



PATIENT PRESENTING CLINICAL SIGNS

Shadow Kuik

Weight loss - 1 kg in 8 months Anorexia - 1 week duration Tachycardia > 200, Tachypnea ~ 40 Muscle wasting. No meds currently. ALP high, TProt low, Phosphorus high, Hematocrit low, Hemoglobin low, High WBCs, high mono, high lymph, elevated total T4, low calcium.

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

15 Years

WEIGHT

4.11 kg

INTERPRETED BY

Kathleen Sennello DVM,
MS, Diplomate ACVIM
(Small Animal Internal
Medicine)

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

West Park AH

REFERRING VET

Dr. Rice

INVOICE

42366

DATE

10/27/22

Abnormal PE/Chem/CBC/UA Results: CBC Comment Polychromasia Rare Stress/Shift platelets present. Platelet assessment Adequate Manual Differential performed WBC: 21.2 *H 10⁹/L #LYM: 6.00 #MON: 0.60 #GRA: 14.60 #EOS: 0.61 %LYM: 28.6 %MON: 2.9 %GRA: 68.5 %EOS: 2.9 RBC: 5.04 10¹²/L HGB: 7.9 *L g/dL HCT: 24.2 *L % MCV: 48 F/L MCH: 15.7 PG MCHC: 32.7 g/L RDW: 18.8 % PLT: 217 10⁹/L MPV: 13.7 F/L BUN.: 7.66 (Canine 3.20 - 10.40 mmol/L Feline 5.35 - 11.42 mmol/L) CREA.: 41 *L (Canine 35 - 124 umol/L Feline 71 - 159 umol/L) ALT: 79 U/L ALP.: 156 *H (Canine 0 - 140 U/L Feline 0 - 90 U/L GLU.: 6.6 (Canine 4.2 - 6.9 mmol/L Feline 3.9 - 7.2 mmol/L) TP: 57 *L Albumin: 26 g/dl PHOS.: 2.16 *H (Canine 0.60 - 1.60 mmol/L Feline 0.84 - 1.94 mmol/L) CA.: 2.16 *L (Canine 2.30 - 3.10 mmol/L Feline 2.20 - 3.00 mmol/L) T-BILI.: 3 (Canine 0 - 9 umol/L Feline 0 - 9 umol/L) GGT: < 10 (Canine 0-14 U/L, Feline 0-10 U/L) TCHO: 4.91 (Canine 3.10 - 8.00 mmol/L, Feline 1.81 - 5.17 mmol/L) Na: 156 mmol/L K: 4.2 mmol/L Cl: 112 mmol/L SDMA: Idexx - ug/dL (0 - 14) ug/dL T4: Idexx - 160 nmol/L (10.0 - 60.0) nmol/L SENT CBC OUT FOR PATH REVIEW DUE TO ABNORMAL CELLS ON SMEAR L RBC 5.1 L Hematocrit 0.25 0.29 - 0.45 L/L Hemoglobin 67 103 - 162 g/L MCV 49.0 39.0 - 56.0 fL MCH 13.1 12.6 - 16.5 pg L MCHC 268.0 285.0 - 378.0 g/L RDW 25.8 10.0 - 26.0 % Reticulocyte 0.5 % Reticulocytes 25.5 3.0 - 50.0 x10E3/uL Reticulocyte Hemoglobin 16.8 15.3 - 22.9 pg H WBC 22.8 3.9 - 19.0 x10E9/L WBC Morphology Pathologist review to follow. % Neutrophils 39.0 % % Lymphocytes 55.0 % % Monocytes 4.0 % % Eosinophils 2.0 % % Basophils 0.0 % % Nucleated RBC 2.0 0.0 - 2.0 /100 WBC Neutrophils 8.9 2.6 - 15.2 x10E9/L H Lymphocytes 12.5 0.9 - 5.9 x10E9/L H Monocytes 0.9 0.0 - 0.5 x10E9/L Eosinophils 0.5 0.0 - 2.2 x10E9/L Basophils 0.0 0.0 - 0.1 x10E9/L Nucleated RBC 2.0 0.0 - 2.0 /100 WBC Platelets 228 155 - 641 x10E9/L CBC Comment Polychromasia Rare Stress/Shift platelets present. Platelet assessment Adequate Manual Differential performed Hemolysis Index Normal Icterus Index Normal Lipemia Index Normal H Total T4 a 160.1 10.0 - 60.0 nmol/L INTERPRETATION: Hemogram: There is moderate anemia. The red blood cells have minimal anisocytosis and polychromasia, consistent with a nonregenerative anemia. Nonregenerative anemias may be due to a wide variety of causes including primary bone marrow disease, chronic renal disease, chronic viral disease (FeLV, FIP and FIV), and chronic disease including chronic inflammation and neoplasia. Nonregenerative anemia can also be seen with acute blood loss or acute hemolysis. These anemias become regenerative in time. Continued monitoring of the anemia and reticulocyte count is recommended to determine if this anemia becomes regenerative. Anemia may be associated with retroviral infections, and testing for feline leukemia virus and feline immunodeficiency virus are recommended if not already done. Bone marrow aspiration cytology and bone marrow core biopsy and histopathology may be helpful for further differentiation if the anemia persists. Leukogram: The differential is repeated by the pathologist. The cells are in the following proportions: 39% mature, segmented neutrophils, 1% immature band neutrophils, 28% mature, well-differentiated lymphocytes, 4% monocytes, 2% eosinophils and 26% unclassified cells. The unclassified cells are intermediate to large in size with oval to indented, eccentric nuclei with coarsely stippled chromatin, a single large nucleolus or multiple nucleoli, and a scant to moderate amount of lightly basophilic cytoplasm. Based on their morphology, the lineage of these cells is unclear. It is possible the cells are reactive lymphocytes. However, I suspect they are neoplastic lymphoblasts, or possibly myeloblasts or undifferentiated blasts. The presence of many blasts is concerning for hematopoietic neoplasia. If the patient has significant lymphadenopathy or organomegaly, this could also potentially be lymphoma with circulating blasts, so correlation with the clinical findings is recommended. Hematopoietic neoplasia in cats can be associated with retroviral infections, and testing for feline leukemia virus and feline immunodeficiency virus is recommended, if not already done. Immunophenotyping by flow cytometry is available to determine if these blasts express lymphoid markers. FELV/FIV SNAP WAS NEGATIVE URINALYSIS NAF No radiograph.


PATIENT ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Shadow Kuik

Urinary System
SPECIES

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

Feline

BREED

The left kidney has a normal shape and size (4.05 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

DSH

SEX

The right kidney has a normal shape and size (4.52 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Neutered Male

AGE
Adrenal Glands

15 Years

The region of left adrenal (Cranial to left renal artery) is unremarkable but the adrenal is not distinctly visualized. No evidence of a mass effect.

WEIGHT

The right adrenal gland is normal in size measuring 0.43 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

4.11 kg

Spleen
INTERPRETED BY

The spleen is large (1.7 cm in width at the level of the hilus) and hypoechoic. The splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

 Kathleen Sennello DVM,
 MS, Diplomate ACVIM
 (Small Animal Internal
 Medicine)

Liver
IMAGING PERFORMED BY

The liver is large and irregular. The parenchyma is hyperechoic and homogenous in echotexture. The visible portions of the vasculature and biliary tract appear normal. There is a large 2.0 cm cyst visualized within the parenchyma.

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The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. The cystic and common bile ducts are normal/not visible.

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Gastrointestinal
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The stomach contains minimal luminal contents. It measures at a normal thickness of <0.36cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

Dr. Rice

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The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. The duodenum measured as normal (between 0.13-0.38cm in wall thickness) and the jejunum measured as normal (between 0.15-0.36cm.) Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

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The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

SPECIES

Feline

Pancreas

The pancreas is prominent and hypoechoic as compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

BREED

DSH

Free Abdomen

There is a moderate amount of free abdominal fluid. There is a significant lymphadenopathy with a cranial abdominal lymph node/mass visualized measuring 1.46 cm x 2.44 cm in the region of the portal lymph node. Additionally, there is a large, round, hypoechoic lymph node in the cranial abdomen measuring 1.0 cm in diameter. The omentum is hyperechoic in the cranial abdomen.

SEX

Neutered Male

ULTRASONOGRAPHIC FINDINGS

AGE

15 Years

- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.
- Large hyperechoic spleen – Findings are concerning for possible infiltrative disease. Recommend a fine needle aspirate. Other differentials would include congestion, heart disease, etc.
- Hypoechoic, prominent pancreas – The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

WEIGHT

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- Large, hyperechoic, irregular liver with a cystic lesion – Hepatic changes are non-specific and could be consistent with hepatic lipidosis, inflammatory/infectious disease, infiltrative neoplasia, or other hepatopathy. Given the splenic findings, there would be concern for possible infiltrative disease or congestion. The cystic lesion likely is a benign hepatic cyst.

IMAGING PERFORMED BY

Crystal Hill

- Moderate amount of free abdominal fluid
- Large round hypoechoic cranial abdominal lymph nodes – The moderate mesenteric lymphadenopathy is most concerning for a neoplastic process, although you can see significant lymphadenopathy in some cases of autoimmune/inflammatory disease, infectious disease (tick born disease-such as bartonella, fungal infections, FIP (cats)) etc. A fine needle aspirate with cytology is recommended for further evaluation.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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Dr. Rice

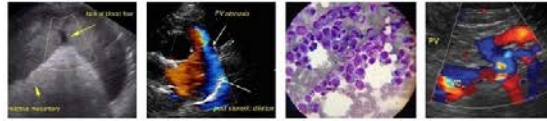
Given the findings of your CBC pathologist review, the hepatosplenomegaly observed and the enlarged cranial abdominal lymph nodes are concerning for possible round cell neoplasia. Consider a fine needle aspirate of the liver and spleen, provided coagulation parameters are normal. If a lymph node can safely be aspirated, this would also be a possibility. Recommend 3-view thoracic radiographs and a cardiac ultrasound. If a diagnosis cannot be obtained this way, then consider flow cytometry on the CBC and consultation with a veterinary oncologist.

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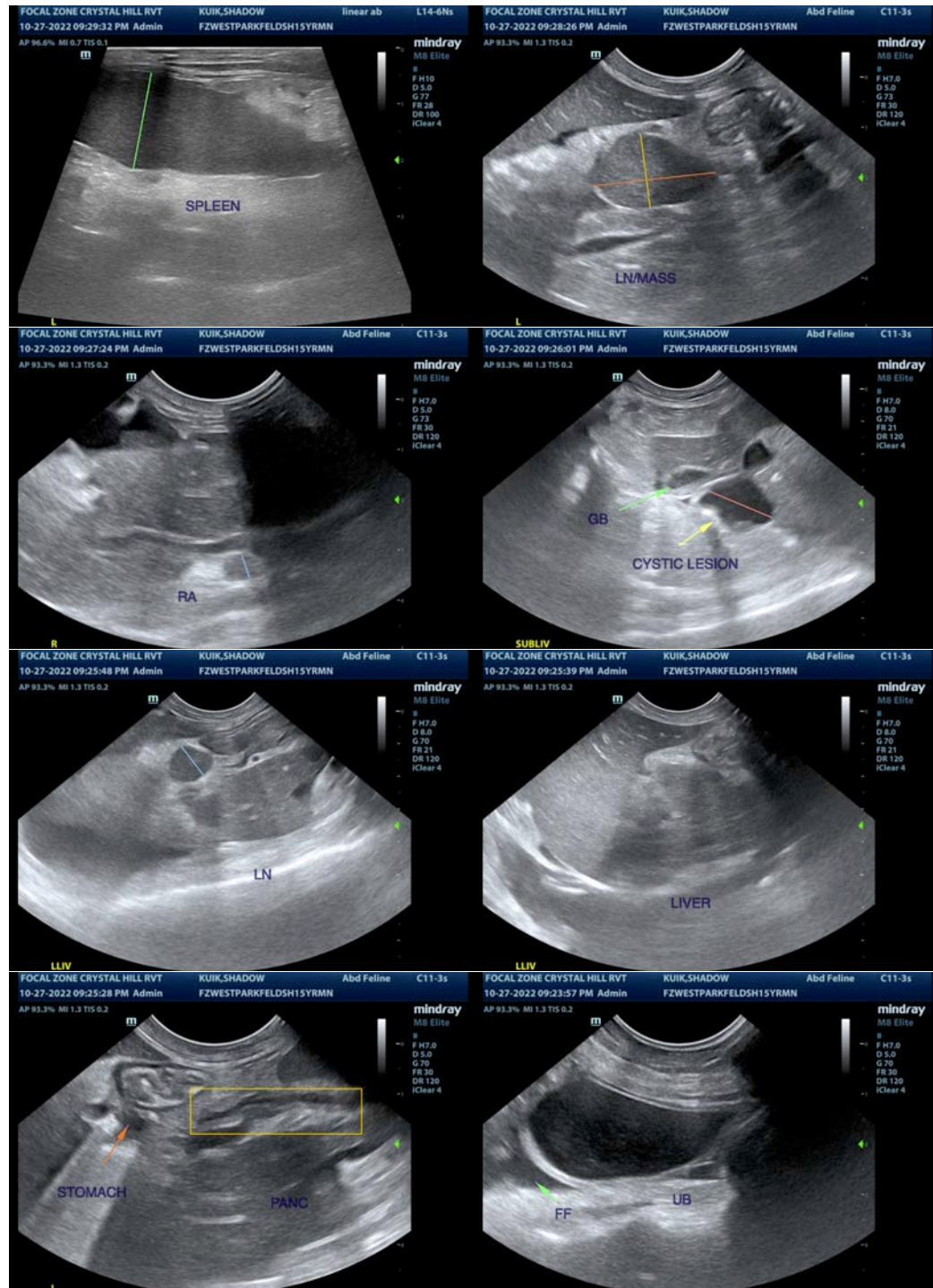
Dr. Rice

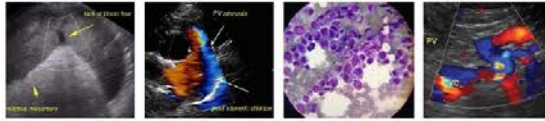
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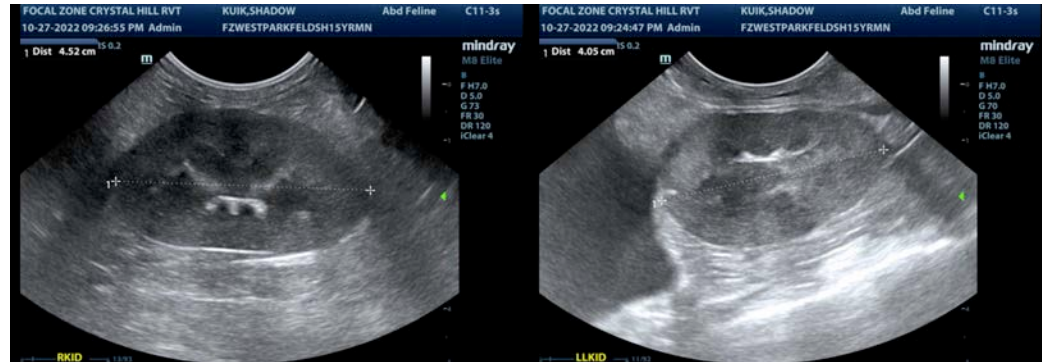
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)

kathleen.sennello@sonopath.com