

**DATE PRESENTING CLINICAL SIGNS**

11/11/22

Presented with trouble walking, rapid weight loss, excessive water intake and urination, passed out on a walk 11/2. No history of diabetes in prior hx. Dx ketoacidosis and diabetes mellitus.

**PATIENT**

Bella Gavilano

Current Medications: Glargine insulin 3 units BID, Purina OM, Gabapentin 100mg night before visit and two hours before visit.

**SPECIES**

Canine

Lab Results: Ketones, elevated enzymes.  
Date of Previous IntraPet Ultrasound: No previous.  
Sedation: Not required to complete full diagnostic ultrasound.  
Stat Report: Not requested.

**BREED**

American Eskimo

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

Spayed Female

**Urinary System**

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

**AGE**

5/3/11

The left kidney has a normal shape and size (4.38 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**WEIGHT**

19.8 Pounds

The right kidney has a normal shape and size (4.78 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**INTERPRETED BY**

Kathleen Sennello DVM,  
MS, Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.55 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

**IMAGING PERFORMED BY**

Rachel Brilhart RDMS

The right adrenal gland is normal in size measuring 0.62 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

**HOSPITAL NAME**

Friendly Paws VC

**Spleen**

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

**REFERRING VET**

Dr. Price

**Liver**

The liver is large in size, and normal in echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There are too numerous to count ill-defined hypoechoic nodules throughout the parenchyma. The most defined nodule is adjacent to the diaphragm, measuring 2.5 cm x 1.93 cm. Additionally, there is one measuring 1.34 cm in diameter.

**INVOICE**

42756

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

### ***Gastrointestinal***

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

### ***Pancreas***

The pancreas is large and hypoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is evidence of regional mesenteric inflammation. Consistent with mild to moderate pancreatitis.

### ***Free Abdomen***

There is a scant amount of free abdominal fluid. No lymphadenopathy. The omentum is slightly hyperechoic in the cranial abdomen.

## **ULTRASONOGRAPHIC FINDINGS**

- Large, heterogeneous pancreas with mildly hyperechoic mesentery surrounding – The pancreatic changes are most consistent with mild to moderate pancreatitis/pancreatic inflammation. Recommend fPLI testing and continued monitoring for improvement or possible development of a pancreatic abscess. Consider fine needle aspirate if not improving.
- Large, heterogeneous liver with ill-defined hypoechoic nodules – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. The nodules observed trend toward a more benign process but underlying neoplasia cannot be ruled out.
- Moderate gallbladder debris – The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.
- Scant free abdominal fluid

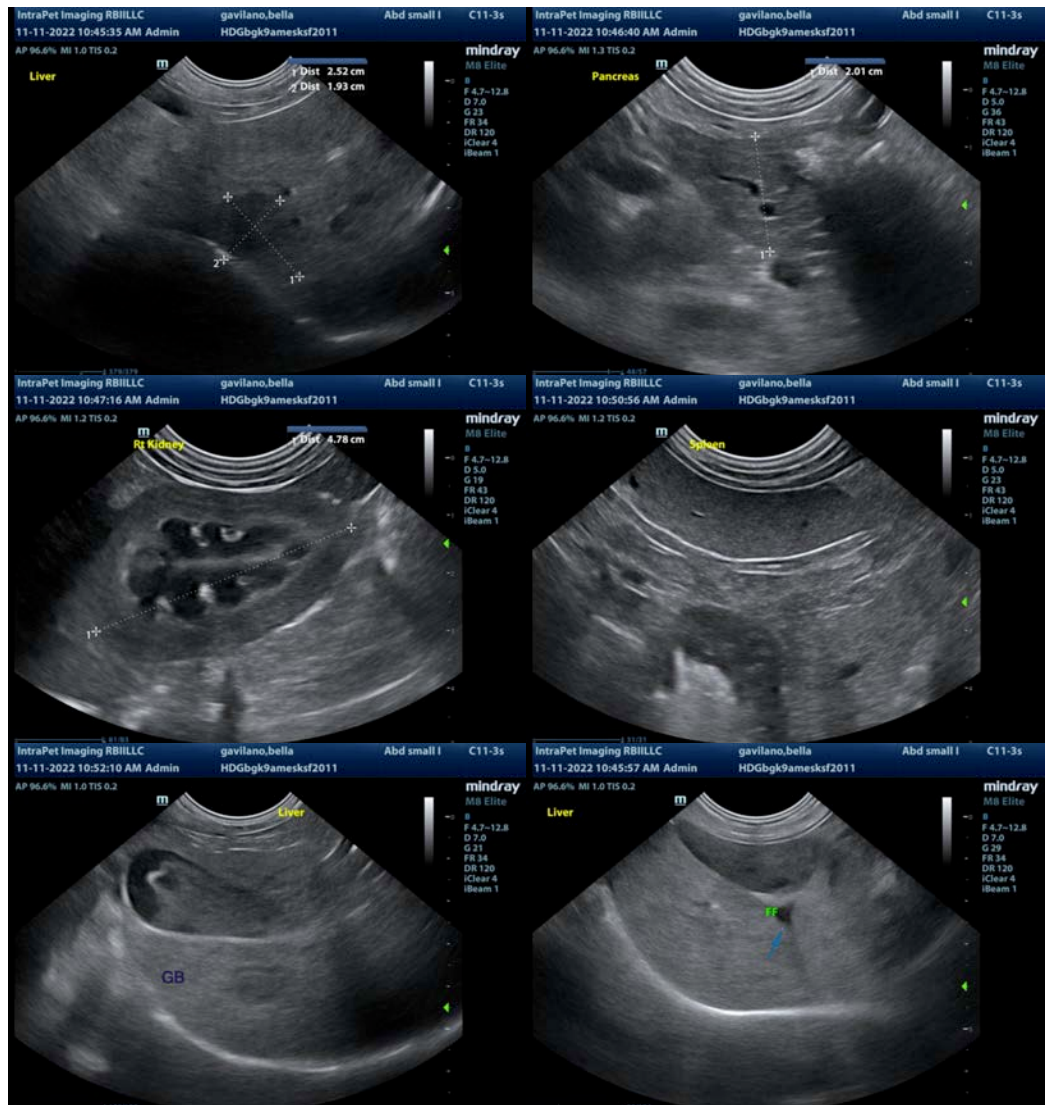
## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

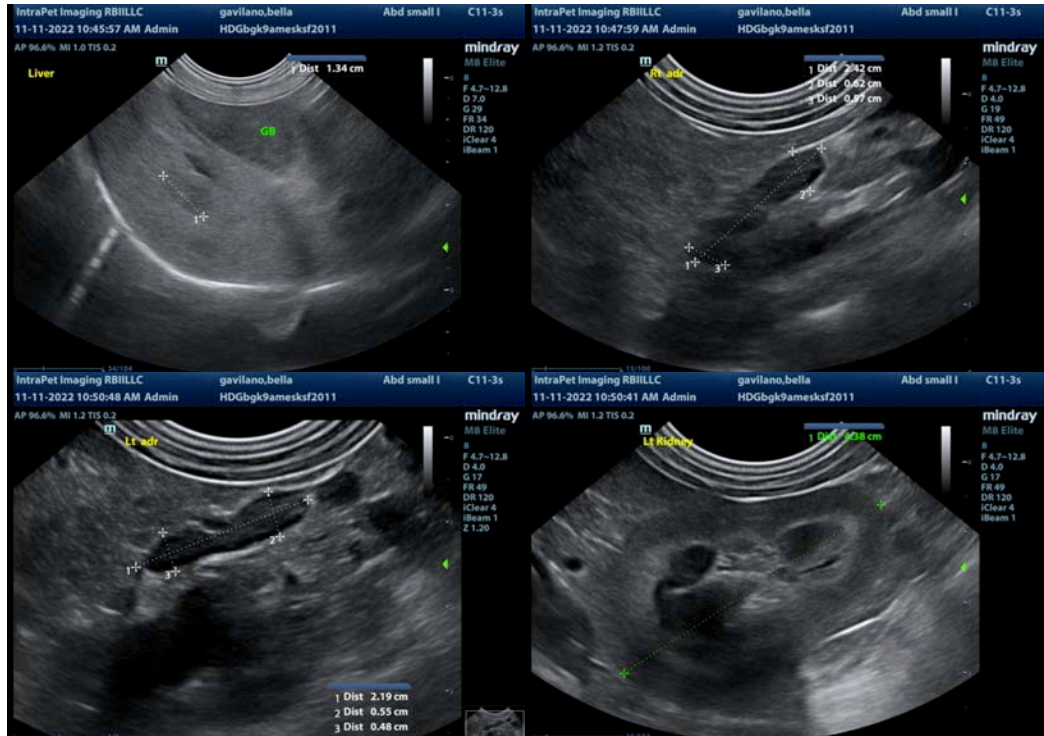
The pancreas is large and hypoechoic with mildly hyperechoic surrounding mesentery. These findings are consistent with mild to moderate active pancreatitis or a recent bout of severe pancreatitis that is improving. Recommend continued treatment for pancreatitis.

The liver is large and heterogeneous. This is consistent with a diabetic hepatopathy, but there are numerous hypoechoic, ill-defined nodules. These trend towards a more benign appearance, but there are some that are more defined. These are not in easily reachable areas for a fine needle aspirate. Recommend continued monitoring. If liver enzymes spike, a liver function test and fine needle aspirate should be considered.

There is a moderate amount of gallbladder debris visualized, but no significant wall thickening or inflammation associated with the gallbladder. You could consider starting chronic Ursodiol therapy. Either way, continued monitoring of the gallbladder for progression of the lesion is recommended.

Recommend aggressive medical management for diabetic ketoacidosis using long acting insulin in combination with treatment for pancreatitis, then transition to long acting insulin at home. No definitive neoplastic lesions are observed.





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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