

## Clinical pathology diagnostic challenge : case #10

**Signalment:** 8 year old, neutered male Labrador.

**History:** housed by the veterinarian during winter holidays, the animal was initially examined for a thoracic mass when first brought to the clinic; several days later, it was found in lateral recumbency in its cage, diarrhea was noted.

**Physical exam observations:** dehydrated, bradycardia.

### CBC results

Hematocrit (0.37-0.55 L/L)	0.55
Hemoglobin (120-180 g/L)	175
Erythrocytes ( $5.5-8.5 \times 10^{12}$ /L)	8.2
MCV (60-77 fL)	70
MCHC (320-360 g/L)	330
Reticulocytes (<1 %)	-
Reticulocytes ( $<60\,000 \times 10^6$ /L)	-
Platelets ( $200-900 \times 10^9$ /L)	446
Plasma protein (60-80 g/L)	60
Leukocytes ( $6.0-17.0 \times 10^9$ /L)	15.0
Neutrophils (mature) ( $3.0-11.5 \times 10^9$ /L)	11.0
Neutrophils (band) ( $0-0.3 \times 10^9$ /L)	0
Lymphocytes ( $1.0-4.8 \times 10^9$ /L)	3.0
Monocytes ( $<1.4 \times 10^9$ /L)	0.9
Eosinophils ( $0.1-1.3 \times 10^9$ /L)	0.1
Basophils (0 - rare $\times 10^9$ /L)	0

### Clinical chemistry results

Glucose (3.38-6.88 mmol/L)	4.0
BUN (2.09-7.91 mmol/L)	19.70
Creatinine (58-127 $\mu$ mol/L)	184
ALT (4-62 U/L)	80
Alkaline phosphatase (6-80 U/L)	45
Total protein (56.6-74.8 g/L)	59.6
Albumin (29.1-39.7 g/L)	29.6
Globulins (23.5-39.1 g/L)	30.0
Calcium (2.38-3.00 mmol/L)	3.36
Phosphorus (0.75-1.70 mmol/L)	2.80
Potassium (3.82-5.34 mmol/L)	5.82
Sodium (143-154 mmol/L)	139.1
Chloride (108-117 mmol/L)	109.9
Total CO <sub>2</sub> (17-25 mmol/L)	17.6
Anion Gap (12-24 mmol/L)	17.42

### Urinalysis

Specific gravity before fluid therapy: 1.015.

### Cytology

When admitted, a fine needle aspiration was done on the well-defined 10 cm (in diameter) mobile subcutaneous thoracic mass.

Using the laboratory changes, submit a differential diagnosis and justify it (pathophysiology). If needed list other possible tests to confirm your diagnosis.