



## PATIENT

Arthur Paws and Tails  
Rescue

## SPECIES

Feline

## BREED

Domestic Shorthair

## SEX

Neutered male

## AGE

11 years

## WEIGHT

8.1 lbs

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Kelly Reshny, RVT

## HOSPITAL NAME

Beech Mobile

## REFERRING VET

Dr. Beech

## INVOICE

96113

## DATE

2/15/22

## PRESENTING CLINICAL SIGNS

Decreased appetite, lethargic, suspect needs dental cleaning. Needs to get started on Methimazole. Currently in rescue.  
ALT increased 544, AST increased 142, CK increased 410, Amylase increased 918, T4 increased 99.4.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### Urinary System

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.

The left kidney has a normal shape and size (3.74 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (3.88 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

### Adrenal Glands

The left adrenal gland is normal in size measuring 0.33 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.34 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.

### Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and 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.

### Liver

The liver is subjectively large in size, and echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed. The gallbladder lumen is moderately distended. The wall of the gallbladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The bile duct is visualized as mildly dilated and tortuous measuring 0.34 cm. No obstruction is visualized.



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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.

**SPECIES**

Feline

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 and the jejunum measured as normal (0.22 cm). Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

**BREED**

Domestic Shorthair

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.

**SEX**

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**Pancreas**

**AGE**

11 years

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.

**WEIGHT**

8.1 lbs

**Free Abdomen**

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

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**ULTRASONOGRAPHIC FINDINGS**

**IMAGING PERFORMED BY**

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**PRIMARY FINDINGS:**

- Prominent hypoechoic pancreas. The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- Large heterogenous liver. Hepatic changes are non-specific and could be consistent with inflammation/infection (cholangiohepatitis), infiltrative neoplasia, lipidosis or other hepatopathy.
- Mildly dilated tortuous bile duct. Dilation of the common bile duct could be consistent with a functional obstruction (i.e. primary hepatic disease resulting in hepatocellular swelling) or with an extrahepatic bile duct obstruction (ie. choledocholith, bile duct tumor, pancreatic disease, other).

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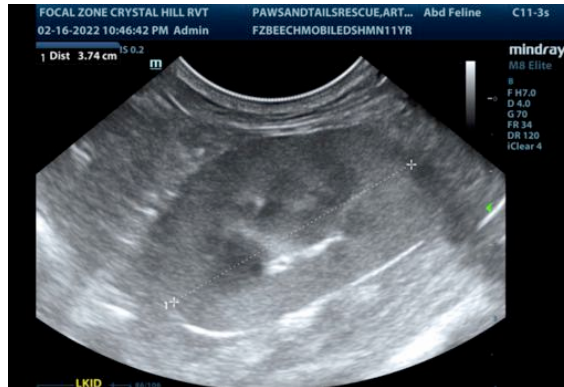
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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The changes observed with the liver, pancreas and bile duct are relatively non-specific. The pancreatic changes are very mild. You can consider a quantitative PLI, TLI, cobalamin and folate (to Texas A&M) to further evaluate the pancreas and small intestine.

No focal lesions are observed in the liver. The bile duct is mildly dilated, but I suspect this is a somewhat incidental finding. Consider further evaluation of the elevated liver enzymes.

- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc..
- This patient is hyperthyroid and this could be a significant cause for the liver enzyme elevations reported.
- If not already done consider pre and post prandial bile acids to evaluate liver function
- Consider fine needle aspirate if round cell neoplasia is on your differential list (25 g needle, normal coags)
- If cytology is not helpful and there is no response to therapy, consider liver biopsy with samples obtained for histopathology and culture.
- If triaditis is suspected consider therapy for cholangiohepatitis (fluids, antibiotics, +/- Ursodiol, +/- steroids), testing for pancreatitis and evaluation for IBD (GI panel to Texas A&M GI lab)





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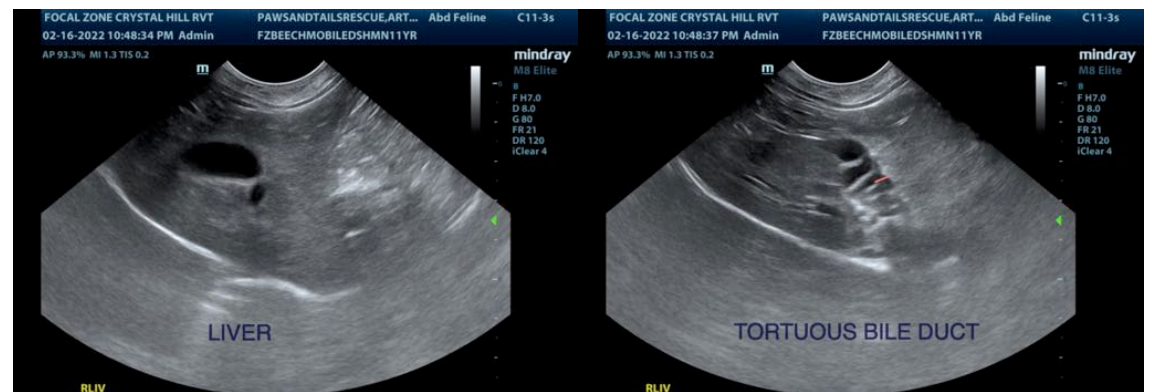
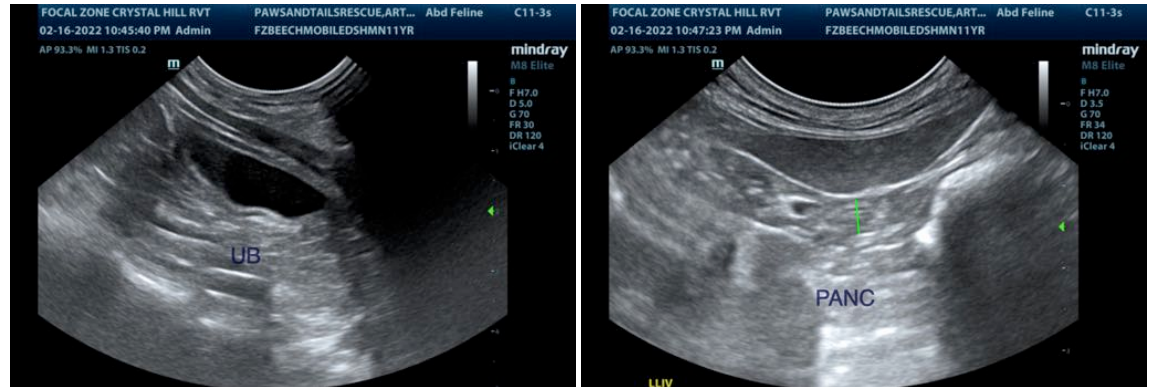
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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