



PATIENT

Mia Patten

SPECIES

Canine

BREED

Terrier X

SEX

Spayed Female

AGE

14 Years

WEIGHT

6.6

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

IMAGING PERFORMED BY

Dr. Lucas Budden

HOSPITAL NAME

Frontier Vet Hospital

REFERRING VET

Dr. Lucas Budden

INVOICE

46880

DATE

4/23/23

PRESENTING CLINICAL SIGNS

Clinical signs: Liver nodules found on brief ultrasound exam on 3/15/23 History: Seen at ER 3/15/23 for coughing and pacing. AFAST showed possible liver nodules, hepatomegaly. Mia has elevated liver values historically, but also on Phenobarbital. Chest rads done at ER showed cardiomegaly, tracheal narrowing. P also had facial pruritus. TVE treated with Dex SP injection, Clavamox, Apoquel, Prednisone. P rechecked at FVH 4/2, recheck liver values ALP(380)-319 at ER, ALT(150) 242 at ER. Coughing resolved and less itchy. Ultrasound to assess liver further. Current medications: Phenobarbital Gabapentin for ultrasound

Abnormal PE/Chem/CBC/UA Results: Physical exam: Cataracts OU, severe dental tartar/gingivitis, BCS 7/9, enlarged abdomen, grade 4/6 left systolic murmur, mild crackles in lung fields bilaterally, lost 0.5# since 4/2/23 Lab work: 4/4/23 cbc/chem/ua CBC: wnl Chem: elev TP(7.5), ALP(380) 219 at ER 3/15/23 ALT(150) 242 at ER

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

The area of the aortic trifurcation was free of pathology.

Normal size and margination was present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and moderate loss of corticomedullary symmetry and definition expected for the age of the patient. Mild areas of lateral diverticuli mineral. Mild pyelectasia noted in the left kidney. The left kidney measured 3.2 cm. The right kidney measured 3.0 cm.

Adrenal Glands

The bilateral adrenal glands were normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. No adrenal neoplastic criteria. The left adrenal gland measured 0.49 cm at the cranial pole and 0.56 cm at the caudal pole. The right adrenal gland measured 0.45 cm at the cranial pole and 0.49 cm at the caudal pole.

Spleen

The spleen was overall normal in size. Lateral and medial capsule asymmetry noted. Generalized non-homogeneous to mildly heterogeneous parenchyma. A solitary, mildly expansive heterogeneous to mild cystic appearing splenic nodule noted measuring 1.4 cm in diameter.

Liver

The liver was enlarged with areas of capsular asymmetry. Significant non-homogeneous to mixed echogenic hepatic parenchyma noted with variably echogenic intraparenchymal nodules. Example of nodule measured 1.7 cm diameter. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. Moderate, variably hyperechoic yet non-shadowing gallbladder debris noted. The gallbladder debris was non-organized. No evidence of peripheral gallbladder inflammation. The cystic and common bile ducts were normal.



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Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction or foreign material.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material.

Normal visible colon wall layers were present with apparent formed feces in lumen.

Pancreas

Variably prominent heterogeneous pancreas noted with minor capsule asymmetry. Possible focal pancreatic cyst in the area of the pancreas base.

Free Abdomen

Intermittent minor benign/reactive incidental mesenteric lymph nodes. No evidence of peritoneal effusion or omental masses.

ULTRASONOGRAPHIC FINDINGS

- Heterogeneous/nodular, irregular hepatomegaly – non-specific, chronic vacuolar hepatopathy, nodular hyperplasia, chronic inflammatory disease, hematopoiesis, fibrosis, infiltrative neoplasia, or other hepatopathy. Some degree of hepatic enzyme induction owing to Phenobarbital and corticosteroids also possible.
- Moderate gallbladder debris – not consistent with mucocele criteria. Possible very early to immature mucocele.
- Heterogeneous focally nodular spleen – hyperplasia, hematopoiesis, splenitis, small hematoma, emerging neoplasia (less likely) possible.
- Moderate chronic renal changes with mild medullary mineral and mild left kidney pyelectasia.
- Mildly prominent, heterogeneous, possibly focally cystic pancreas.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Assuming normal clotting status, screening hepatic FNA cytology warranted for further clarification. Sonographic monitoring of the spleen for evidence of progressive parenchymal or nodular changes would be reasonable. Hepatosupportive medications including Denamarin and Ursodiol may prove beneficial. GI panel to include PLI, TLI, cobalamin and folate to assess for occult pancreatic or intestinal disease as a contributing factor to the mild weight loss may be considered.



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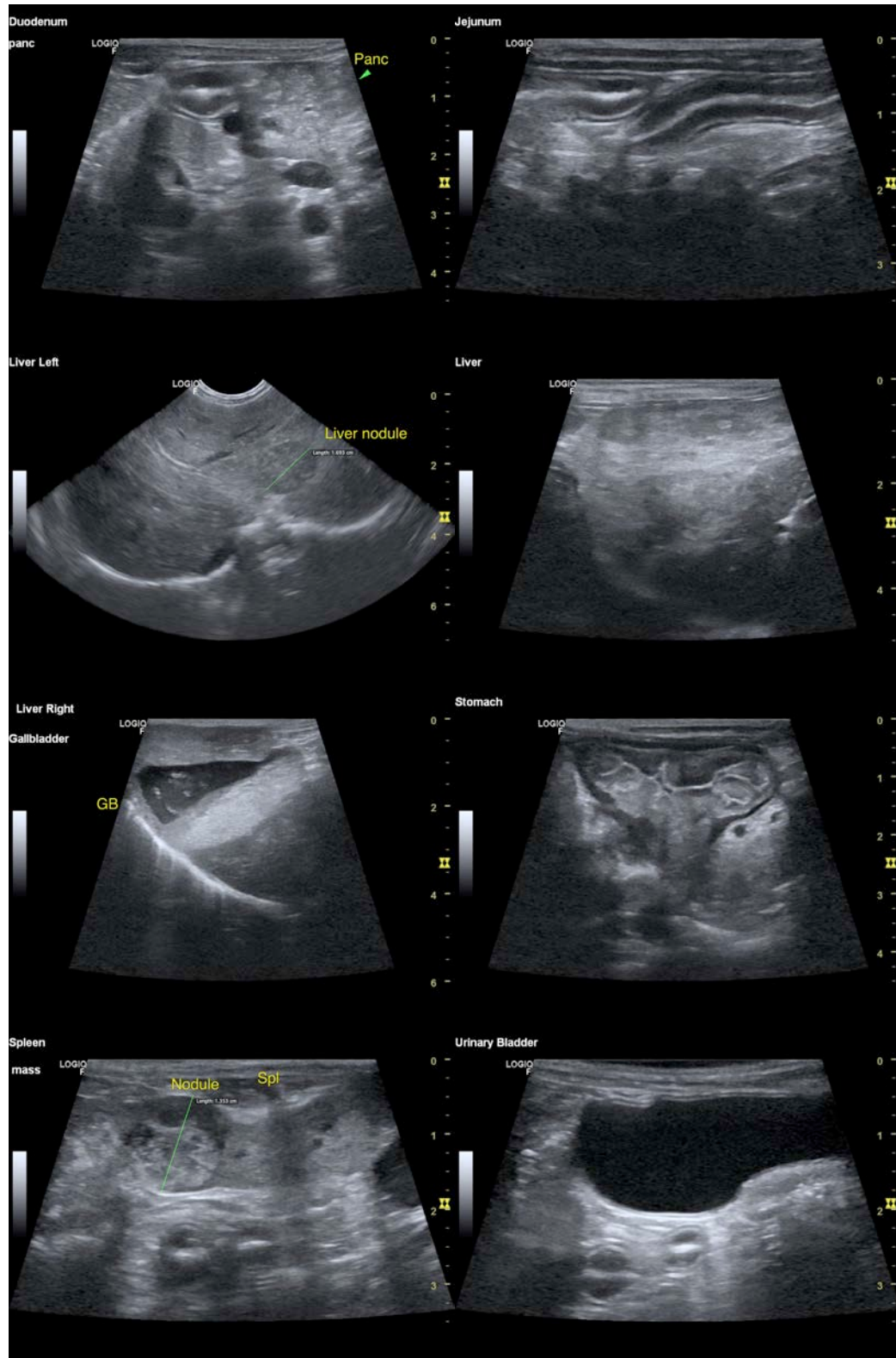
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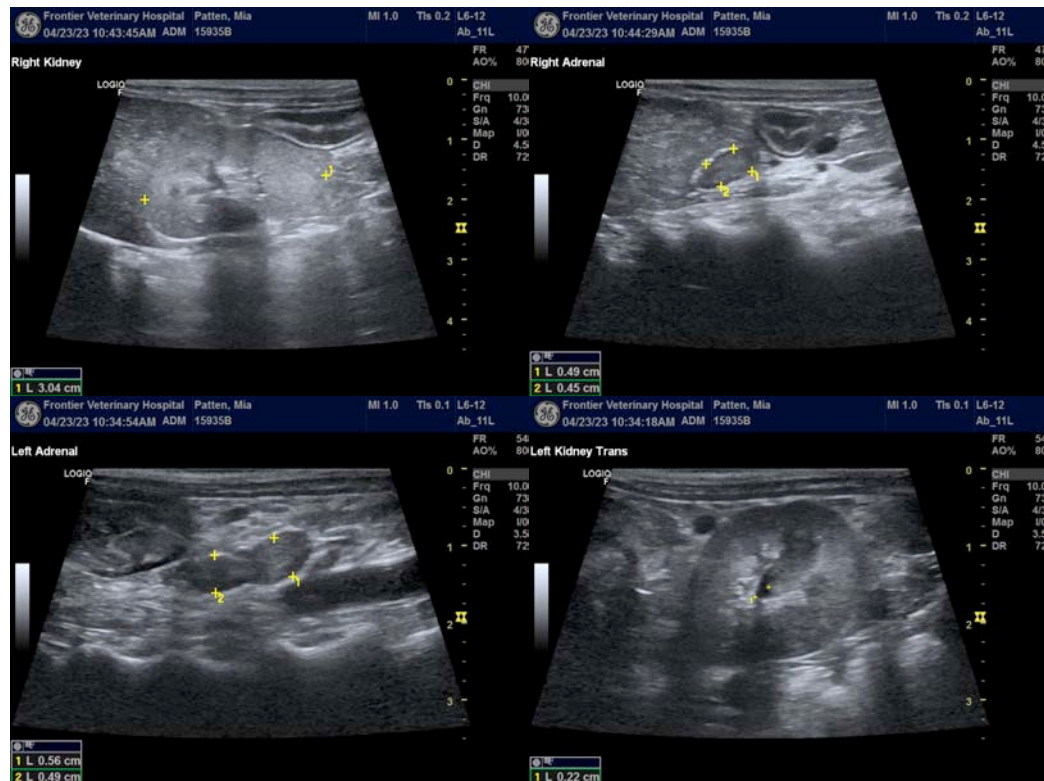
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

info@SonoPath.com