



## PATIENT PRESENTING CLINICAL SIGNS

Jax Szwoyer History: chronic vomiting, hyporexia  
Abnormal PE/Chem/CBC/UA Results: GI barium study WNL, ALT 476

## SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### Canine *Urinary System*

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder is moderately distended. Luminal contents are anechoic. No cystic calculi are observed. The region of the trigone and visible portion of the proximal urethra are normal.

### BREED

Boston

The prostate is normal in size (1.00 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

### SEX

Neutered Male

The left kidney is normal in size (5.22 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

### AGE

3 years

The right kidney is normal in size (5.74 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

### *Adrenal Glands*

### WEIGHT

12.9 kg

The left adrenal gland is normal in size (0.51 cm at cranial pole) (0.59 cm at caudal pole) (2.29 cm in length) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

## INTERPRETED BY

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Diplomate ACVIM  
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The right adrenal gland is in normal size (0.80 cm at cranial pole) (0.53 cm at caudal pole) (2.11 cm in length) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

### *Spleen*

## IMAGING PERFORMED BY

Hayley Heindel, CVT

The spleen is normal in size (1.58 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

### *Liver*

## HOSPITAL NAME

Mason Dixon  
Animal EH

The liver is subjectively normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative, or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed.

## REFERRING VET

Dr. Hughes

The gall bladder is of normal contours and contains some dependent echogenic debris. The wall is normal in thickness. No choleliths are observed. The cystic and common bile ducts are normal/not seen.

### *Gastrointestinal*

## INVOICE

12547

The lumen is not distended. The gastric wall is normal in thickness with a normal layering pattern. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

## DATE

3.29.23

### **Pancreas**

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

### **Free Abdomen**

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

## **ULTRASONOGRAPHIC FINDINGS**

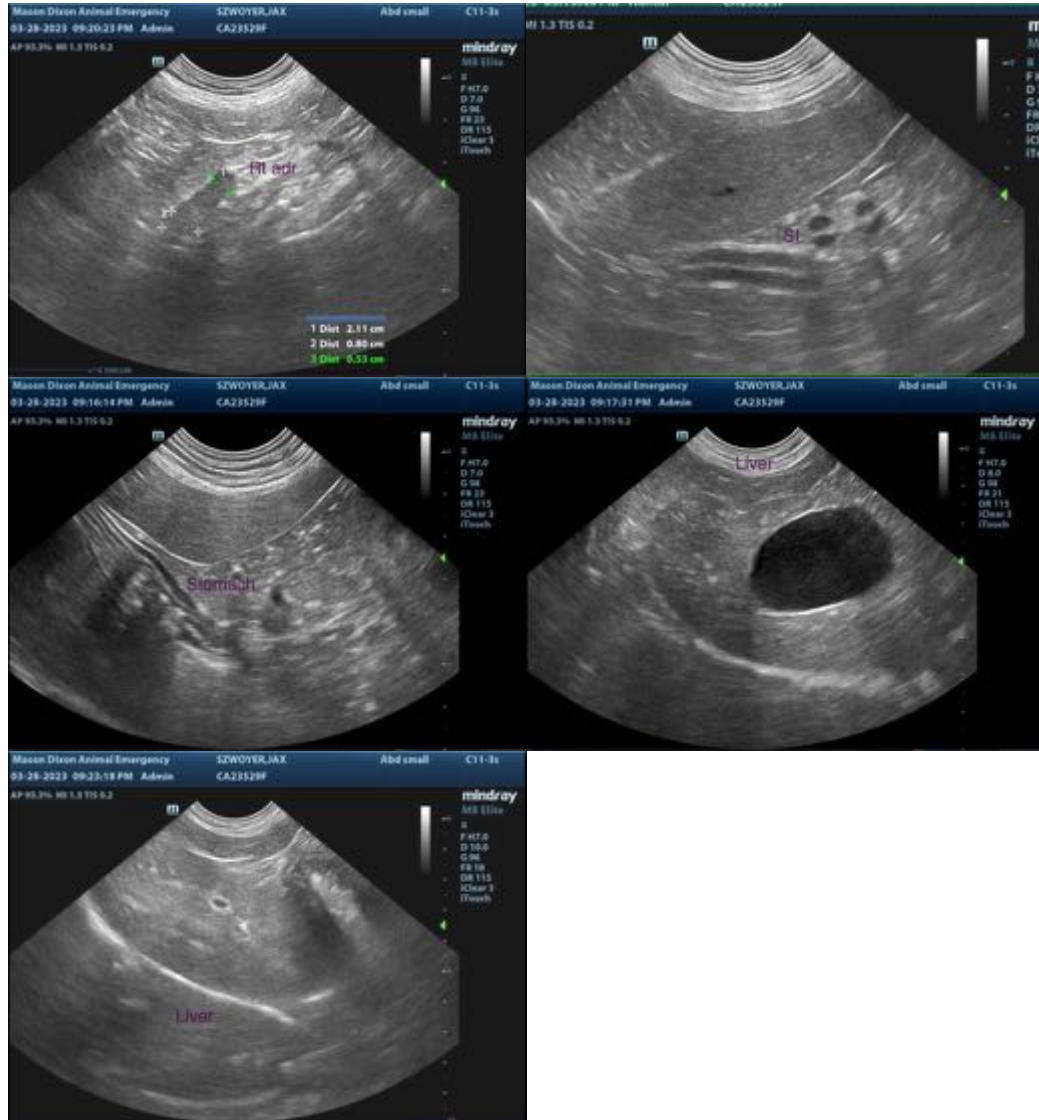
### **Findings**

Unremarkable abdomen. An obvious cause for the patient's elevated ALT and clinical signs is not definitively identified in this study. However, a microscopic hepatopathy (i.e., inflammatory disease (chronic hepatitis, bacterial cholangiohepatitis, hepatotoxicosis, Leptospirosis (less likely)), congenital malformation (i.e., portosystemic shunt), microvascular dysplasia, or other hepatopathy) should be considered.

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

- Pre-and postprandial serum bile acids.
- Leptospirosis testing (i.e., blood and urine PCR, serology), particularly if the clinical suspicion for disease is high.
- Ultimately, liver biopsies (i.e., laparoscopic, or surgical) may be necessary to get a definitive diagnosis. If biopsies are pursued, hepatic copper quantitation should be performed, and aerobic and anaerobic bile cultures obtained. A liver aspirate can be considered. However, cytologic evaluation of the liver is generally not useful in diagnosing chronic hepatitis and copper hepatotoxicosis.





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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