



# Diagnostic Exercise

## From The Davis-Thompson Foundation\*

Case #: **152**; Month: **January**; Year: **2025**  
*Question sheet*

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### **Clinical History:**

A twelve-year-old spayed female cat presented with lethargy and dehydration. Severe pleural effusion was identified during thoracic cavity TFAST ultrasound. Samples of the effusion were submitted for cytology evaluation, and lymphocytic effusion with long-chained rods was diagnosed. The cat stayed hospitalized for 4 days, and despite treatment, the cat died. The other five cats within the same household presented similar clinical signs. The cat was submitted for post-mortem evaluation.

**Gross Findings:** At necropsy, the cat was in a thin body condition. The thoracic cavity contained approximately 20ml of orange to red viscous fluid (Figure 1). The pleural surface of the lungs was completely opacified by intense fibrin deposits. The right cranial lobe had multifocal to coalescing brown-tan adhesions on the outermost surface, and the right caudal lobe had a firm consistency, besides a depressed, dark red with a yellow rim 1.3 cm area (Fig. 2).

**Microscopy findings:** Microscopically, approximately 60% of the pulmonary parenchyma was markedly infiltrated by neutrophils, viable and degenerate, fibrin deposits, hemorrhage, cellular debris, and few lymphocytes and macrophages with golden to brown intracytoplasmic granules (Fig. 3). Large colonies of rod-shaped bacteria were admixed with the inflammatory cells (Fig. 4). The interstitial blood vessel walls were replaced by bands of eosinophilic and fibrillar material surrounded by neutrophils (fibrinoid vasculitis) (Fig. 5), frequently occluded by fibrin thrombi. The pleura was severely expanded by thick bands of fibrin, cellular debris, neutrophils, and bacteria colonies.

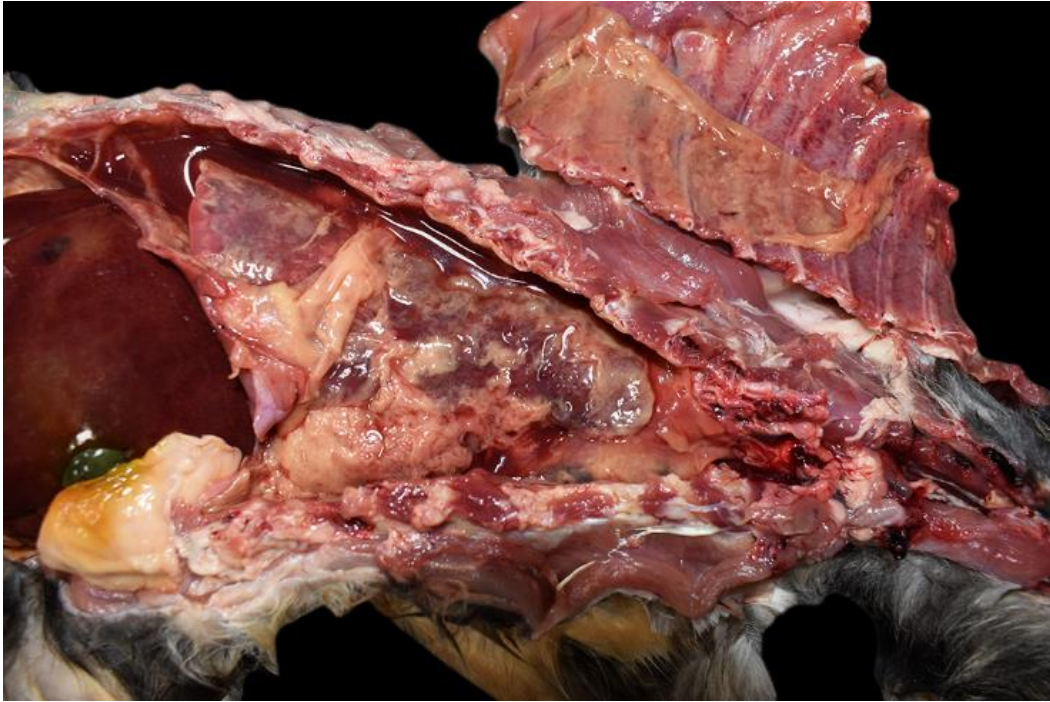


Figure 1



Figure 1



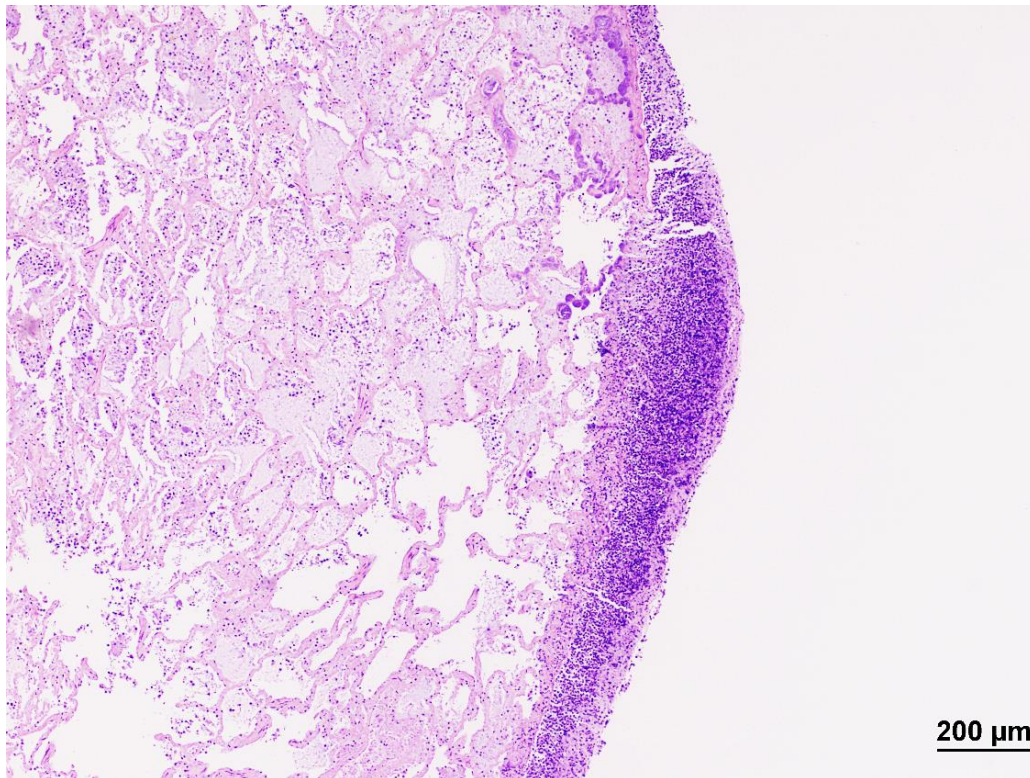


Figure 3

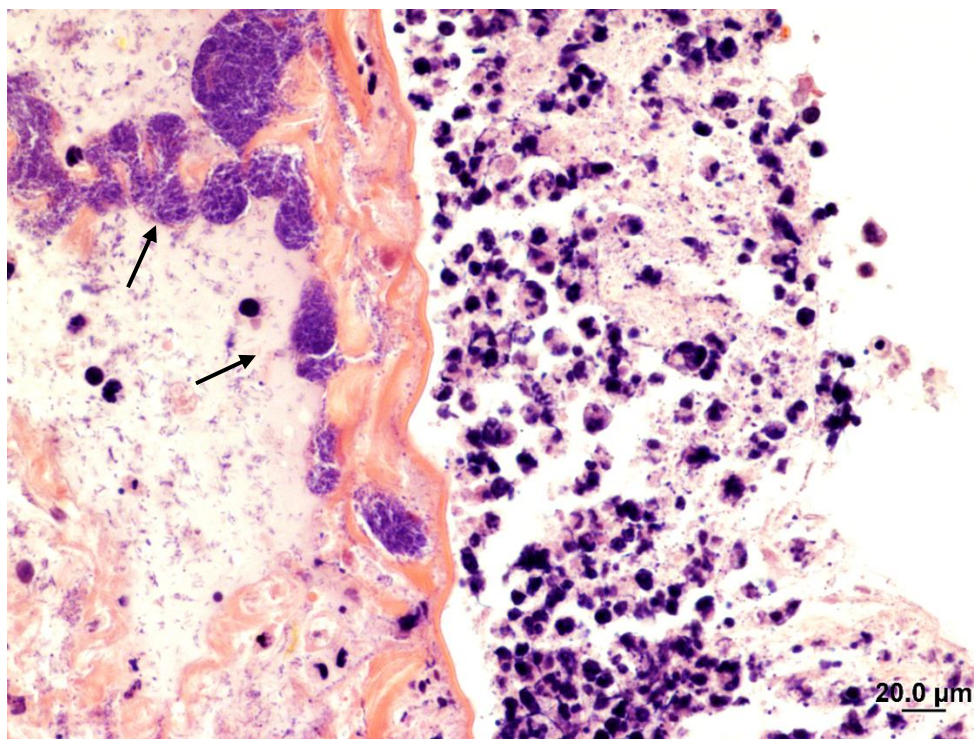


Figure 4

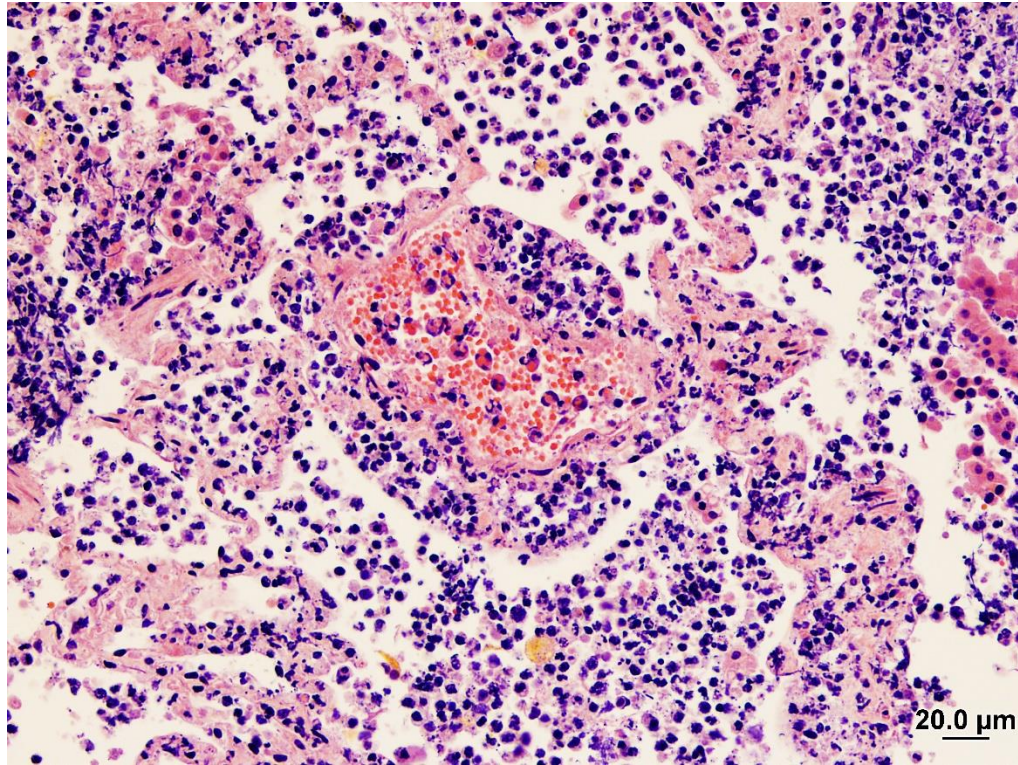


Figure 5:

**Follow-up questions:**

- *Morphologic diagnosis*
- *Possible etiological agents*

\*The Diagnostic Exercises are an initiative of the Latin Comparative Pathology Group (LCPG), the Latin American subdivision of The Davis-Thompson Foundation. These exercises are contributed by members and non-members from any country of residence. - Consider submitting an exercise! - A final document containing this material with answers and a brief discussion will be posted on the CL Davis website ([http://www.cldavis.org/diagnostic\\_exercises.html](http://www.cldavis.org/diagnostic_exercises.html)).

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