

**DATE PRESENTING CLINICAL SIGNS**

3/16/23 History of Hyperthyroidism. Has been controlled for at least a month. Seen last week for poor appetite. No vomiting, but very picky with food. BW sent out shows the thyroid still controlled but marked elevation in liver values.

**PATIENT**

Lucy Deck Current Medications: Methimazole transdermal 2.5mg/dose - 1 dose on either ear BID, started 1/16/23  
Lab Results: AST 551 (10-100), ALT 1264 (10-100), ALP 550 (6-102), T4 2.8 (0.8-4.0) - normal  
Date of Previous IntraPet Ultrasound: No previous.

**SPECIES**

Feline

Sedation: Not required to complete full diagnostic ultrasound.  
Stat Report: Not requested.  
Imaging Performed By: Rachel Brillhart, RDMS.

**BREED**

DSH

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****Urinary System**

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

**SEX**

Spayed Female

**AGE**

5/29/14

The right kidney is normal in size (3.89 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

**WEIGHT**

12.02 Pounds

The left kidney is normal in size (3.81 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

**INTERPRETED BY**Beth Johnson, DVM  
DACVIM**Adrenal Glands**

The right adrenal gland is normal in size (0.49 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**HOSPITAL NAME**

Healing Paws VWC

The left adrenal gland is normal in size (0.54 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**Spleen**

Spleen is subjectively large in size (1.0 cm in diameter) with normal smooth margins. Parenchyma is normal in echogenicity with a coarse/heterogenous echotexture. No focal nodules or masses are observed. Splenic vasculature appears normal.

**REFERRING VET**

Dr. Preston

**Liver**

Liver is subjectively enlarged (swollen contour) without disruption of architecture. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen and falciform fat. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

**INVOICE**

46000

Gallbladder is moderately distended with anechoic bile as well as very mild suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

### ***Gastrointestinal***

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestine demonstrates areas of thick muscularis layer relative to mucosa (disruption of the normal 1:3 muscularis:mucosa ratio). This finding is most present at the level of the ileum. Small intestinal submucosa is slightly irregular, thick and hyperechoic, without evident loss of layering appreciated. Lumen is empty with no evidence of obstruction or foreign material.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas. The cecum is prominent in this patient, measuring approximately 1.0 cm in diameter, with a mildly thick, hypoechoic wall measuring 0.20 cm thick.

### ***Pancreas***

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

### ***Free Abdomen***

There is no evidence of free peritoneal effusion noted in these images.

The mesenteric lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

## **ULTRASONOGRAPHIC FINDINGS**

- **Hyperechoic hepatomegaly** – This appearance is most consistent with benign hepatic lipidosis. Infiltrative disease such as amyloidosis or round cell neoplasia, such as mast cell tumor or less likely, lymphoma, is also possible.
- **Coarse splenomegaly** – can be associated with congestion caused by sedation (if sedated) but can also be associated with diffuse infiltrative disease. Both benign conditions such as extramedullary hematopoiesis, lymphoid hyperplasia, amyloidosis (leave amyloidosis out if canine) as well as infiltrative neoplastic diseases such as round cell neoplasia should be considered.
- **Inflammatory bowel disease (IBD) pattern with a prominent cecum** – Thick muscularis has been reported with infiltrative bowel disease including both benign inflammatory disease as well as infiltrative neoplasia such as lymphoma. No aggressive lymphadenopathy, loss of layering, etc. is noted to make lymphoma more probable, but lymphoma cannot be definitively ruled out without tissue sampling. The prominent cecum could represent the same infiltrative inflammatory, parasitic, or even infiltrative neoplastic process versus other.
- **Reactive mesenteric lymph nodes** – infiltrative neoplastic disease cannot be ruled out but is considered less likely.

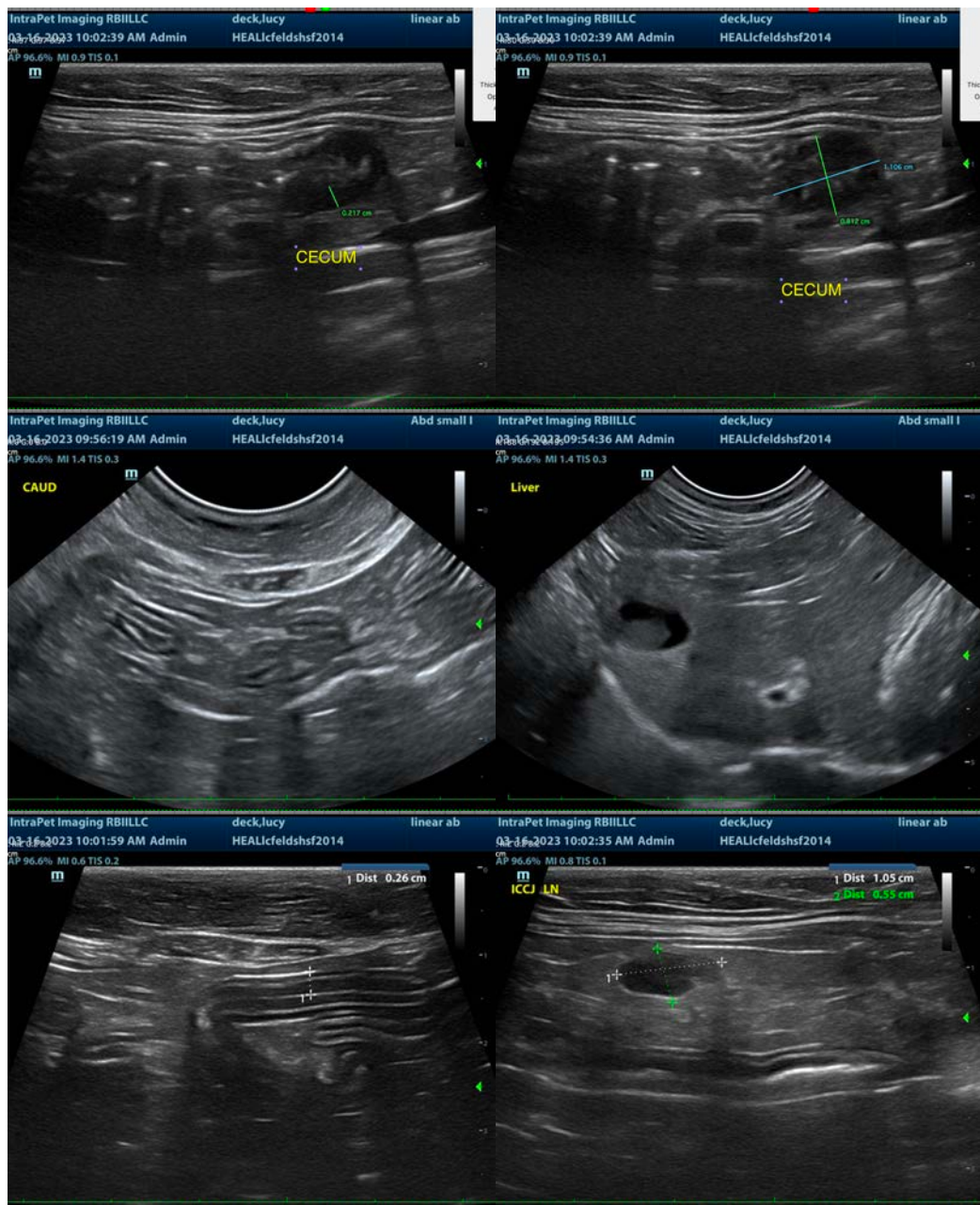
## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

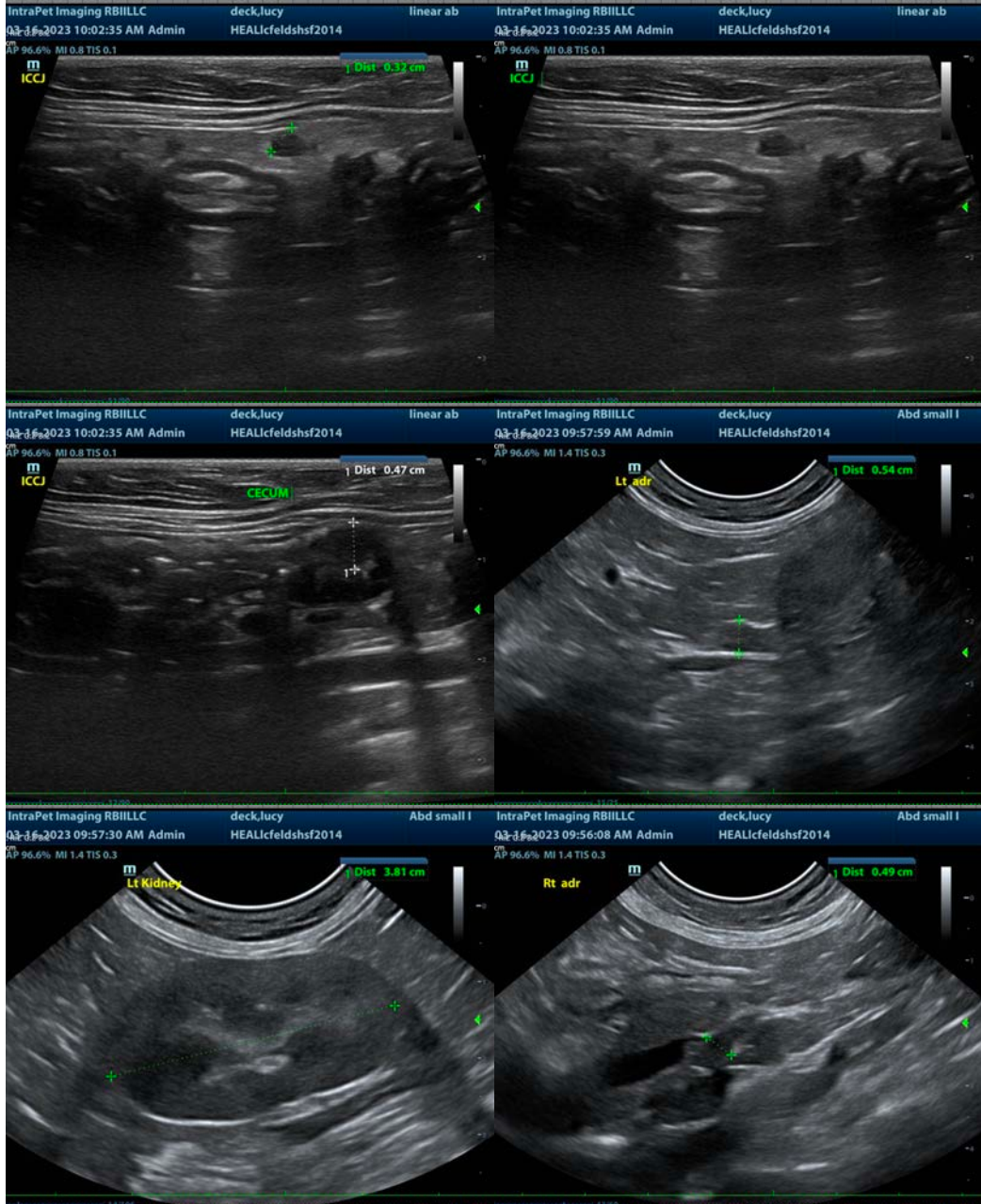
If this patient had normal lab work prior to starting Methimazole, the timing is concerning for hepatotoxicity secondary to Methimazole, in which case Methimazole should be discontinued while providing supportive/symptomatic care, hepatic nutraceuticals, etc., and monitoring liver enzymes for improvement.

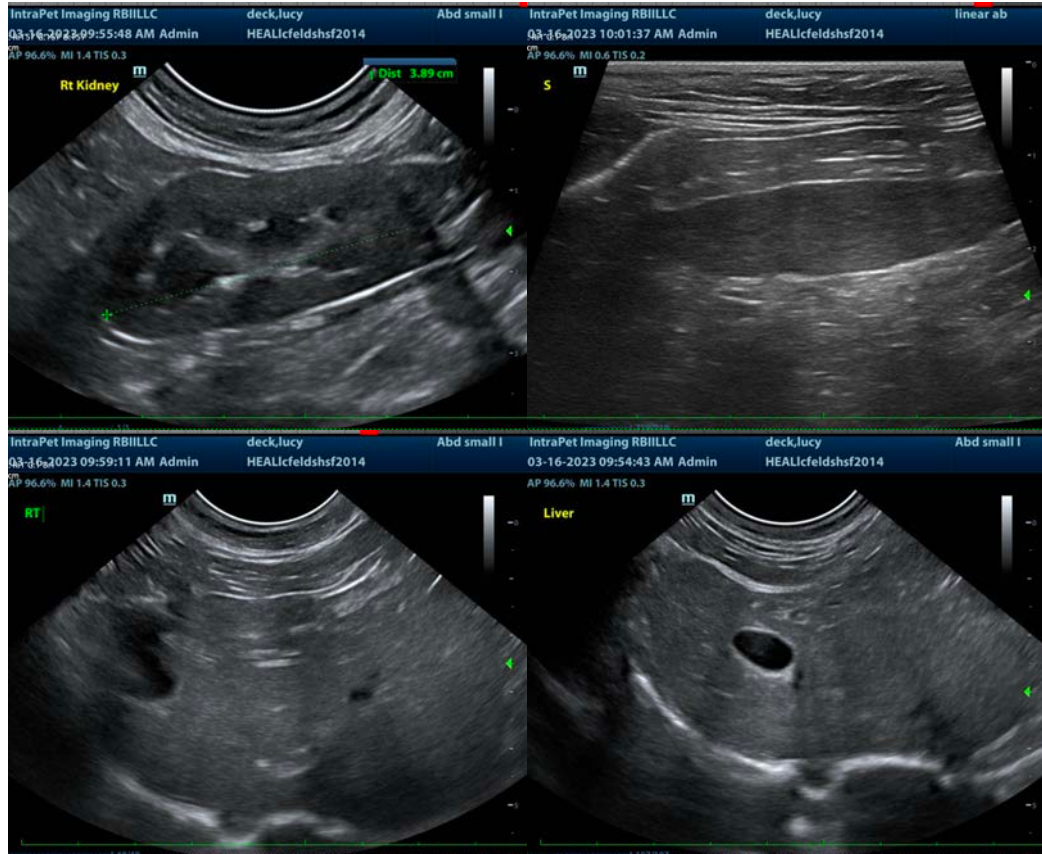
If a diagnostically more aggressive approach is elected, however, given the concurrent pathology noted, next steps could include fine needle aspirates of the liver and spleen if patient's coagulation status is appropriate, as well as a gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory.

Ultimately, pending results and patient's status, etc., biopsies of the GI tract, being sure to include ileum and cecum, if possible, could be considered.

In the meantime, regardless of approach, empirical deworming with a 5-day course of Panacur is recommended.







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.

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