UNINVITED GUESTS: BLOOD SMEAR FROM A DOG

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CASE PRESENTATION

Specimen

Giemsa-stained peripheral blood smear (Figure 1).

Signalment

Dog, Poodle cross, 5-year-old, intact male, 6.7 kg.

History

The dog was presented with intermittent vomiting, anorexia and weight loss for the previous 3 weeks. It was housed indoors and was incompletely vaccinated and dewormed.

Clinical signs

Physical examination revealed mild hypothermia, emaciation, lethargy, moderate dehydration, and respiratory distress. Inspection of the oral cavity disclosed the presence of an ulcerated lesion on the tongue, while abdominal palpation suggested the presence of splenomegaly. Arterial blood pressure was normal.

Clinicopathologic investigation

Abnormal findings yielded from the complete blood count and results of serum biochemistry panel analysis are tabulated in Table 1. A Giemsa-stained blood smear was microscopically examined for the assessment of white blood cells differential count and morphology.

Analyte	Units	Result	Reference intervals
Red blood cells	$10^6/\mu L$	5.14	5.50-8.50
Hemoglobin	g/dL	11.8	12.0-18.0
Hematocrit	%	35.5	37.0-55.0
White blood cells	$10^3/\mu L$	35.7	6.0-17.0
Neutrophils	$10^3/\mu L$	29.7	3.9-8.0
Monocytes	$10^3/\mu L$	1.6	0.2-1.1
Total proteins	g/dL	4.7	5.5-8.0
Albumin	g/dL	1.3	2.9-4.0
Blood urea nitrogen	mg/dL	81	10-38
Creatinine	mg/dL	1.2	0.7-1.3
ALT	IU/L	21	18-62
ALP	IU/L	679	32-149
Total bilirubin	mg/dL	2.2	0.2-0.6
Total calcium	mg/dL	7.0	8.6-10.9
Phosphorus	mg/dL	6.5	2.2-6.0
Potassium	mEq/L	3.9	3.7-5.9
Sodium	mEq/L	150	144-158
Cholesterol	mg/dL	363	125-296
Triglycerides	mg/dL	207	24-102

Table 1: Clinicopathologic investigation at presentation.

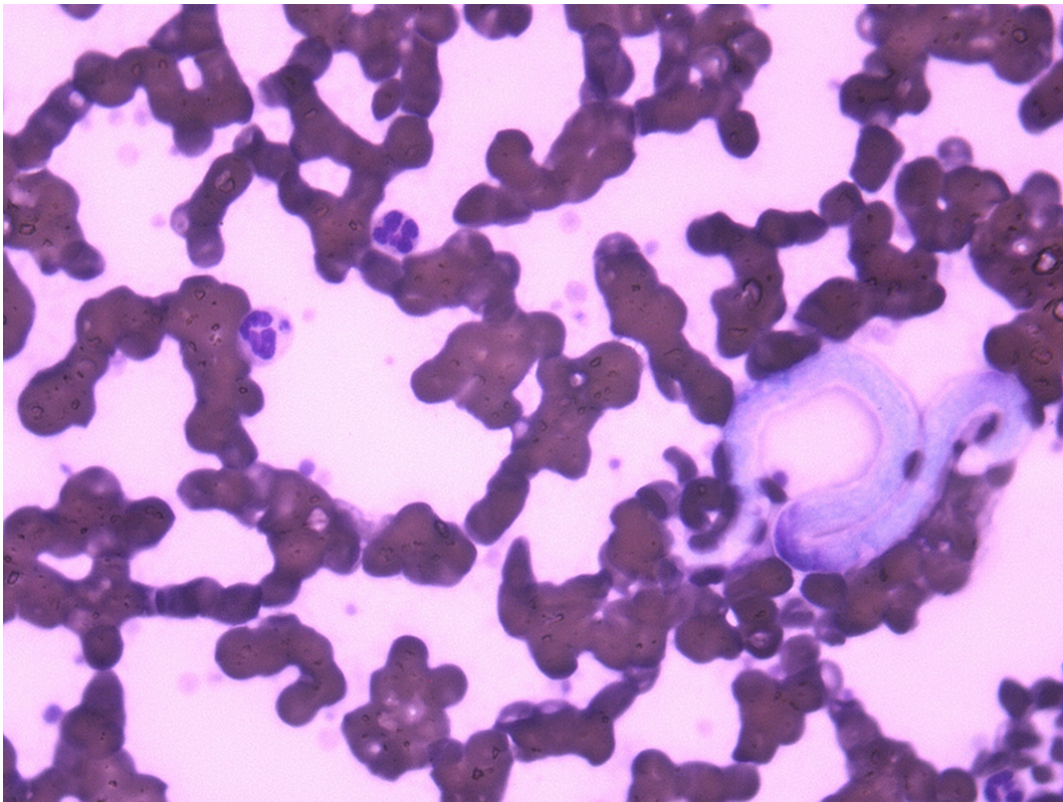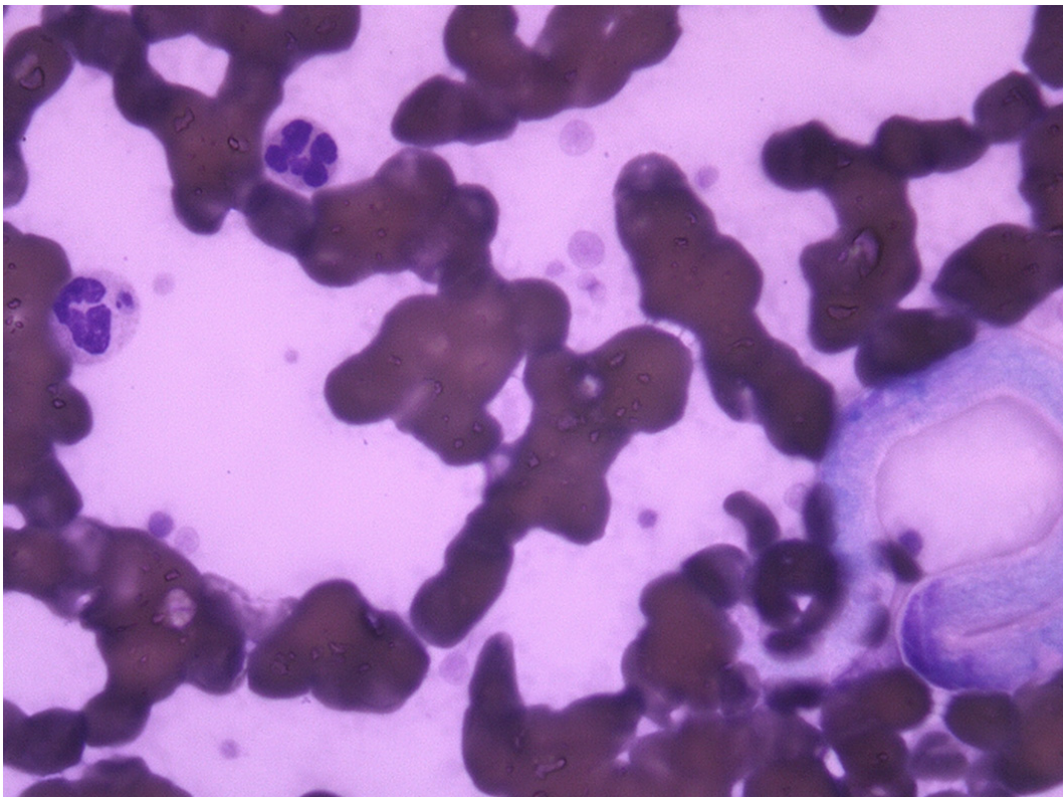*Evaluate the following images and provide your diagnostic interpretation (Figure 1A and 1B).*

Figure 1A (63x objective)

Figure 1B (100x objective)