

**DATE PRESENTING CLINICAL SIGNS**

1/6/2022 History: Diabetic- on 7 units of NPH Insulin twice daily. weight loss (5 lbs in last year) Presented 1/4/22 with acute vomiting and dehydration. Rest of PE wnl. Elevated liver values and hyperglycemic (although owner had not given insulin today).

**PATIENT**

Gracie Freeburn

Current Medications: Metronidazole.

Lab Results: Attached separately within request.

Date of Previous IntraPet Ultrasound: No previous IntraPet scans.

Sedation: Not required to complete full diagnostic ultrasound.

**SPECIES**

Canine

ALP is &gt;993 ALT is 910. Glucose &gt;600. CBC unremarkable. Normal T4. Urine specific gravity 1045. 2+ proteinuria. Glucosuria trace ketoneuria. In April the ALT was normal and Alk Phos was 990.

**BREED**

Miniature Poodle

Stat Report: Not requested.

Imaging Performed By: Rachel Brillhart, RDMS.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****SEX**

Female Spayed

**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.

**AGE**

12-7-2010

The left kidney presented normal size (5.53 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. A hyperechoic medullary band is observed adjacent to the corticomedullary junction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**WEIGHT**

14 Lbs

The right kidney presented normal size (5.22 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. A hyperechoic medullary band is observed adjacent to the corticomedullary junction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**INTERPRETED BY**

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

**Adrenal Glands**

The left adrenal gland is mildly enlarged (0.59 cm at cranial pole) (0.67 cm at caudal pole) (1.52 cm in length); 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.

**HOSPITAL NAME**

Bayside Animal  
Medical Center

The right adrenal gland is mildly enlarged (0.98 cm at cranial pole) (0.73 cm at caudal pole) (2.23 cm in length); 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.

**REFERRING VET**

Dr. Bray

**Spleen**

The spleen is normal in size (1.09 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. A tiny 0.23 cm hyperechoic nodule is observed. Splenic vasculature is normal.

**INVOICE**

10115

**Liver**

The liver is subjectively prominent in size with rounded peripheral contours. The parenchyma is hyperechoic relative to the spleen and subtly mottled in appearance. No distinct focal lesions are

observed. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

The gall bladder lumen is moderately distended. The wall is variably thickened, up to 0.22 cm and hyperechoic. A few polypoid-like lesions are arising from the luminal surface. A scant amount of gravity dependent echogenic debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.

### ***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 mildly thickened (up to 0.39 cm); with a normal layering pattern. There is evidence of mucosal speckling in several segments. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

### ***Pancreas***

The right limb is prominent in size with minimal deviation from the normal peripheral contours. The parenchyma is slightly hypoechoic relative to surrounding omental fat and mottled in appearance. No distinct focal lesions are observed. The pancreatic duct is not overtly dilated. The mesentery effacing the serosal surface is subtly reactive.

### ***Free Abdomen***

Trace free fluid is observed. The abdominal lymph nodes are normal/not visible.

## **ULTRASONOGRAPHIC FINDINGS**

### **Primary Findings**

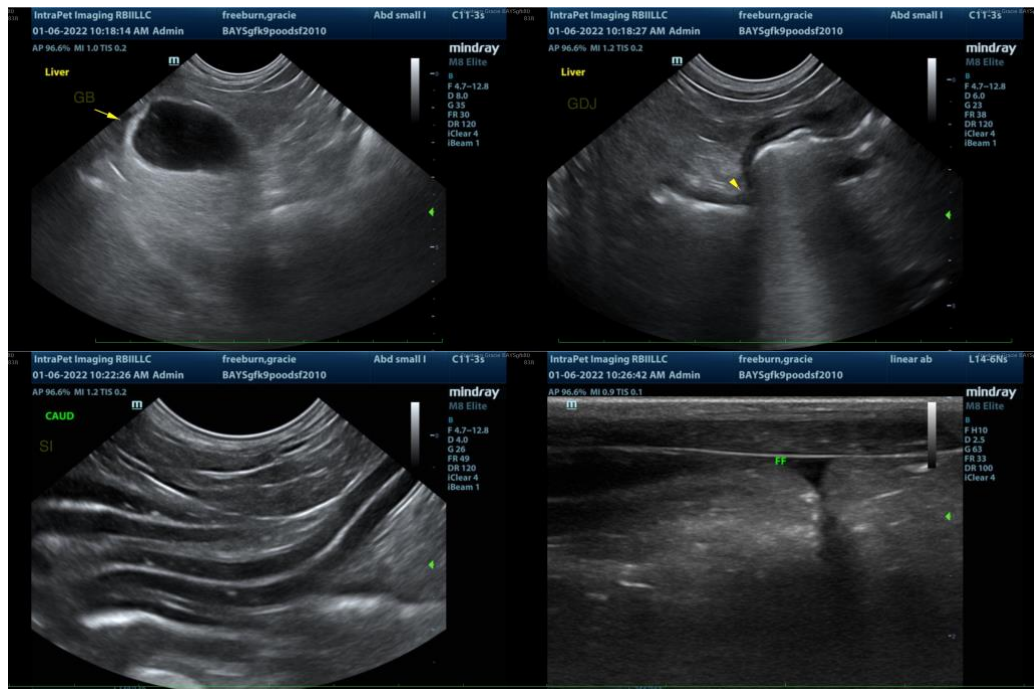
- Non-specific diffuse hepatopathy. Differentials include inflammatory disease (i.e., bacterial cholangiohepatitis, chronic hepatitis), leptospirosis, hepatotoxicity, infiltrative neoplasia (i.e., lymphoma), with possible concurrent benign change (i.e., vacuolar hepatopathy, regenerative nodular hyperplasia)
- Gall bladder debris, coincidental
- The pancreatic changes are suggestive of chronic +/- active pancreatitis.
- The small intestinal mucosal speckling is suggestive of enteritis.
- Trace ascites. Differentials include increased vascular impermeability, low oncotic pressure, or increased hydrostatic pressure. Correlation with clinical findings is recommended.

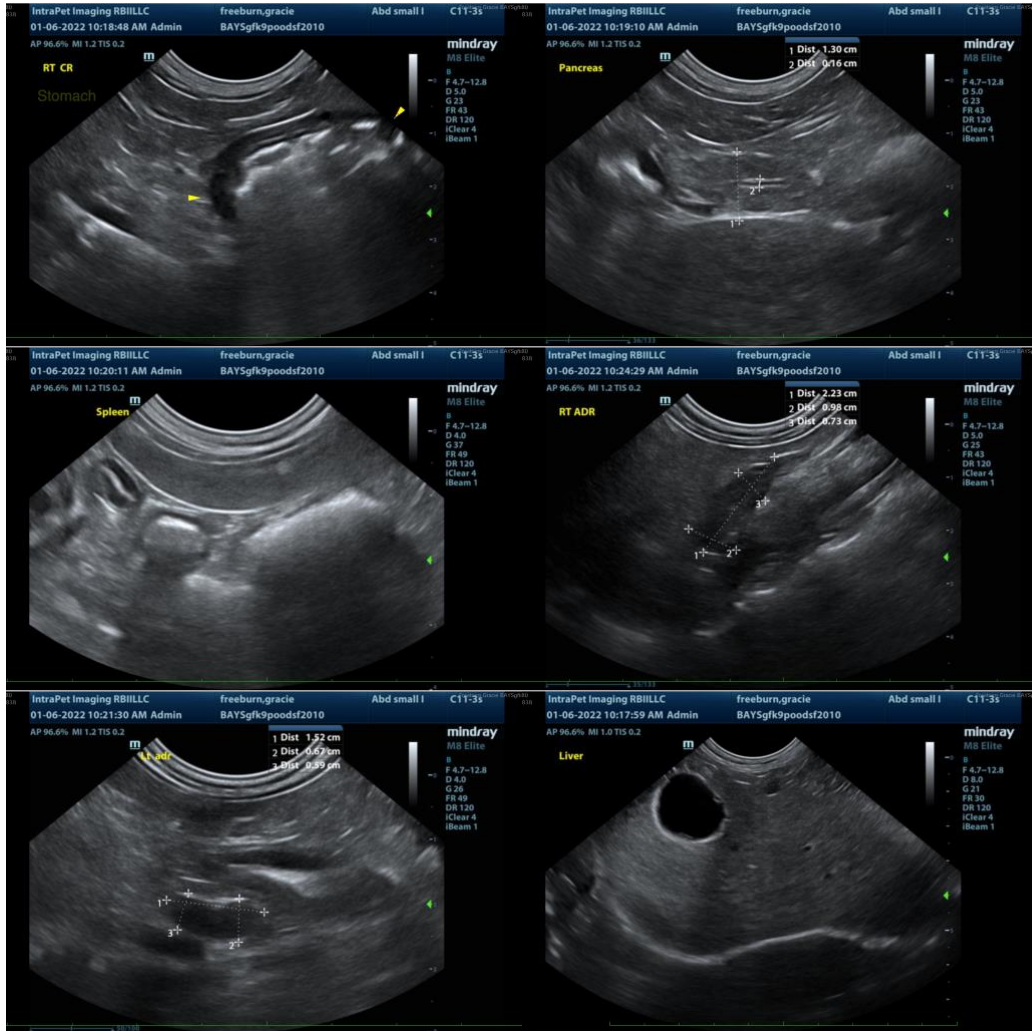
### **Secondary Findings**

- Bilateral renal changes consistent with diabetic nephropathy
- Mild bilateral adrenomegaly
- The hyperechoic splenic nodule likely represents a benign process (i.e., myelolipoma).

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Consider a fine-needle aspirate of the liver if clotting status is appropriate. A 25-gauge needle should be used.
- Also consider a malabsorption panel including serum cobalamin and folate TLI and PLI.
- Supportive care for diabetic ketoacidosis and empirical treatment for pancreatitis/bacterial cholangiohepatitis is recommended, including fluid therapy, regular insulin, broad-spectrum antibiotics, gastric protectants, antiemetics, and pain medication as needed.
- Also consider a urine culture and sensitivity (given the diabetic status), preferably on a pre-antibiotic sample
- Given the patient's age, three-view thoracic radiographs are also recommended to assess cardiopulmonary status.
- 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.





The information and recommendations provided are based on the images presented by the referring veterinarian. 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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