

IMAGING PERFORMED BY

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**DATE PRESENTING CLINICAL SIGNS**

12/6/11 Chronic diarrhea and weight loss.

**PATIENT** Current Medications: Methimazole 2.5mg BID.

Coo Scheafer Lab Results: Hyperthyroidism.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: IM sedation.

Stat Report: Not requested.

**SPECIES**

Feline

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**BREED** *Urinary System*

DSH

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.

**SEX**

Neutered Male

The left kidney has a normal shape and size (3.89 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.

**AGE**

11/2/06

The right kidney has a normal shape and size (3.56 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**

7.8 Pounds

**INTERPRETED BY**

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

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.48 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.

The right adrenal gland is normal in size measuring 0.36 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.

**IMAGING PERFORMED BY**

Rachel Brilhart RDMS

**Spleen**

The spleen is large and irregular. The blood flow through the hilus and splenic parenchyma appears normal.

The spleen creates an isoechoic mass effect measuring approximately 4.42 cm x 3.2 cm. This could represent a true mass, irregular splenic enlargement, or curling back upon itself.

**HOSPITAL NAME**

Aberdeen Vet Clinic

**Liver**

The liver is large and irregular. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There are numerous ill-defined hyper- and hypoechoic nodules visualized within the parenchyma. One such hyperechoic nodule is visualized at 0.99 cm.

**REFERRING VET**

Dr. Fritz

**INVOICE**

43235

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. The bile duct appears slightly dilated and tortuous, measuring 0.24 cm. No obstruction visualized.

### ***Gastrointestinal***

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.36cm 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. Jejunum wall measures 0.23 cm. 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, hypoechoic, and irregular as compared to surrounding mesentery. Some of this irregularity is prominent, and there is an irregular hypoechoic rounded structure caudal to the stomach measuring approximately 0.85 cm in diameter, which could be consistent with irregular pancreatic tissue, a pancreatic mass effect, or an irregular lymph node. There is hyperechoic mesentery surrounding the pancreas.

### ***Free Abdomen***

There is a large volume of echogenic free fluid. No lymphadenopathy is noted. The omentum appears diffusely hyperechoic, irregular/almost nodular in appearance.

### ***Other***

There is a large volume of free fluid visualized cranial to the diaphragm.

## **PRIMARY FINDINGS**

- Large irregular spleen – The spleen appears irregular, large and rounded. The parenchyma is uniformly isoechoic. Findings could be consistent with a large irregular spleen or a focal splenic mass. Consider a fine needle aspirate.
- Hypoechoic, irregular pancreas surrounded by hyperechoic mesentery – Findings are most consistent with pancreatic inflammation +/- a focal mass lesion. Borders of the pancreas are very irregular and mottled.
- Large, severely heterogeneous nodular liver – Hepatic changes are non-specific and could be consistent with inflammation/infection (cholangiohepatitis), infiltrative neoplasia, lipidosis or other hepatopathy.
- Large volume bicavitary effusion – Recommend sampling, fluid analysis and cytology.
- Hyperechoic, irregular/nodular omentum – Findings could be consistent with inflammation and chronic effusion, but carcinomatosis should also be considered.

## **SECONDARY FINDINGS**

- Mildly prominent/tortuous bile duct – Dilatation of the common bile duct could be consistent with a functional obstruction (i.e. primary hepatic disease resulting in hepatocellular swelling) or with an extrahepatic bile duct obstruction (ie. choledocholith, bile duct tumor, pancreatic disease, other).

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a large volume of somewhat echogenic effusion visualized in the abdomen as well as cranial to the diaphragm. The omentum is diffusely irregular and nodular. This could be secondary to inflammation or due to neoplastic change. Likewise, many of the abdominal organs are irregular and somewhat large.

The spleen is rounded, creating somewhat of a mass effect, but the parenchyma is isoechoic. This could represent an irregular folded spleen, a splenic mass, etc. Consider a fine needle aspirate of the spleen.

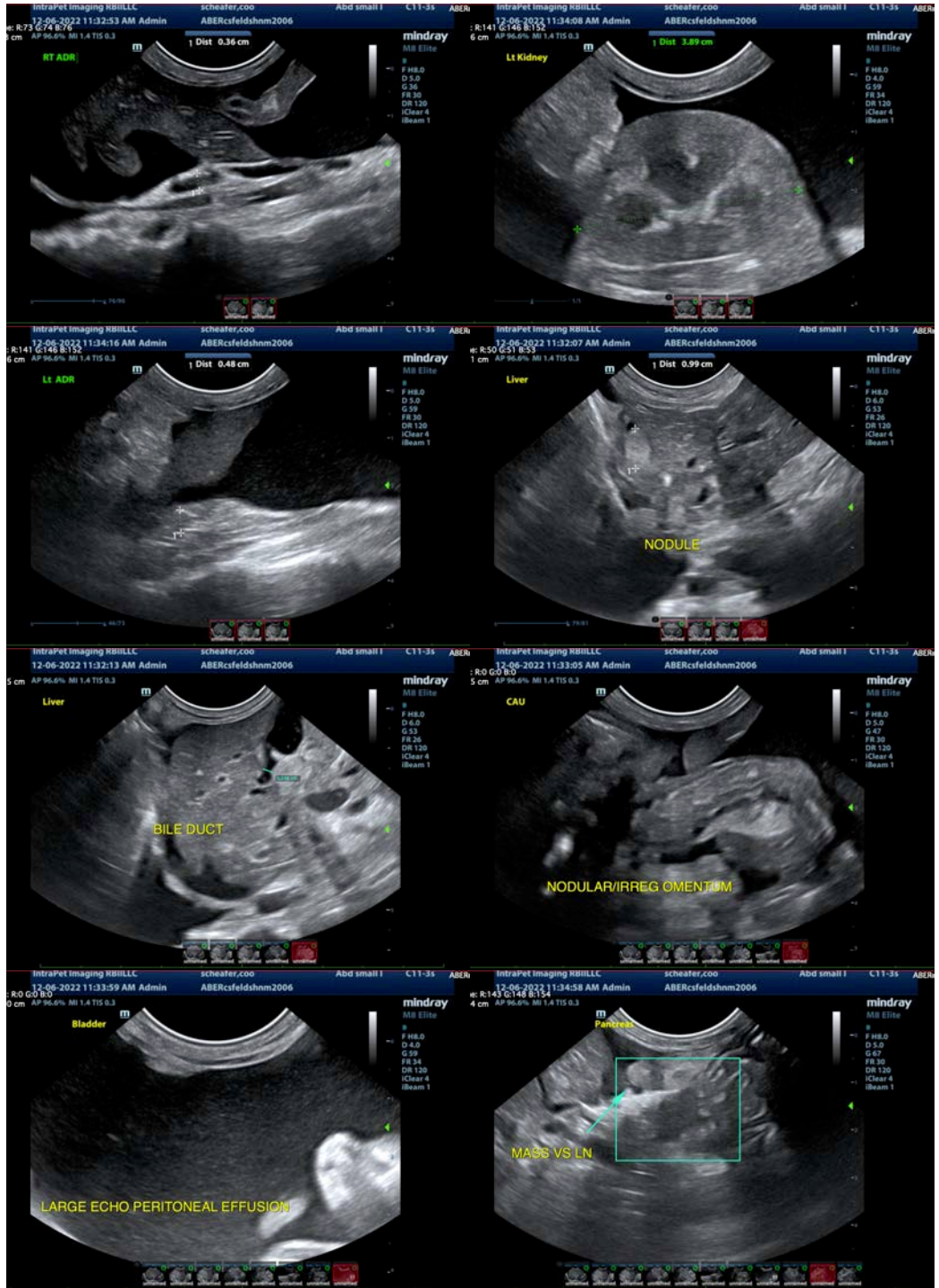
Additionally, the pancreas was irregular and prominent with a focal mass effect that could represent a benign nodule, a pancreatic mass lesion, or irregularity, adhesions, etc.

Likewise, the liver is large and heterogeneous and somewhat irregular and nodular. Recommend a fine needle aspirate of the liver (provided coagulation parameters are normal).

Recommend 3-view thoracic radiographs +/- thoracentesis and a cardiac ultrasound.

If a cytologic diagnosis cannot be obtained based on sampling of the fluid analysis and cytology of the abdominal fluid and fine needle aspirates of the spleen, liver, +/- pancreas, then consider surgical biopsies or a contrast CT scan for better resolution.





**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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)  
kathleen.sennello@sonopath.com