

**Vetpath** is a specialist veterinary laboratory dedicated to providing our clients with the finest laboratory diagnostic service. A team of veterinary pathologists and medical scientists with extensive experience in veterinary diagnostic pathology forms the core of the Vetpath team.

# VNNews

  
**VETPATH**  
LABORATORY SERVICES

**MARCH 2019**

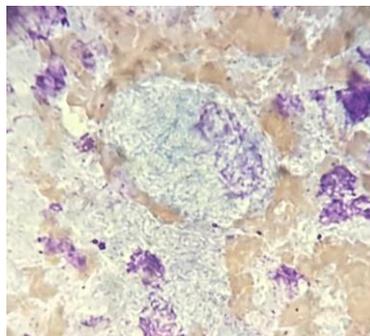
## What's your diagnosis?

A 2 year old cat presented to the veterinarian with pyrexia, lethargy and weight loss.

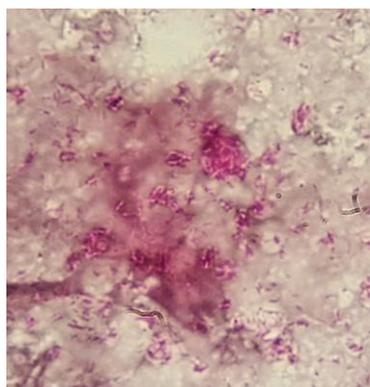
Abdominal ultrasound revealed severe mesenteric lymphadenomegaly. The lymph nodes were aspirated for cytological evaluation. The smears contained a large number of negatively staining rod-shaped structures within the background, as well as within reactive macrophages (Figure 1). Lymphocytes were not identified on the smears.

A smear was de-colourised and re-stained with Ziehl-Neelsen stain (Figure 2). The structures were determined to be acid-fast (dark pink).

**What is your diagnosis?**



**Figure 1:** Negatively staining rod shaped structures within macrophages.



**Figure 2:** Acid-fast structures in the background of the smear.

The cytological diagnosis was pyogranulomatous inflammation with acid-fast bacterial infection. The morphology of the bacteria is most consistent with *Mycobacterium* sp.

## Ask us anything!

VNews endeavours to provide you with interesting and useful information about veterinary pathology.

We would love to hear from you if you have any particular questions or topics you would like addressed in a future edition of VNews. We are happy to discuss anything from interpretation of particular diagnostic tests to how best to collect samples.

Please email [ltwomey@vetpath.com.au](mailto:ltwomey@vetpath.com.au) with your questions.



## Lungworm in dogs and cats

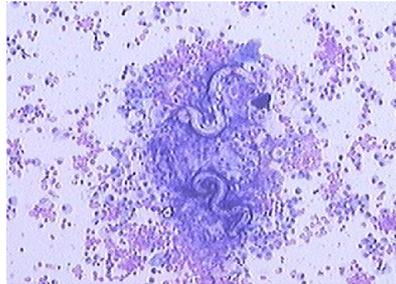
Lungworm infections occur in most of our domestic animal species. Infection can be subclinical or can cause mild to severe clinical signs including coughing and respiratory distress, general malaise, exercise intolerance and weight loss.

Lungworm infections occur throughout Australia and should be a differential diagnosis in patients presenting with respiratory clinical signs. Screening for lung worm infection is particularly important when eosinophilic inflammation is identified on tracheal washes or bronchoalveolar lavage samples.

Cats are most commonly infected by *Aelurostrongylus abstrusus* (see figure 1). Cats are likely to acquire lungworm infections through the ingestion of paratenic hosts, e.g., infected small birds or rodents, rather than through the ingestion of the snail intermediate hosts. Young cats or older cats that hunt are more likely to show clinical disease.

Dogs can be affected by *Filaroides (Oslerus) osleri* which has a direct cycle, with larvae coughed up and transmitted from mother to pups in sputum. The worms are

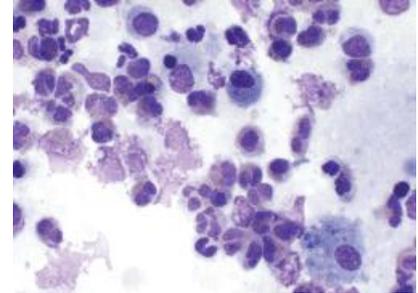
found in the trachea and bronchi where they form nodules. Other nematodes that migrate through the lungs include *Angiostrongylus vasorum* and *A. cantonensis*.



**Figure 1:** *Aelurostrongylus abstrusus* larvae in a BAL from a cat.

Lungworm infection can be diagnosed using a number of techniques. The primary method of screening a patient for infection is the Baermann test. This test detects nematode larvae in faeces and is performed on a fresh sample of at least 20 grams. The sample must be fresh or collected directly from the rectum to avoid contamination with environmental nematodes. The Baermann test requires 24 hours to perform and results are typically available the next working day.

Patients presenting with respiratory clinical signs are often assessed by tracheal wash and/or bronchoalveolar lavage. Adult and larval stages may be identified in these samples, along with an eosinophilic inflammatory response (figure 2). Parasites may also be observed on smears from direct fine needle aspiration of lung nodules.



**Figure 2:** Eosinophilic inflammation in a BAL from a cat.

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### Figures:

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2. <https://todaysveterinarypractice.com/diagnosis-of-feline-lower-airway-disease/>



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