



## PATIENT PRESENTING CLINICAL SIGNS

- Noah Gonzalez
- Presented to evaluate elevated liver enzyme, anorexia, lethargy, showing signs of pain and episodes of vomiting.
- SPECIES**
- Started on January 28th and pt was then hospitalized.
  - Pt is currently on Cerenia, famotidine, lactulose
  - Suspect hepatic Tumor or other abnormalities
- Canine

**BREED** Abnormal PE/Chem/CBC/UA Results: PE: BCS 8/9 Abdominocentesis fluid collection: Collected fluid for cytology and/or culture. ALT 401. ALP did not read. BUN 5.

Chihuahua

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### SEX

#### Urinary System

Neutered Male The urinary bladder is moderately distended. The wall is normal in thickness with a smooth mucosal surface. Some mineralized sand is observed in the region of the cystourethral junction/proximal/prostatic urethra. The region of the trigone is otherwise unremarkable.

### AGE

8

The prostate is normal in size (0.96 cm in width) with a normal shape and smooth peripheral contours. The parenchyma is homogenous. Mineralized sand is observed within the prostatic urethral lumen. The lumen is not overtly dilated.

### WEIGHT

19.8 lbs

The left kidney is normal in size (5.18 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. Pinpoint hyperechoic foci are observed within the cortex. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

### INTERPRETED BY

Andrea Nicastro, DVM,  
Diplomate ACVIM  
(Small Animal Internal  
Medicine)

The right kidney is normal in size (5.41 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. Pinpoint hyperechoic foci are observed within the cortex. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

### IMAGING PERFORMED BY

Gabriel Ferrer DVM

#### Adrenal Glands

The left adrenal gland is mildly enlarged (0.64 cm at cranial pole) (0.58 cm at caudal pole) with a normal shape. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

### HOSPITAL NAME

Pulse Pet  
Ultrasound Services

The right adrenal gland is mildly enlarged (0.65 cm at cranial pole) (0.60 cm at caudal pole) 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.

### REFERRING VET

Noah

#### Spleen

The spleen is normal in size (1.67 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.

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#### Liver

The liver is prominent-in-size with smooth peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely homogeneous in appearance. No distinct focal lesions are observed. Vascular and biliary tracts are of normal volume with no evidence of congestion.

### DATE

2-2-26



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## BREED

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## SEX

Neutered Male

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The gallbladder is distended. The wall is mildly-thickened (up to 0.25 cm) and hyperechoic. A large amount of suspended sludge in a stellate pattern is observed within the lumen. The mesentery surrounding the gallbladder is hyperechoic. There is evidence of adjacent free fluid. The distal common bile duct is distended (up to 0.53 cm). Echogenic debris is observed w/ the distal common bile duct lumen. The duodenal papilla is normal-in-size (0.25 cm in width).

### **Gastrointestinal**

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

### **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.

### **Lymph Nodes**

The abdominal lymph nodes are normal/not visible.

### **Free Abdomen**

The mesentery in the cranial- to mid-abdomen is hyperechoic. A mild-to-moderate amount of echogenic free fluid is observed.

## ULTRASONOGRAPHIC FINDINGS

### Primary Findings

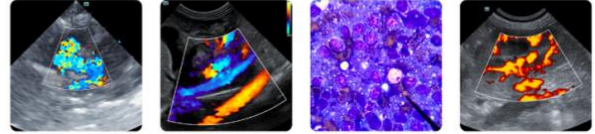
- The gallbladder changes are consistent with a fully-formed mucocele with suspected rupture (or impending rupture) and adjacent peritonitis. The gallbladder wall changes are consistent with cholecystitis.
- The hepatic changes are nonspecific and could be secondary to inflammatory disease (i.e., cholangiohepatitis, chronic hepatitis), Leptospirosis, hepatotoxicosis, infiltrative neoplasia (i.e., lymphoma), vacuolar hepatopathy, regenerative nodular hyperplasia, other hepatopathy, or some combination thereof.

### Secondary Findings

- Mild bilateral adrenomegaly
- Mild bilateral nonspecific age-related renal changes
- Proximal/prostatic urethral sand

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

An emergency cholecystectomy with submission of the gallbladder for histopathology, as well as aerobic and anaerobic bile cultures are recommended. Liver biopsies should be obtained at the time of surgery. Three-view thoracic radiographs and clotting times are also recommended prior to anesthesia. In the meantime, aggressive symptomatic care is recommended.



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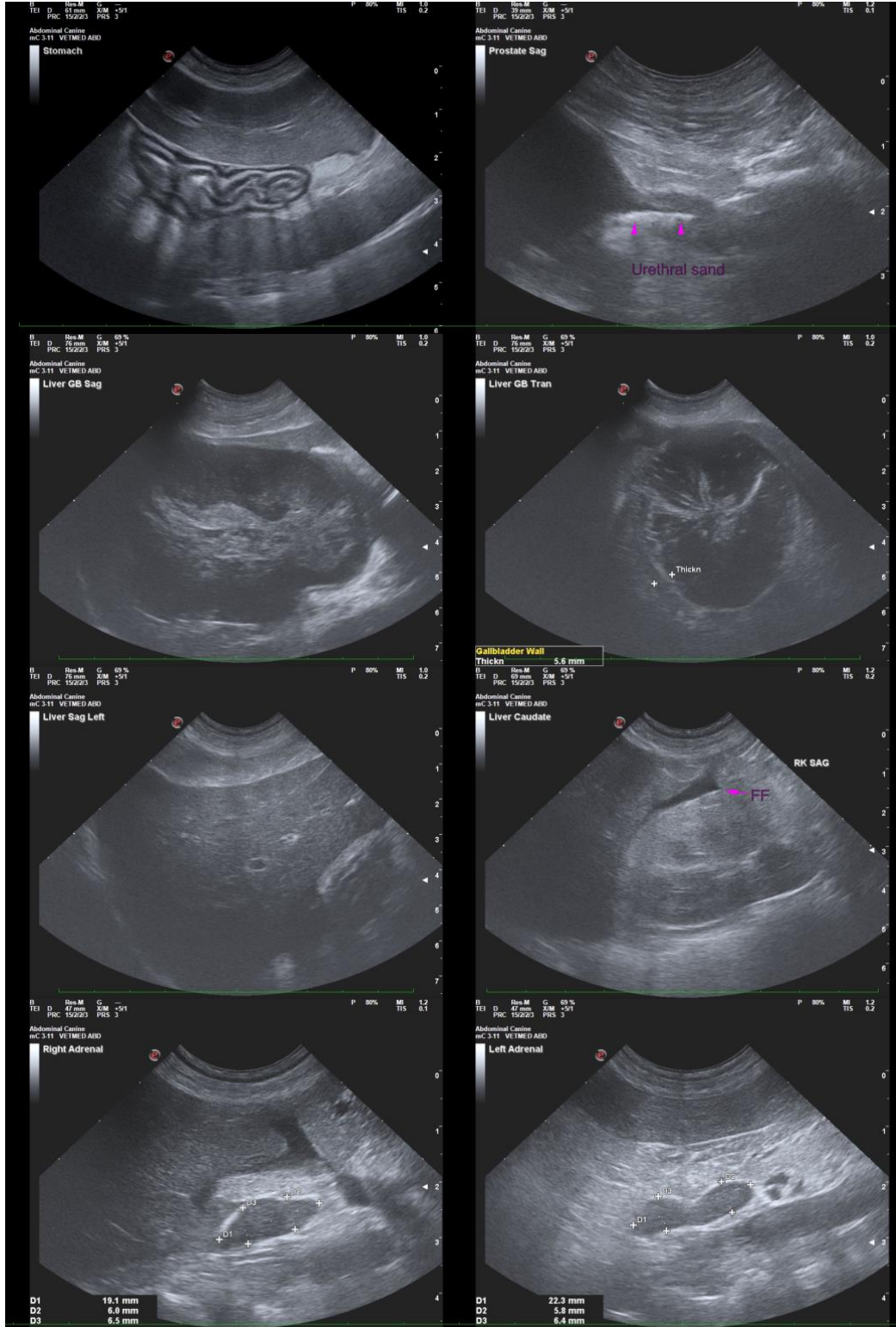
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Andrea Nicastro, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)**  
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