

### Clinical pathology diagnostic challenge: case #3

**Signalment:** domestic cat, neutered male, 7 years old.

**History:** sudden onset of complete anorexia persisting for the last 2-3 days; the cat has access to the outdoors.

**Physical exam observations:** generalized weakness, pale mucous membranes, moderately dehydrated .

#### CBC results

Hematocrit (0.24-0.45 L/L)	0.17
Hemoglobin (80-150 g/L)	53
Erythrocytes (5.0-10.0 x 10 <sup>12</sup> /L)	2.78
MCV (39-55 fL)	61
MCHC (300-360 g/L)	312
Reticulocytes (<1 %)	2.23
Reticulocytes (<60 000 x 10 <sup>6</sup> /L)	61 994
Platelets (300-700 x 10 <sup>9</sup> /L)	adequate
Plasma protein (60-80 g/L)	77
Leukocytes (5.5-19.5 x 10 <sup>9</sup> /L)	6.4
Neutrophils (mature) (2.5-12.5 x 10 <sup>9</sup> /L)	3.1
Neutrophils ( band ) (0-0.3 x 10 <sup>9</sup> /L)	0.2
Lymphocytes (1.5-7.0 x 10 <sup>9</sup> /L)	2.6
Monocytes (<0.8 x 10 <sup>9</sup> /L)	0.5
Eosinophils (0-1.3 x 10 <sup>9</sup> /L )	0
Basophils (0 - rare x 10 <sup>9</sup> /L)	0

#### Clinical chemistry results

Glucose (3.8-7.9 mmol/L)	8.5
BUN (4.1-10.8 mmol/L)	11.3
Creatinine (51-180 µmol/L)	180
ALT (16-63 U/L)	85
Alkaline phosphatase (<50 U/L)	7
Plasma protein (59.6-80.8 g/L)	67.10
Albumin (26.0-39.0 g/L)	34.80
Globulins (29.0-47.0 g/L)	32.30
Calcium (2.17-2.86 mmol/L)	2.40
Phosphorus (0.96-1.96 mmol/L)	2.00
Potassium (3.60-5.30 mmol/L)	3.80
Sodium (145-158 mmol/L)	148
Chloride (110-125 mmol/L)	125
Total CO <sub>2</sub> (14-24 mmol/L)	14
Anion gap (10-27 mmol/L)	12.8

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