



## PATIENT PRESENTING CLINICAL SIGNS

**Bugs Hicks** History: P presents for work up of an acute increase in ALT/ALKP. Doing well clinically at home. Historic isosthenuria, recent increased BUN, normal SDMA, high/normal creatinine.

**SPECIES** Abnormal PE/Chem/CBC/UA Results: ALT: 243 U/L ALKP: 199 U/L BUN: 40 mg/dL USG: 1.018

## Canine ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### BREED *Urinary System*

**Boston Terrier Mix** The urinary bladder wall is normal in thickness. 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.

### SEX

**Female Spayed** The left kidney is normal to borderline small in size (3.95 cm in length) with a slightly irregular shape. The cortex is variably thickened, with mild-to-moderate loss of corticomedullary distinction. Hyperechoic shadowing diverticular foci are visualized. There is no evidence of pyelectasia or hydroureter.

### AGE

**15** The right kidney is normal to borderline small in size (3.56 cm in length) with a slightly irregular shape. The cortex is variably thickened, with mild-to-moderate loss of corticomedullary distinction. Hyperechoic shadowing diverticular foci are visualized. Trace pyelectasia is present. There is no evidence of hydroureter.

### WEIGHT

### 32 lbs *Adrenal Glands*

The left adrenal gland is normal in size (0.47 cm at cranial pole) (0.58 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.

## INTERPRETED BY

Andrea Nicastro DVM  
Diplomate ACVIM  
(Sm Animal Internal Med)

The right adrenal gland is normal in size (0.67 cm at cranial pole) (0.36 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.

## IMAGING PERFORMED BY

Saum Hadi

### *Spleen*

The spleen is normal in size (1.61 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. A few, irregular, hyperechoic nodules are observed throughout the organ. Splenic vasculature is normal.

## HOSPITAL NAME

Nimbus Pet Hospital

### *Liver*

The liver is prominent-in-size, with smooth peripheral contours. The parenchyma is hypoechoic relative to the spleen. A 2.3 x 2.2 cm hyperechoic macronodule/mass is observed on the right side. The remaining parenchyma is relatively homogenous. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

## REFERRING VET

Saum Hadi

The gallbladder lumen is moderately distended. The wall is thin and smooth. A small amount of mostly gravity-dependent, echogenic debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.

## INVOICE

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### *Gastrointestinal*

## DATE

12-13-25

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 colonic wall is normal. There is no evidence of an obstructive pattern.



**PATIENT**

Bugs Hicks

**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.

**SPECIES**

Canine

**Lymph Nodes**

The abdominal lymph nodes are normal/not visible.

**BREED**

Boston Terrier Mix

**Free Abdomen**

The peritoneal cavity is normal. There is no evidence of inflammation or effusion.

**ULTRASONOGRAPHIC FINDINGS**

**SEX**

Female Spayed

**Primary Findings**

- Bilateral nonspecific age-related renal changes with dystrophic mineralization and trace right pyelectasia
- The right hepatic macronodule/mass trends toward the benign (i.e., myelolipoma, regenerative nodule) with a lower possibility of emerging neoplasia or other pathology.

**AGE**

15

**WEIGHT**

32 lbs

\*An obvious cause for the patient's mildly elevated liver values is not definitively identified in this study. The hyperechoic hepatic macronodule is unlikely to be responsible for these elevations. Considerations for the elevated ALP and ALT include an inflammatory process (i.e., cholangiohepatitis, chronic hepatitis), hepatotoxicosis (i.e., copper), emerging neoplasia (less likely), and/or other hepatopathy.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Consider pre- and postprandial serum bile acids and Leptospirosis testing (i.e., blood and urine PCR, serology). Ultimately, hepatic tissue sampling (i.e., aspirates or biopsies may be necessary to get a definitive diagnosis). If biopsies are pursued, aerobic and anaerobic bile cultures and hepatic copper quantitation should also be performed.
- If a conservative approach is desired, consider empirical treatment for bacterial cholangiohepatitis/ Leptospirosis (amoxicillin-clavulanic acid, Denamarin). If no improvement in the liver values is seen within 7-10 days of initiating therapy, antibiotics should be discontinued, and hepatic tissue sampling reconsidered. If liver values improve, continue therapy for at least 4-6 weeks and 1 week beyond normalization of the liver values.

**IMAGING PERFORMED BY**

Saum Hadi

**HOSPITAL NAME**

Nimbus Pet Hospital

**REFERRING VET**

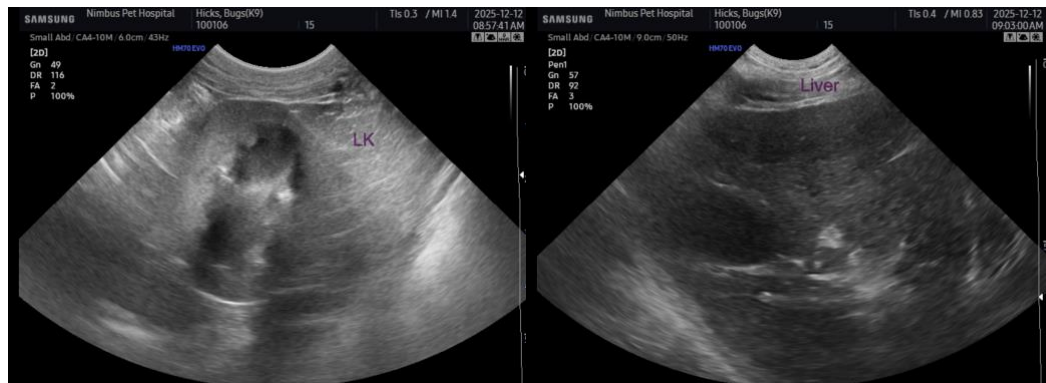
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**PATIENT**

Bugs Hicks

**SPECIES**

Canine

**BREED**

Boston Terrier Mix

**SEX**

Female Spayed

**AGE**

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**WEIGHT**

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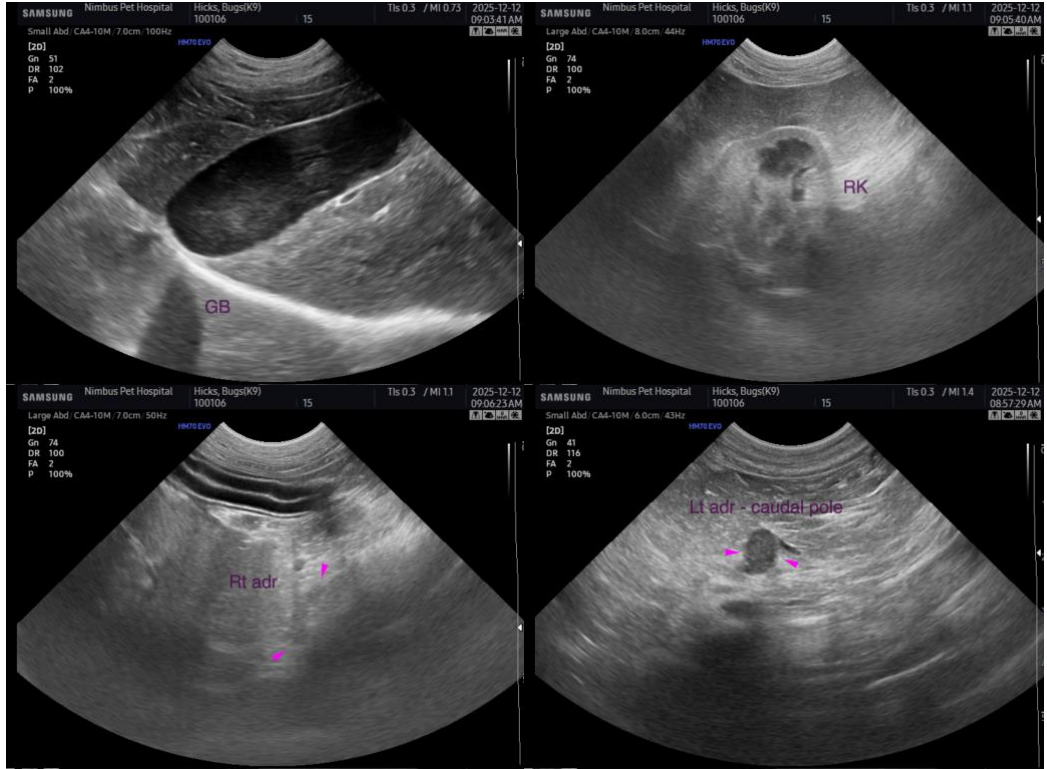
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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