

# **The mystery of the vomiting cat:**

## *A granular analysis of splenic and hepatic nodules*

### **Contributors**

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### **Specimen**

Cytology of splenic and hepatic nodules

### **Signalment**

3-year-old spayed female European shorthair cat

### **History**

The cat was presented to the emergency unit at the veterinary teaching hospital of Toulouse, France, with a two-day history of anorexia and two episodes of vomiting.

### **Clinical findings**

Clinical examination was unremarkable. A biochemistry panel revealed mild hyperproteinemia (93g/L [57-89]) and hyperglobulinemia (63 g/L [28-51]). A CBC showed eosinopenia ( $0.03 \times 10^9/L$  [0.17-1.57]).

Blood gas analysis revealed mild hypokalemia (3.2 mmol/L [3.5-4.8]), ionized hypocalcemia (1.09 mmol/L [1.10-1.33]) and moderate hypochloremia (95.6 mmol/L [116.0-126.0])

Thoracic X-ray was unremarkable. Abdominal ultrasound revealed multiple hepatic nodules (<20mm), a splenic nodule (17mm) and a round, nonobstructive intestinal mass (6mm), suggestive of multiple neoplastic processes.

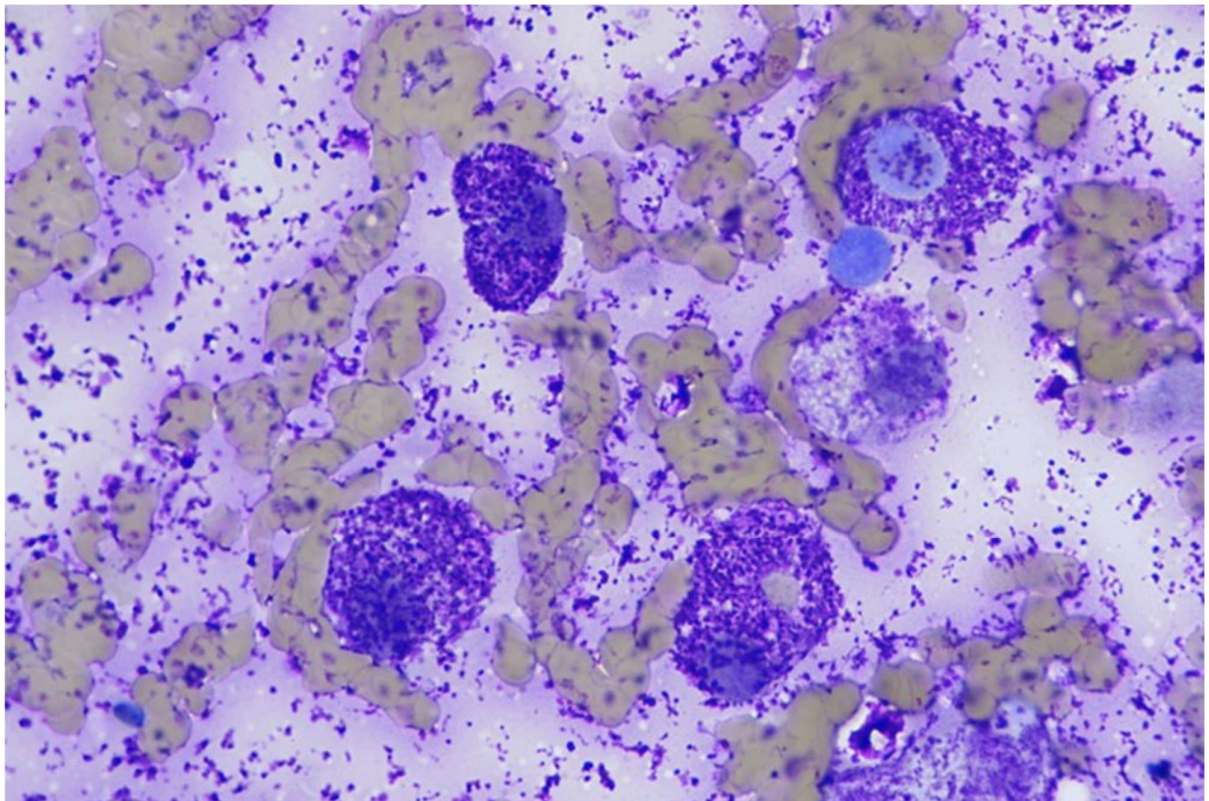
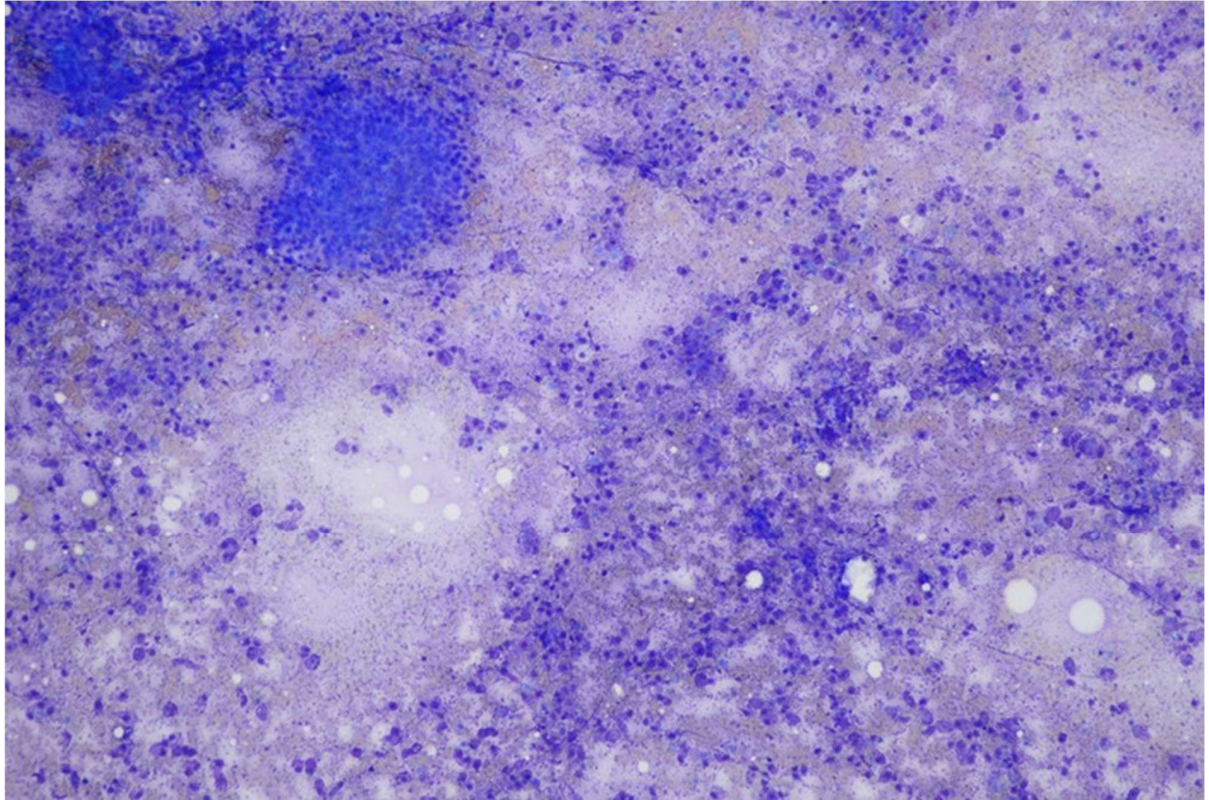
The cat was sedated and fine needle aspiration of the splenic and hepatic nodules was performed. Samples were submitted to the laboratory for cytological interpretation (Figures 1 and 2).

### **Follow-up**

Splenectomy was performed and the splenic nodule was submitted for histopathological analysis.

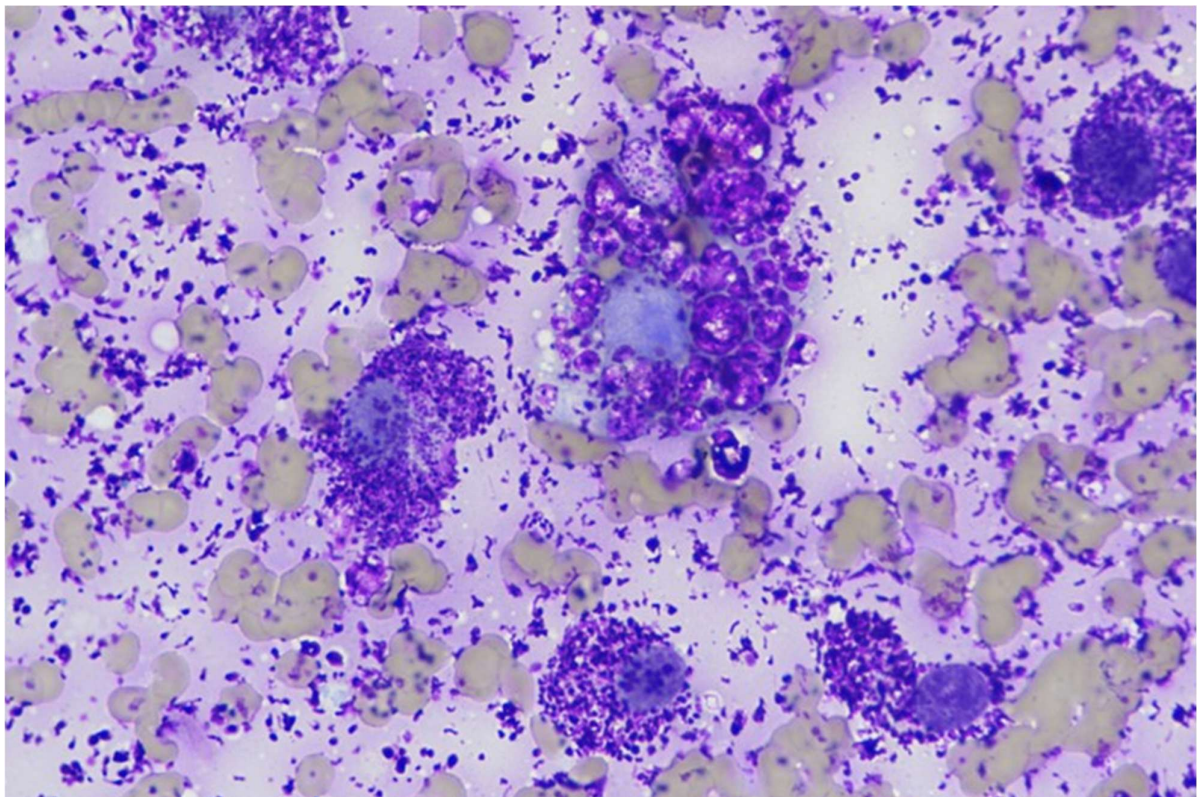
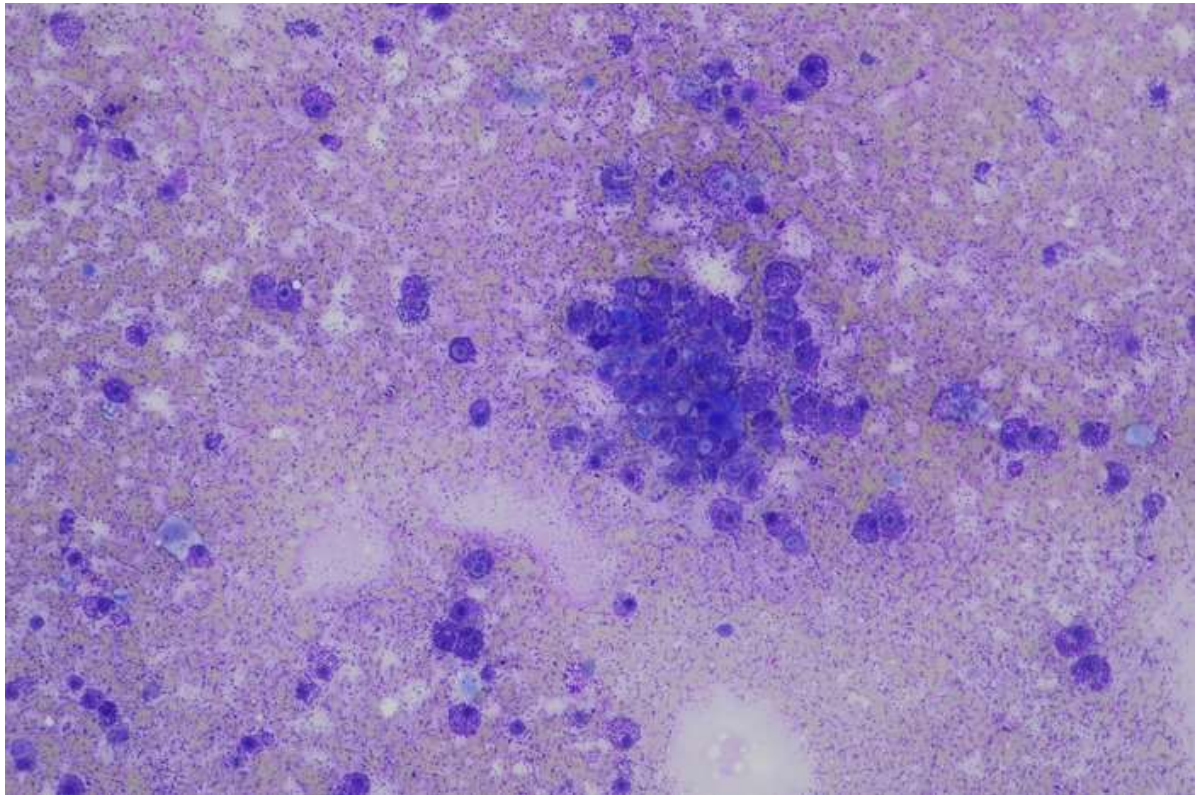
The cat showed clinical improvement following splenectomy; however, occasional vomiting persisted. A follow-up ultrasound performed 2-month after splenectomy revealed persistence of the previously observed hepatic nodules and a new 20mm nodule in the right medial liver lobe, a mild enlargement of the intestinal mass (6x7x9mm), and a hypertrophy of the ileo-caecal lymph node. A CBC revealed a moderate leukocytosis ( $22.7 \times 10^9/L$  [4.0-15.2]) and lymphocytosis ( $13.6 \times 10^9/L$  [1.2-10.2]) with a moderate number of reactive lymphocytes and very rare granulated cells (Figure 3).

**Figure 1.** Cytology of the splenic nodule. May-Grunwald-Giemsa, original magnification x10 and x100 oil objectives, respectively

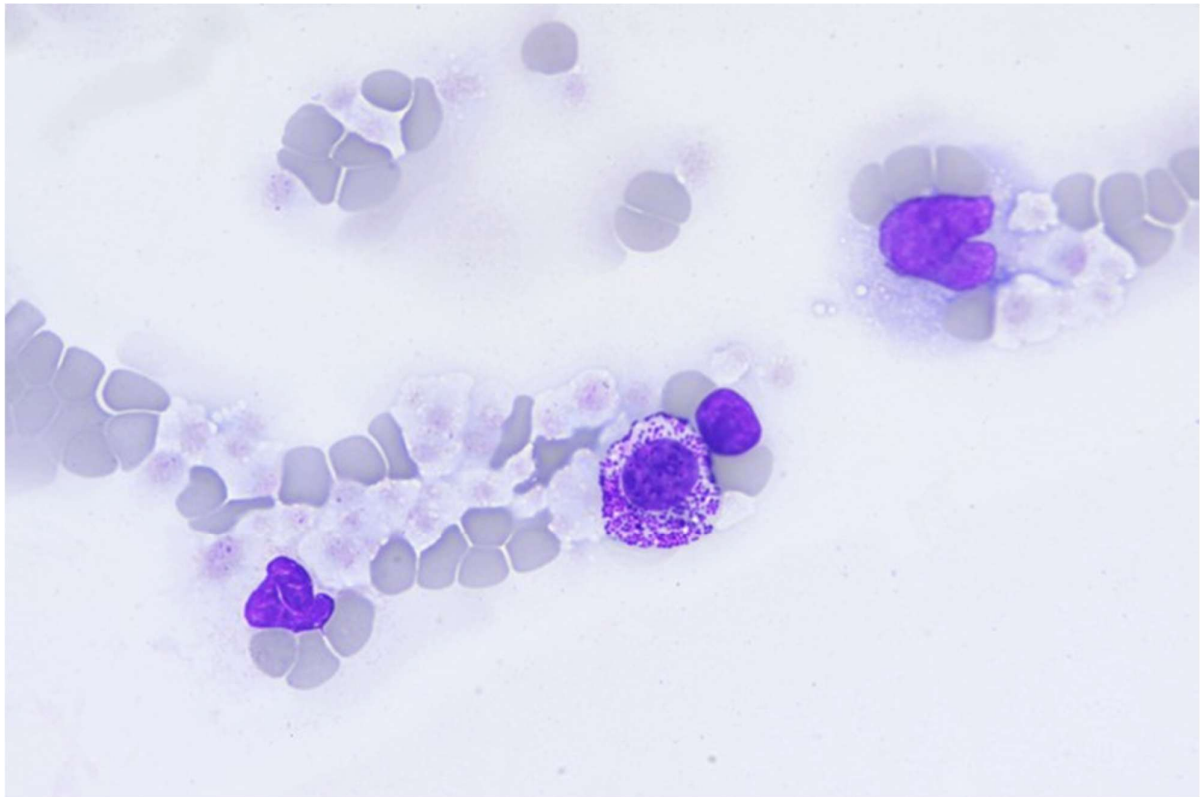




**Figure 2:** Cytology of one hepatic nodule. May-Grünwald-Giemsa, original magnification x20 and x100 oil objectives, respectively



**Figure 3.** Peripheral blood smear. May-Grünwald-Giemsa, original magnification x100 oil objective



**Questions**

**1/ How would you describe the cytological samples (Figures 1 and 2)? What is the most probable diagnosis?**

**2/ What would you recommend to confirm the diagnosis?**

**3/ Identify the granulated cells on peripheral blood smear (Figure 3) and give the differential diagnosis.**