

### ESVCP Mystery Case 2020

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<b>COMPANY OR UNIVERSITY</b>	Purdue University

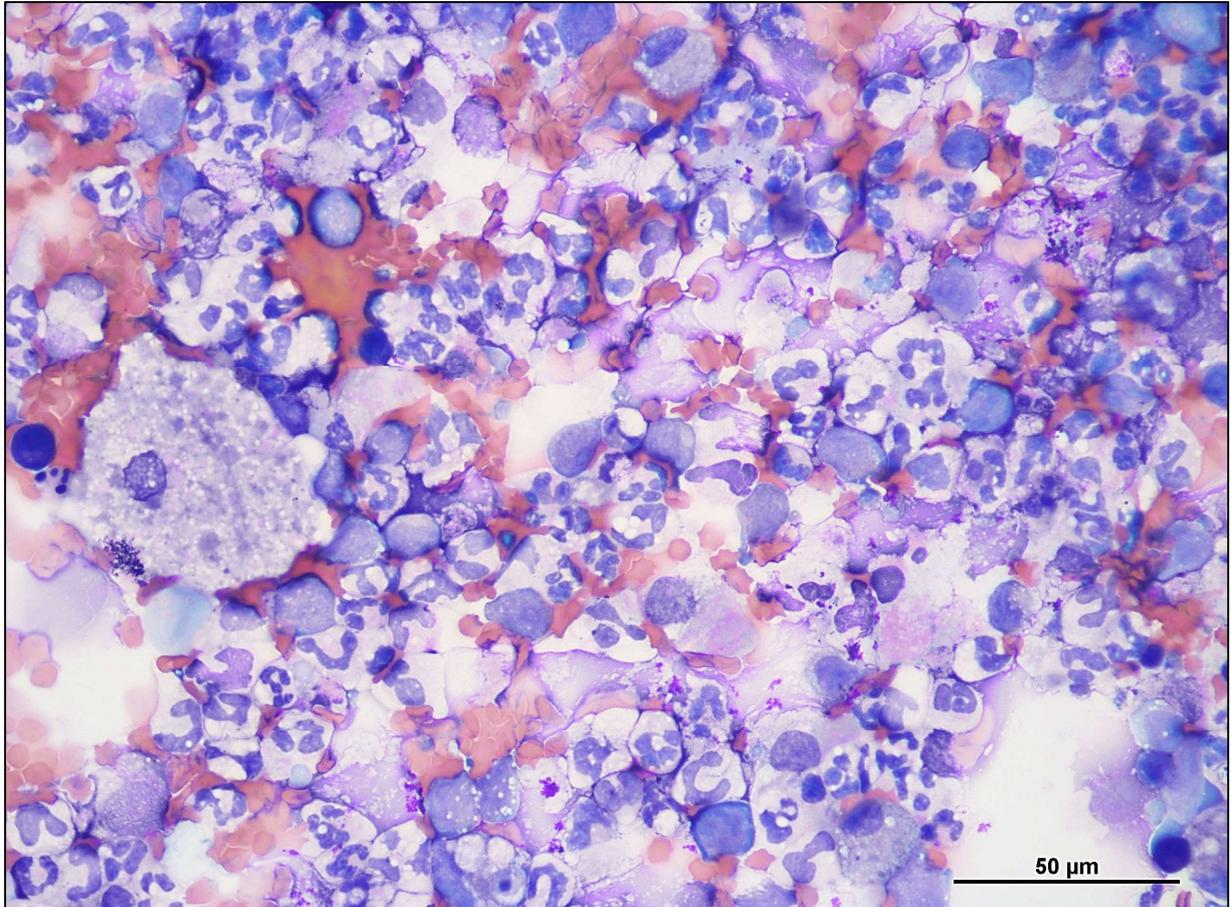
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**SPECIMEN:** BAL right caudal lung lobe, cytocentrifuge preparation, Modified Wright stain

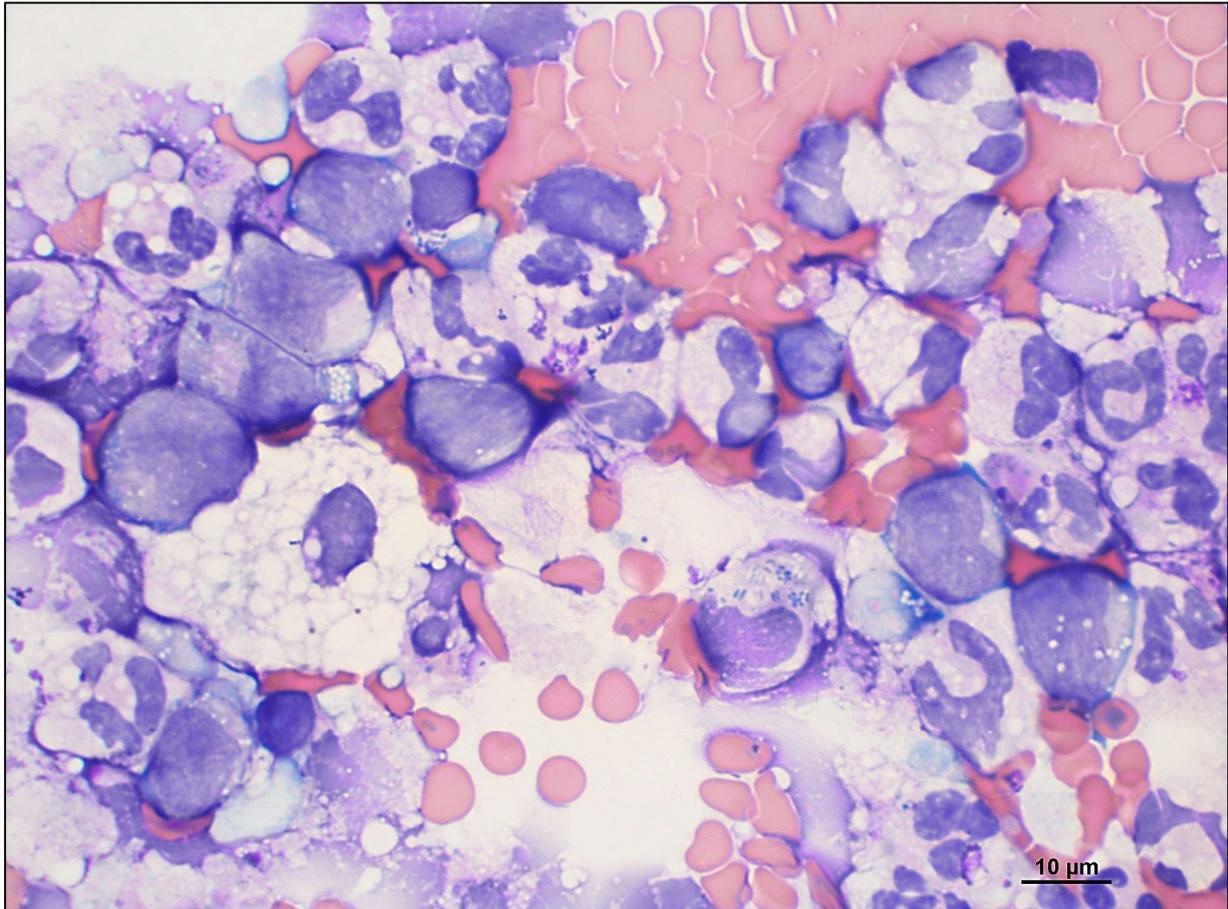
**SIGNALMENT:** Feline, 4-year-old, male, neutered Maine Coon, 7 kg

**HISTORY AND CLINICAL FINDINGS:** The patient was presented to Purdue University Veterinary Teaching Hospital (PUVTH) for evaluation of a one-year history of a chronic dry cough, with worsening of the radiographic bronchial pattern in the last two months. He had a previous diagnosis of feline asthma, whose treatment was prednisone and fluticasone inhaler, both of each was still being administered daily to the cat. On physical examination, the cat had a mild fever (39.8 °C), increased respiratory rate (48 bpm), and increased lung sounds bilaterally. Thoracic radiographs confirmed the bronchointerstitial lung pattern and also found uncountable variable sizes ill-defined, opaque, soft tissue nodules throughout the pulmonary parenchyma. One patchy mass was also noted in the right caudal lung lobe. His CBC and urinalysis were unremarkable. His chemistry panel (Vitros 5,1 FS Chemistry System, Ortho-Clinical Diagnostics, Raritan, NJ, USA) revealed only a moderate hyperproteinemia (8.3 g/dL, reference interval [RI] 5.5-7.1 g/dL) and hyperglobulinemia (4.8 g/dL, RI 2.3-3.8 g/dL). Bronchoalveolar lavages of the right caudal and two left caudal lung lobes were performed.

**CYTOLOGICAL IMAGES:**



**Figure 1:** Overall cellularity of the BAL (right caudal lung lobe). Numerous degenerate neutrophils are present, in addition to lymphocytes, activated macrophages, and plasma cells in a background with moderate numbers of red blood cells and numerous nonintact cells. Modified Wright stain (50x objective).



**Figure 2:** Photomicrograph at high magnification showing the cells present in the cat's BAL. Modified Wright stain (100x objective).

#### QUESTIONS:

1. What are the possible differential diagnoses for the pulmonary mass based on the BAL findings? (Mark all pertinent options).
  - Granulomatous disease
  - Severe persistent asthma with secondary infectious pneumonia
  - Epithelial neoplasia
  - Round cell neoplasia
  - Mesenchymal neoplasia