

**DATE PRESENTING CLINICAL SIGNS**

6/15/2022

Patient has history of gradual decline. Intermittent soft stools - improved with Provable and metronidazole but have not fully resolved. Increased coughing (history of collapsing trachea). Hypertension. Subjectively distended abdomen. PU/PD.

**PATIENT**

Munchkin Howard

Current Medications: Amlodipine 5 mg SID (not well managed on 2.5 mg SID - dose increase 6/13), Gabapentin 100mg BID, Dasquan Advanced SID, Fatty Acid SID, Carprochews 12.5 mg BID, Provable Forte SID, Denamarin.

**SPECIES**

Canine

Lab Results: 2/1/22 ALT 348 ALP 879. 5/25/22 ALT 118 ALP 373.

**BREED**

Poodle Mix

Platelets 696 - increased on blood fil review.  
 WBC 17.3 (RR 17.6),  
 Neut 13356 (RR 12670)  
 Mono 1419 (RR 1150)  
 USG 1.018  
 Spec CPL 203 (RR 200).

**SEX**

Spayed Female

Radiographs: Thoracic radiographs showed potential liver mass/abnormality.  
 Date of Previous IntraPet Ultrasound: 11/18/20.  
 Sedation: Not required to complete full diagnostic ultrasound.  
 Stat Report: Not requested.

**AGE**

2/8/08

Imaging Performed By: Andi Parkinson, BS, RDMS.

**WEIGHT**

15 lbs

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****Urinary System**

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

The left kidney is normal size (4.81 cm in length); with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis.

The right kidney is normal in size (4.86 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis.

**Adrenal Glands**

The left adrenal gland is enlarged (0.63 cm at cranial pole) (0.99 cm at caudal pole) (2.48 cm in length) with a normal shape and smooth peripheral contours. The parenchyma is hypoechoic with some loss of glandular detail. No focal lesion are observed. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is enlarged (0.67 cm at cranial pole) (0.77 cm at caudal pole) (1.90 cm in length); with a slightly irregular shape. The parenchyma is hypoechoic with some loss of glandular detail. No focal lesions are observed. The phrenicoabdominal vein and surrounding vasculature appear normal.

**INTERPRETED BY**

Andrea Nicastro, DMV,  
 Diplomate DACVIM  
 (Small Animal  
 Internal Medicine)

**HOSPITAL NAME**

Paradise AH

**REFERRING VET**

Dr. Pound

**INVOICE**

11076

### ***Spleen***

The spleen is normal in size (1.12 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. A few, ill-defined myelolipomas are visualized. Splenic vasculature is normal.

### ***Liver***

The liver is subjectively enlarged with swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and heterogenous in appearance. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion. The portal vein to caudal vena cava ratio is approximately 1: 1.

The gall bladder lumen is moderately distended. The wall is thin and smooth. A moderate to large amount of aggregated, echogenic, partially dependent to suspended, but mobile debris/sludge is observed within the lumen. The cystic and common bile ducts are normal. The common bile duct can be seen entering the duodenal papilla. It is normal in diameter (0.22 cm). The duodenal papilla is normal in size (0.37 cm in width)

### ***Gastrointestinal***

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. 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 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.

### ***Pancreas***

The right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely isoechoic 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.

### ***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**

### **Primary Findings**

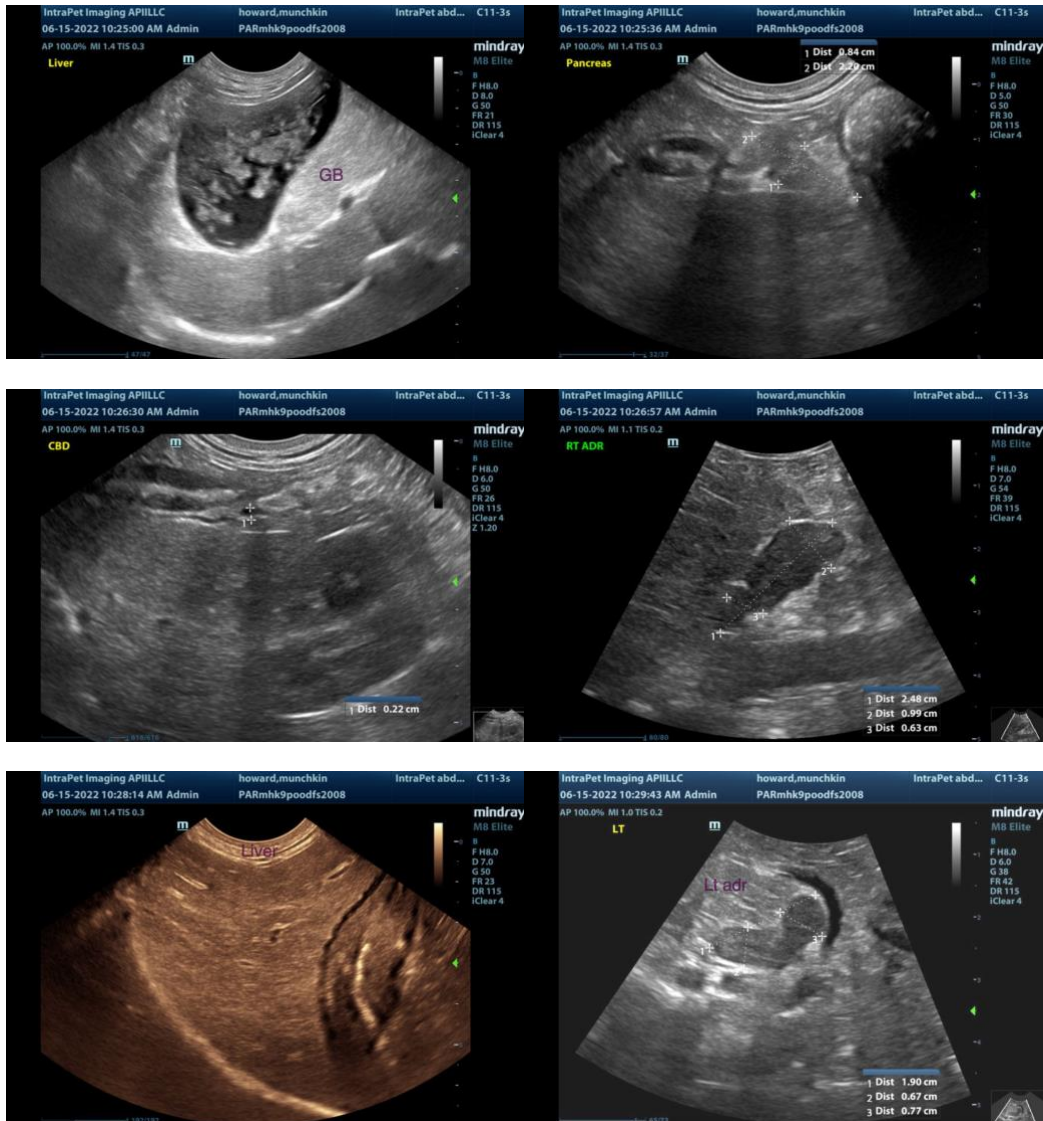
- The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, regenerative nodular hyperplasia, and/or age-related remodeling. Inflammatory disease is considered unlikely in light of the disproportionate elevation in ALP. However, prior inflammatory disease cannot be completely excluded, as the ALT was higher in February of 2022. Infiltrative neoplasia is possible, but considered less likely given the sonographic liver changes
- Bilateral adrenomegaly, most consistent with hyperplastic change
- Gall bladder sludge, non-mucocele

## Secondary Findings

- Bilateral, chronic, age-related changes with dystrophic mineralization
- Minor, age-related pancreatic remodeling

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Given the patient's clinical history, consider testing for Cushing's Disease (i.e., low-dose dexamethasone suppression test).
- If proteinuria is present, a UPC should also be considered.



**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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