



**PATIENT**

Chuck Baker

**SPECIES**

Canine

**BREED**

Dachshund

**SEX**

Male, neutered

**AGE**

14 Yrs.

**WEIGHT**

16 lbs.

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Dr. Hadi

**HOSPITAL NAME**

Nimbus PH

**REFERRING VET**

Dr. Hadi

**INVOICE**

15067

**DATE**

6/20/23

**PRESENTING CLINICAL SIGNS**

History: P presented for annual lab work. Doing good at home. Previous mild hepatopathy has been managed with Denamarin advanced with no further work up. Lab work revealed a mild to moderate increase in hepatic values (ALKP/GGT moderate, ALT/AST mild). Mild hyperkalemia, low na/k ratio, mild to moderate increase in BUN. AUS for further evaluation. ALP 1240, ALT 302, GGT 51, USG 1.024, 3+ proteinuria, numerous RBC (sample obtained via cystocentesis).

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

*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 the visible portion of the proximal urethra are normal.

The prostate is not definitively visualized due to its pelvic location.

The left kidney is normal in size (4.71 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. The cortex is isoechoic relative to the spleen with several cortical cysts visualized. There is mild to moderate loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

The right kidney is normal size (5.17 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. The cortex is isoechoic relative to the spleen with several cortical cysts visualized. There is mild to moderate loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

*Adrenal Glands*

The left adrenal gland is mildly enlarged (0.70 cm at cranial pole) (0.73 cm at caudal pole); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is enlarged (0.72 cm at cranial pole) (0.92 cm at caudal pole) with a slightly irregular shape. The parenchyma is subtly heterogeneous with some loss of glandular detail. No distinct focal lesions are observed. Surrounding vasculature appears normal.

*Spleen*

The spleen is normal in size (0.95 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*

The liver is subjectively enlarged with slightly swollen peripheral contours. The parenchyma is hyperechoic 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. The gall bladder lumen is moderately distended. The wall is thin and smooth. Luminal contents are anechoic. The cystic and common bile ducts are normal/not seen.

*Gastrointestinal*



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The gastric lumen is moderately distended with ingesta and varying sized hypoechoic round structures. 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. No obstructive disease is noted.

**SPECIES**

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***Pancreas***

The right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is slightly hyperechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

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***Free Abdomen***

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

**AGE**

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**ULTRASONOGRAPHIC FINDINGS**

**WEIGHT**

16 lbs.

**Primary Findings:**

- Bilateral adrenomegaly.
- The hepatic parenchymal changes could be consistent with vacuolar hepatopathy, inflammatory disease (i.e., chronic hepatitis, bacterial cholangiohepatitis), hepatotoxicosis (i.e., copper), infiltrative neoplasia (i.e., lymphoma), other hepatopathy.

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**Secondary Findings:**

- Bilateral chronic renal changes with subtle dystrophic mineralization.
- The hypoechoic structures within the gastric lumen are suspected to represent kibble. However, foreign material cannot be completely excluded. If the patient was fasted for this study, the presence of ingesta within the gastric lumen could suggest delayed gastric emptying.
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis, or chronic pancreatitis.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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- Consider a fine needle aspirate of the liver (if clotting status is appropriate). A 25-gauge needle should be used. If hepatic tissue sampling is not pursued at this time, serial monitoring (i.e., every 3-4 months) of the patient's bloodwork is recommended to assess for further liver enzyme elevations. If values continue to increase, a repeat ultrasound +/- hepatic tissue sampling (i.e., fine needle aspirate or biopsy) may be warranted.
- Consider testing for hyperadrenocorticism with a low-dose dexamethasone suppression test or ACTH stimulation test if clinical signs (i.e., PU/PD) develop in the future.

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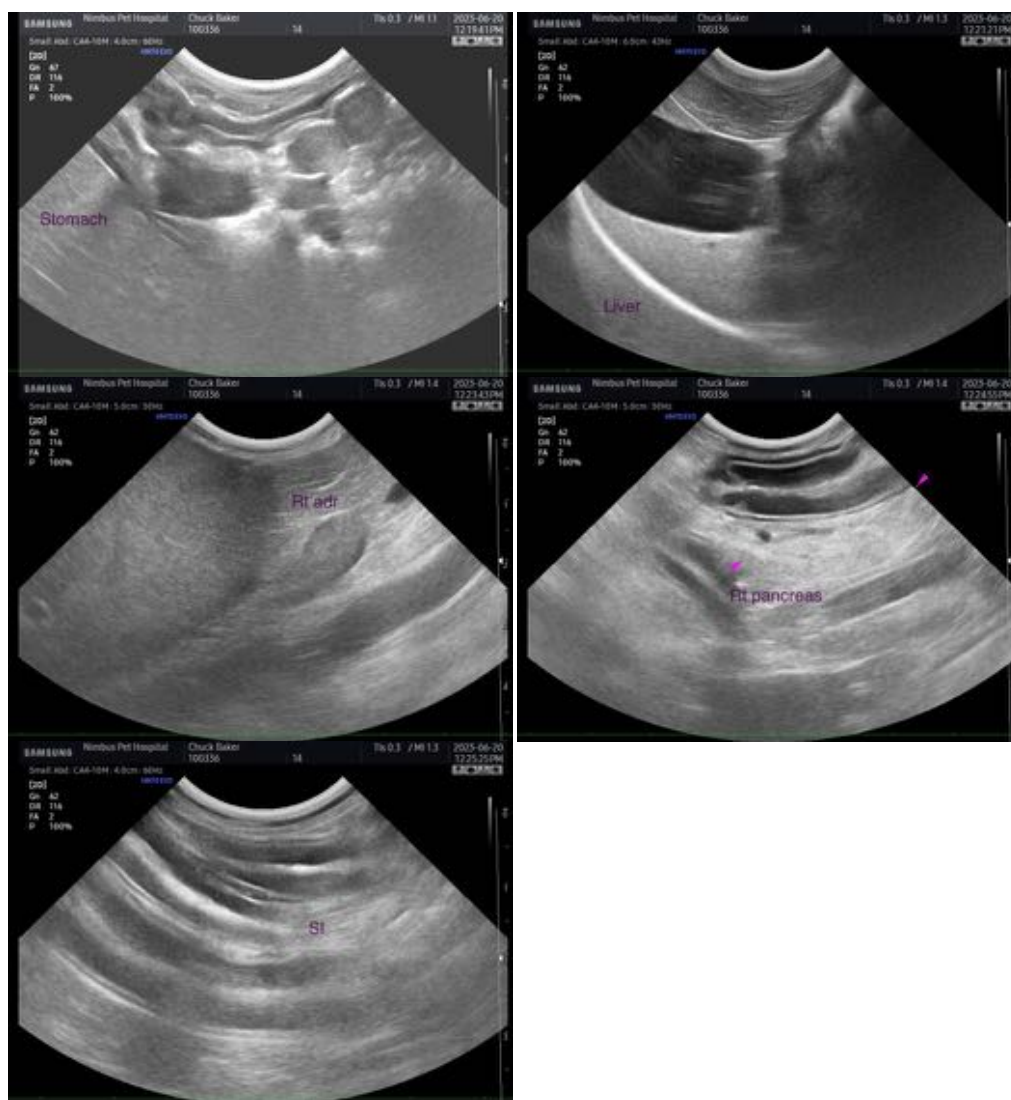
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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