the ingestion of an infected bird.



*Thoracic cavity, bobcat. Mottled, wet lungs.*

### Hypercalcemic nephropathy

was the cause of sudden death in a 14-year-old female spayed cat. Clinically, the indoor-only cat had a 1-month history of polydipsia and mildly decreased appetite. A cause for the sudden death was not found on gross necropsy, but the cat had smaller than normal kidneys. On histological exam, the kidneys had severe acute and chronic changes. Changes supporting chronic renal disease, common in geriatric cats to some degree, included lymphoplasmacytic inflammation, wedge-shaped interstitial fibrosis, and glomerular changes. In addition to the chronic changes, there was mineralization of the renal collecting ducts, which was interpreted as an acute change (hypercalcemic nephropathy) and the likely cause of sudden death. This is typically caused by a sudden increase/imbalance in serum calcium which can result from accidental ingestion of excess vitamin D (e.g., rodenticide ingestion, human Vitamin D containing supplements, etc.), hypercalcemia of malignancy, and primary or secondary hyperparathyroidism. Evidence of underlying disease were not found in this cat and no further history was provided to support vitamin D ingestion.

# The Work-Up

## Diagnostic Services Unit

Issue 20 - 2025

### DSU Team

#### Anatomic Pathologists:

Dr. Jennifer Davies (*on sabbatical*)  
Dr. Dayna Goldsmith  
Dr. Ashish Gupta  
Dr. Cameron Knight  
Dr. Carolyn Legge  
Dr. Kylie Pon  
Dr. Nicole Rose  
Dr. Jamie Rothenburger  
Dr. Katie Waine  
Dr. Erin Zachar

#### Clinical Pathologists:

Dr. Angelica Galezowski  
Dr. Catherine Wagg  
Dr. Amy Warren

#### Bacteriologist:

Dr. Beverly Morrison

#### Parasitologist:

Dr. Sawsan Ammar

#### Virologist:

Dr. Maria Bravo Araya

#### Support Staff:

Reham Abdelsalam  
Jim Carlsen  
Nancy Coulter  
Sandra Damianos  
Dr. Manga Devi (*on leave*)  
Dr. Camila dos Santos Meira  
Mai Farghaly  
Sydney Fischer  
Patrick Fuller  
Karan Gadani  
Lori Goodbrand  
Chloe Ingham  
Lilit Karapetyan  
Ashi Kaur  
Jennifer Larios  
Julie Lawrence  
Kelsey Lennon  
Rafael Liao  
Emery Maligaya  
Shahnas Najimudeen  
Mel Nicolas  
Ciara O'Higgins  
Dr. Lindsay Rogers  
Sara Skotarek Loch  
Melanie Stenner

### DSU Contact Information

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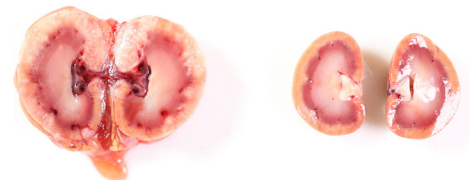
**A malignant epithelial neoplasm** was the cause of death in a 10-year-old, domestic short hair, female spayed cat. The cat had a history of vomiting and weight loss and died suddenly at home. On necropsy, a suspected neoplastic process effaced the right kidney and the right adrenal gland; infiltrated adjacent hypaxial muscles, spinal nerves and the vertebral column; compressed the abdominal aorta; and metastasized to the liver. Histopathology confirmed the presence of a malignant epithelial tumor which was interpreted to be a urothelial (transitional cell) carcinoma with squamous differentiation. Urothelial cell tumors are most common in the bladder; however, there are rare reports of urothelial carcinomas arising from the renal pelvis in cats, dogs, cows, pigs, and horses.



*Kidney, cat. malignant epithelial neoplasm effacing the kidney*

**Feline Infectious Peritonitis (FIP)** was strongly suspected in a 1-year-old, purebred, male neutered cat who was euthanized following hos-

pitalization for lethargy, anorexia, and diarrhea. In clinic, the cat was anemic, neutropenic, thrombocytopenic, and hyperglobulinemic with a fever and heart murmur. He was FeLV/FIV negative. On postmortem exam, lesions consistent with FIP included pyogranulomatous inflammation of the kidney and peritoneal effusion. A [recent paper](#) reviewing FIP cases submitted to the DSU found that perirenal hemorrhage can also be seen. Histology confirmed these findings. Confirmatory testing (coronavirus immunohistochemistry) was not pursued in this case. The feline coronavirus (FCoV) typically causes GI and respiratory tract diseases but in some cats, the virus mutates to cause FIP. Young, male sex, and purebred lineage are risk factors for the development of FIP. The disease is immune-mediated and historically considered fatal, although research into novel antiviral medications is promising for a safe, effective treatment.



*Kidney, cat. Left: multifocal to coalescing pyogranulomatous nephritis; Right: normal*

## Tips & Tricks

When shipping cadavers to the lab for necropsy, ensure they are double-bagged and within an additional hard sided container (e.g., sturdy cardboard box or plastic tote). This helps prevent leakage of any fluid, preserving the integrity of the sample for diagnostics and protecting those involved in shipping the cadaver to the lab, such as the courier and laboratory staff handling the package. Submission forms and cremation instructions (if required) should be included in the package in their own zip-top bag to prevent contamination.

