

## Clinical pathology diagnostic challenge: case #2

**Signalment:** Thoroughbred stallion, 10 years old.

**History:** chronic weight loss, generalized weakness.

**Physical exam observations:** markedly emaciated.

CBC results		Clinical chemistry results	
Hematocrit (0.32-0.52 L/L)	0.44	Glucose (3.4-6.2 mmol/L)	6.2
Hemoglobin (111-190 g/L)	148	BUN (4.1-7.6 mmol/L)	59.6
Erythrocytes (6.5-12.5 x 10 <sup>12</sup> /L)	9.5	Creatinine (87-150 µmol/L)	1202
MCV (34-58 fL)	44	Bilirubin (15-48 µmol/L)	40
MCHC (310-370 g/L)	340	GGT (9-30 U/L)	24
Platelets (100-600 x 10 <sup>9</sup> /L)	458	Alkaline phosphatase (67-185 U/L)	162
Plasma protein (55-70 g/L)	70	AST (182-384 U/L)	429
Fibrinogen (< 4 g/L)	4	CK (80-444 U/L)	500
Leukocytes (5.5-12.5 x 10 <sup>9</sup> /L)	18.0	Total protein (53-71 g/L)	71.0
Neutrophils (mature) (2.7-6.7 x 10 <sup>9</sup> /L)	14.8	Albumin (31-39 g/L)	32.0
Neutrophils (band) (0-0.1 x 10 <sup>9</sup> /L)	0	Globulins (20-35 g/L)	45.0
Lymphocytes (1.5-7.5 x 10 <sup>9</sup> /L)	2.7	Calcium (2.89-3.30 mmol/L)	3.33
Monocytes (<0.8 x 10 <sup>9</sup> /L)	0.4	Phosphorus (0.77-1.67 mmol/L)	0.64
Eosinophils (<0.9 x 10 <sup>9</sup> /L)	0	Potassium (3.36-4.99 mmol/L)	5.10
Basophils (0 - rare x 10 <sup>9</sup> /L)	0	Sodium (135-143 mmol/L)	128
		Chloride (95-105 mmol/L)	86
		Total CO <sub>2</sub> (27-34 mmol/L)	19
		Anion Gap (4-13 mmol/L)	28

Urinalysis		Cytology (Abdominal tap)	
Color	Yellow	Appearance	yellow, clear
Turbidity	2+	Proteins	9 g/L
Specific gravity	1.011	Leukocytes	1.2 x 10 <sup>9</sup> /L
PH	8.0		
Proteins	trace		
Glucose	negative		
Ketone	negative		
Bilirubin	negative		
Blood	trace (stick)		

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