



PATIENT

Alex Daniel

SPECIES

Feline

BREED

Domestic Shorthair

SEX

Spayed Female

AGE

9 years

WEIGHT

8 lbs

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

IMAGING PERFORMED BY

Dr. Myers

HOSPITAL NAME

Hershire AH

REFERRING VET

Dr. Myers

INVOICE

31074

DATE

6/8/22

PRESENTING CLINICAL SIGNS

History: Hx of hyporexia and weight loss; fecal negative
Abnormal PE/Chem/CBC/UA Results: BW--leukocytosis 64.5K, lymphocytes 39.99K, path review showed "marked lymphocytosis consists of small to intermediate-sized lymphocytes" considerations for chronic lymphocytic leukemia, small cell lymphoma, less likely acute lymphoid leukemia with small cell morphology.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is adequately/well distended with anechoic contents. The wall is smooth and regular. No abnormalities are noted with the trigone or proximal urethra, and there is no evidence of sediment, cystoliths, polyps or a mass.

Kidneys

The **left** kidney measures 3.87 cm (3.80-4.40 cm). The capsule is smooth. The cortex is mildly hyperechoic, i.e., it is isoechoic to the spleen. Its overall architecture, including the definition of the cortico-medullary junction, is preserved. There are no signs of nephroliths or pyelectasia. The surrounding mesentery is not hyperechoic.

The **right** kidney measures 4.09 cm (3.80-4.40 cm). The capsule is smooth. The cortex is mildly hyperechoic, i.e., it is isoechoic to the liver. Its overall architecture, including the definition of the cortico-medullary junction, is preserved. Mineralizations of the pelvis are present, without evidence of nephroliths or pyelectasia. The surrounding mesentery is not hyperechoic.

Aortic bifurcation/trifurcation

No abnormalities observed.

Adrenal Glands

The **left** adrenal gland measures 0.43 cm. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

The **right** adrenal gland is not visualized.

Spleen

The spleen is within normal limits in size 8.6 mm (normal = 10 mm) and echogenicity and the capsule is smooth. A subtle, but diffuse, miliary echotexture is suspected. However, this may be due to the



PATIENT	sensitivity and settings of the ultrasound machine. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified. The surrounding mesentery is hyperechoic.
Alex Daniel	
SPECIES	Liver
Feline	Very mild hepatomegaly is suspected. The liver's borders are smooth and sharp. It is homogeneous. It appears diffusely hypoechoic, when evaluated on its own, however, it is isoechoic to the spleen, therefore, its overall echogenicity is increased. Focal lesions are not observed and no abnormalities are observed with the hepatic vessels.
BREED	
Domestic Shorthair	The gallbladder (GB) wall varies between the normal reference range to very mildly thickened at 1.3 mm and is hyperechoic, particularly along the cystic and common bile ducts. A trivial amount of echogenic material is present within the GB. The cystic and common bile ducts are not dilated or tortuous, i.e. there are no signs of an obstruction.
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AGE	Gastrointestinal
9 years	The gastric wall is within normal limits in thickness and the wall layers are well defined. No obvious abnormalities are observed with its peristalsis.
WEIGHT	Jejunum: Mild fogging of the mucosa is present. Some of the loops of jejunum are thicker than normal; up to 0.27 cm. Certain segments show a mildly prominent submucosa. Abnormally dilated loops of bowel are not observed. The mesentery surrounding the small intestines is hyperechoic. A complete evaluation of the ileo-cecal-colic junction is not possible due to the gas in the surrounding gastrointestinal tract, however, no abnormalities are observed with the ileo-cecal portion.
8 lbs	
INTERPRETED BY	The transverse colon is filled with gas.
Lisa Carioto, DVM, DVSc, Diplomate ACVIM	The colonic wall is not thickened and mural detail is considered normal.
IMAGING PERFORMED BY	Pancreas
Dr. Myers	No abnormalities are observed with the architecture, contours, echogenicity or echotexture of the pancreas. There is no evidence of hyperechogenicity of the surrounding mesentery, i.e., signs of active pancreatitis are not present.
HOSPITAL NAME	Other
Hershire AH	Lymph nodes
REFERRING VET	A splenic lymph node is enlarged measuring 0.65 cm in diameter x 1.08 cm in length. It has smooth borders and is mildly hypoechoic. The surrounding mesentery is moderately hyperechoic.
Dr. Myers	
INVOICE	Abdominal effusion is not visualized.
31074	Mesentery
DATE	The mesentery surrounding the GI tract, spleen and liver is diffusely hyperechoic, which is suggestive of inflammation.
6/8/22	



PATIENT	ULTRASONOGRAPHIC FINDINGS
Alex Daniel	<ul style="list-style-type: none"> • Spleen: The subtle, but diffuse, miliary echotexture may be due to <i>extramedullary hematopoiesis, reactive hyperplasia, and mild splenitis</i>. However a “sensitive” ultrasound machine can “pick up” details that may not normally be seen and overinterpretation may occur. If the miliary echotexture is more apparent than usual, other differential diagnoses may include early infiltrative disease, such as <i>lymphoma</i>. In conclusion, the interpretation of the spleen should take into account the experience with one’s machine; <i>a FNA of the spleen is warranted if there is any doubt that Alex’s spleen is “more mottled” compared to other “normal spleens”</i>. • Liver: Hepatic lipidosis, cholestasis, and cholangitis/cholangiohepatitis are possible causes of abnormalities noted. However, lymphoma cannot be excluded. • Gallbladder: Cholecystitis is suspected; a suppurative component may also be present. • Lymph node: A single splenic lymph node is mildly enlarged and hypoechoic. Reactive hyperplasia is suspected, however, early infiltration with neoplastic cells cannot be excluded. • Mesentery: The mesentery surrounding the GI tract, spleen and liver is diffusely hyperechoic, which is suggestive of <i>inflammation</i>. • Gastrointestinal tract: although overt abnormalities are not observed, other than mild fogging and a prominent submucosa, diffuse inflammation is suspected, for example, underlying inflammatory bowel disease. Although there are no signs of neoplasia, and it is considered less likely based on sonographic signs, biopsies would be required to exclude lymphoma with certainty. • Kidneys: Very subtle age-related changes are observed.
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The following are suggested/recommended

Fine needle aspirates of the liver, and possibly the spleen (see note above) are suggested to exclude infiltration of these organs. The lymph node may not be easily accessible depending on the window.

Referral to a board certified oncologist is recommended to discuss the different treatment protocols available.

Empirical therapy may also be considered if aggressive chemotherapy protocols are not pursued.

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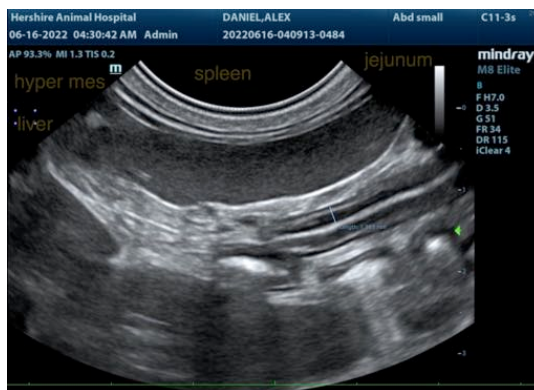
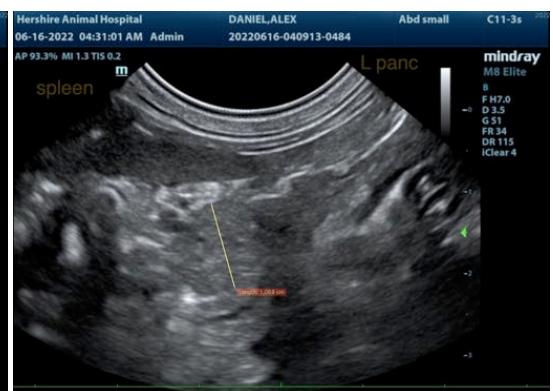
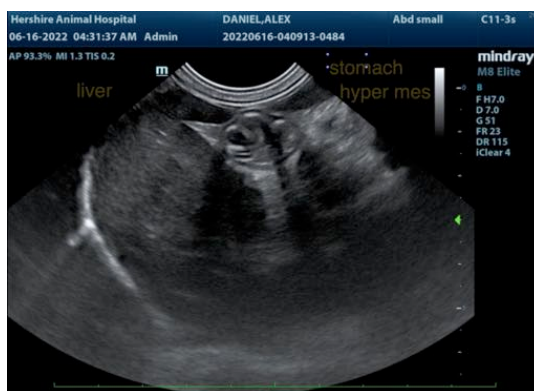
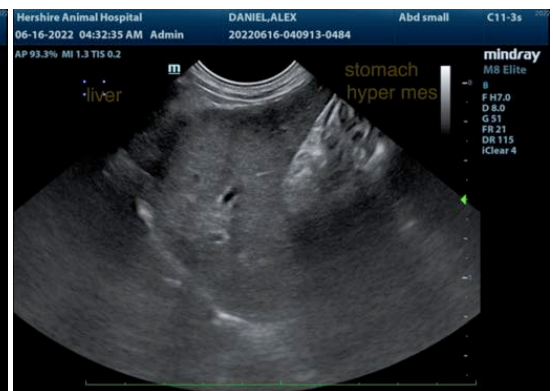
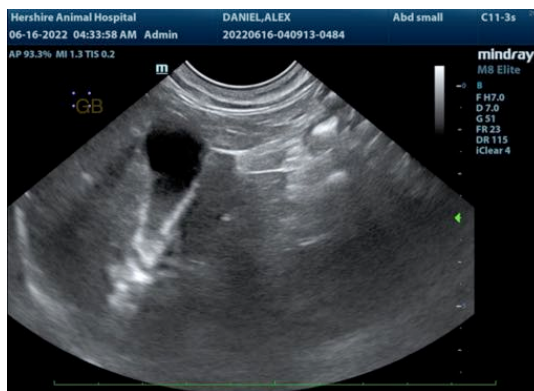
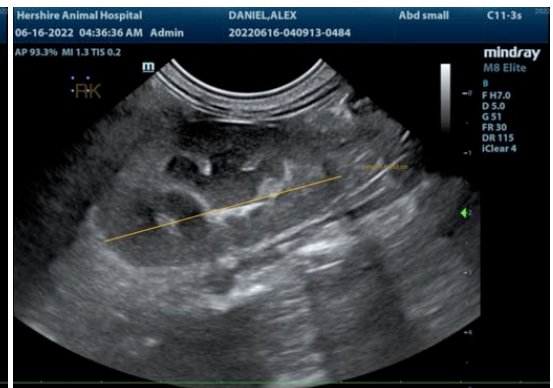
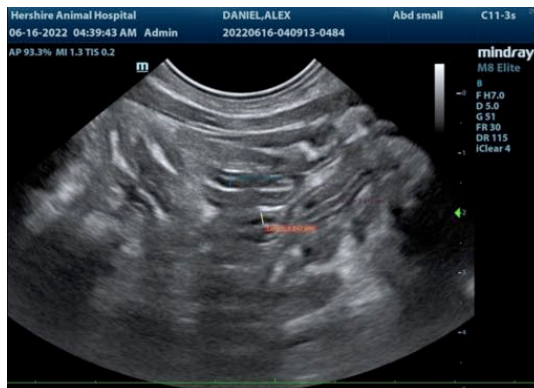
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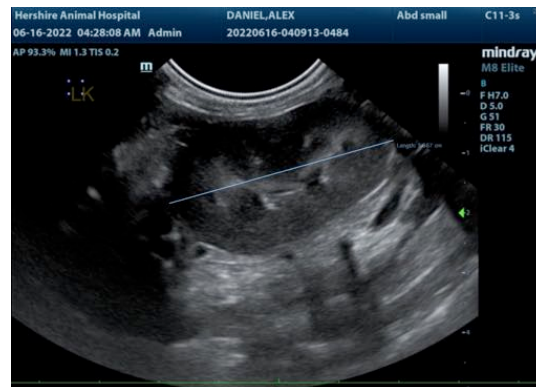
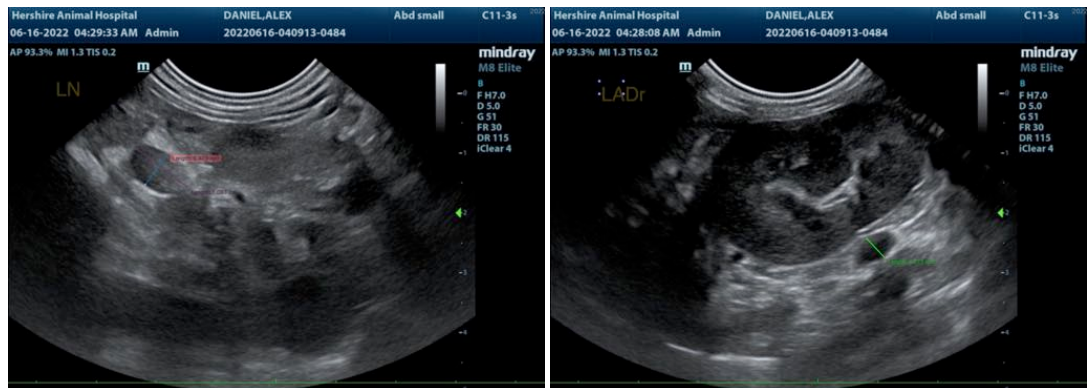
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

Lisa.Carioto@sonopath.com