

**DATE**

6/29/22

**PRESENTING CLINICAL SIGNS****PATIENT**

Baxter Bowers

History: Hx of chronic pancreatitis, needed extensive hospitalization including feeding tube placement in the past (years ago). 5/22/22 ER visit for GI illness (not eating, dry heaving). Radiographs of chest showed lesions that may be asthma or neoplasia (such as lymphoma). Starting 5/23/22 many visits for examination, hospitalization, IVF, treatments for control of GI symptoms.

**SPECIES**

Feline

Current Medications: Currently on oral Metoclopramide, Mirtazapine, Cerenia.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Declined.

Stat Report: Not requested.

**BREED**

DSH

Imaging Performed By: Rachel Brillhart, RDMS.

**SEX**

Neutered Male

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

Urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

**AGE**

2/21/08

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia, mineral or infarcts observed. The left measures 3.96 cm. The right measures 4.33 cm.

**WEIGHT**

12.63 Pounds

**Adrenal Glands**

Left adrenal gland is normal in size (0.49 cm), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

**INTERPRETED BY**Eric Lindquist, DMV  
DABVP, Cert. IVUSS

Right adrenal gland is normal in size (0.4 cm), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

**HOSPITAL NAME**

Banfield Westminster

**Spleen**

Spleen is subjectively large in size with subtly scalloped or undulating capsular contour. Parenchyma is normal in echogenicity with a mildly coarse/heterogenous echotexture. No focal nodules or masses are observed. Splenic vasculature appears normal.

**REFERRING VET**

Dr. Stephens

**Liver**

Liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is Liver is subjectively enlarged (swollen contour). Mild parenchymal remodeling with diffusely mildly coarse architecture and increased portal markings is present. No focal nodules or masses are observed. Visible vasculature appears normal without distension or congestion.

**INVOICE**

16393

The gallbladder and entire biliary system, including cystic and common bile duct and lobar biliary ducts are all markedly overdistended with anechoic fluid and echogenic debris. The entire wall of the biliary system is mildly thick and hyperechoic in appearance. The common bile duct measures maximally up to 1.5 -2.0 cm dilated. No specific visible clot, stone, mass, etc. are visible to explain a post hepatic obstruction and the dilation can be traced all the way to the duodenal papilla.

**Gastrointestinal**

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent. The visible small intestine demonstrates areas of thick muscularis layer relative to mucosa (disruption of the normal 1:3 muscularis:mucosa ratio). Small intestinal submucosa is slightly irregular, thick and hyperechoic, without evident loss of layering appreciated.

The visible colon is normal in wall thickness and layering. Contents are consistent with normal formed feces and gas.

### ***Pancreas***

The observed pancreas is prominent (enlarged) in size, hypoechoic to surrounding tissue and irregular in shape with a swollen undulating contour. Pancreatic duct dilation is noted. Enhanced hyperechoic ill-defined surrounding fat is noted.

### ***Free Abdomen***

A scant amount of anechoic free fluid is noted. There is no appreciable lymphadenopathy present in these images.

## **ULTRASONOGRAPHIC FINDINGS**

### **Primary Findings**

- A diffusely markedly overdistended gallbladder, cystic duct, common bile duct and lobar biliary duct dilation, consistent with a chronic post hepatic obstruction potentially secondary to chronic pancreatitis, chronic severe cholangiohepatitis and debris and mucus within the system versus a nodule, clot or cholelith resulting in an obstruction, however, none of those objects are discernably visible in these images and the dilation is followed all the way to the duodenal papilla without visualization of one of those structures.
- Hypoechoic Hepatomegaly- This appearance is consistent with an acute hepatopathy or acute cholangiohepatitis. Infiltrative neoplasia (round cell neoplasia) should also be considered.
- Inflammatory bowel disease pattern. This finding has been reported with infiltrative bowel disease including both benign inflammatory disease as well as infiltrative neoplasia such as lymphoma.
- Acute pancreatitis

### **Secondary Findings**

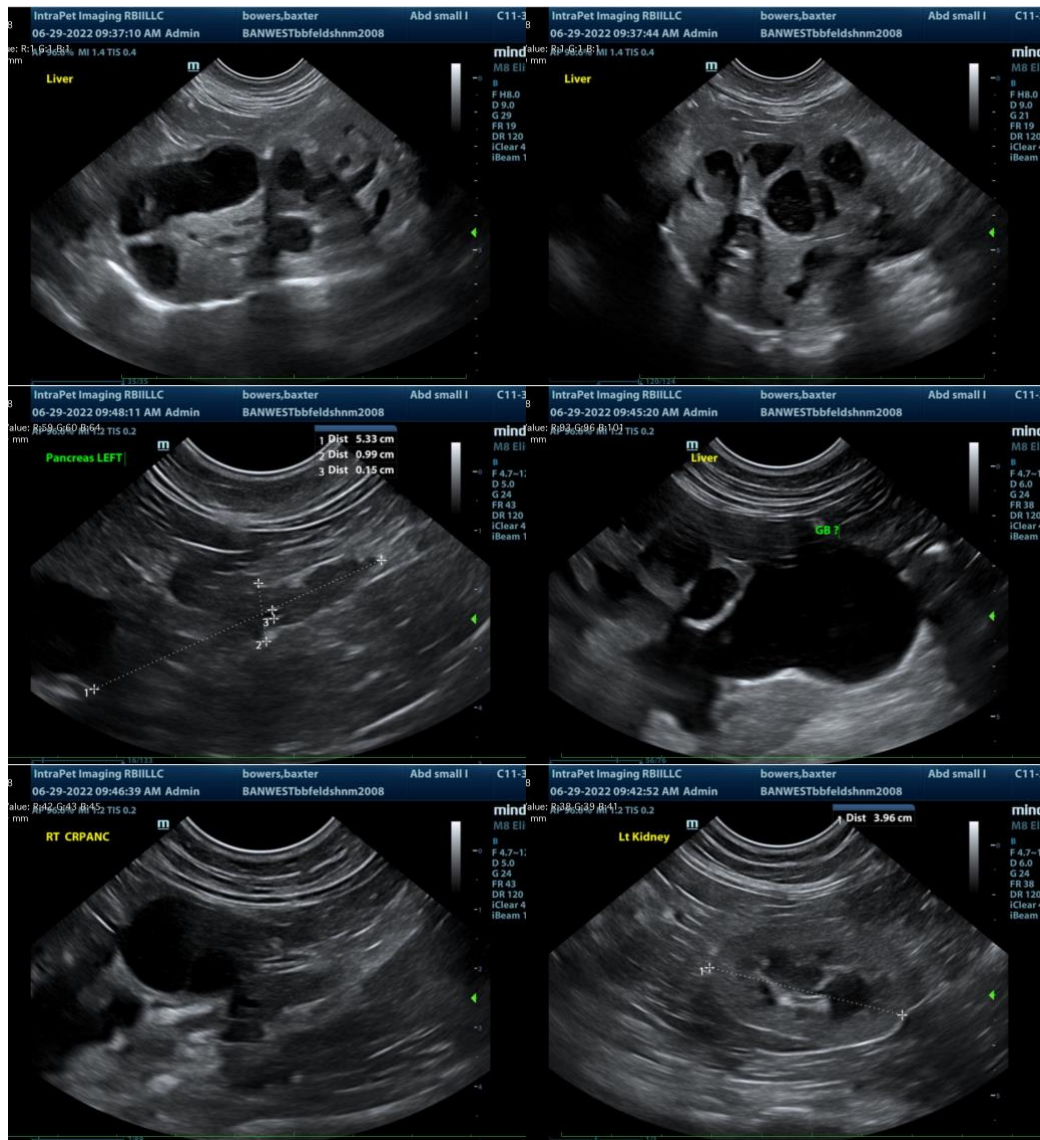
- Age-related kidney changes

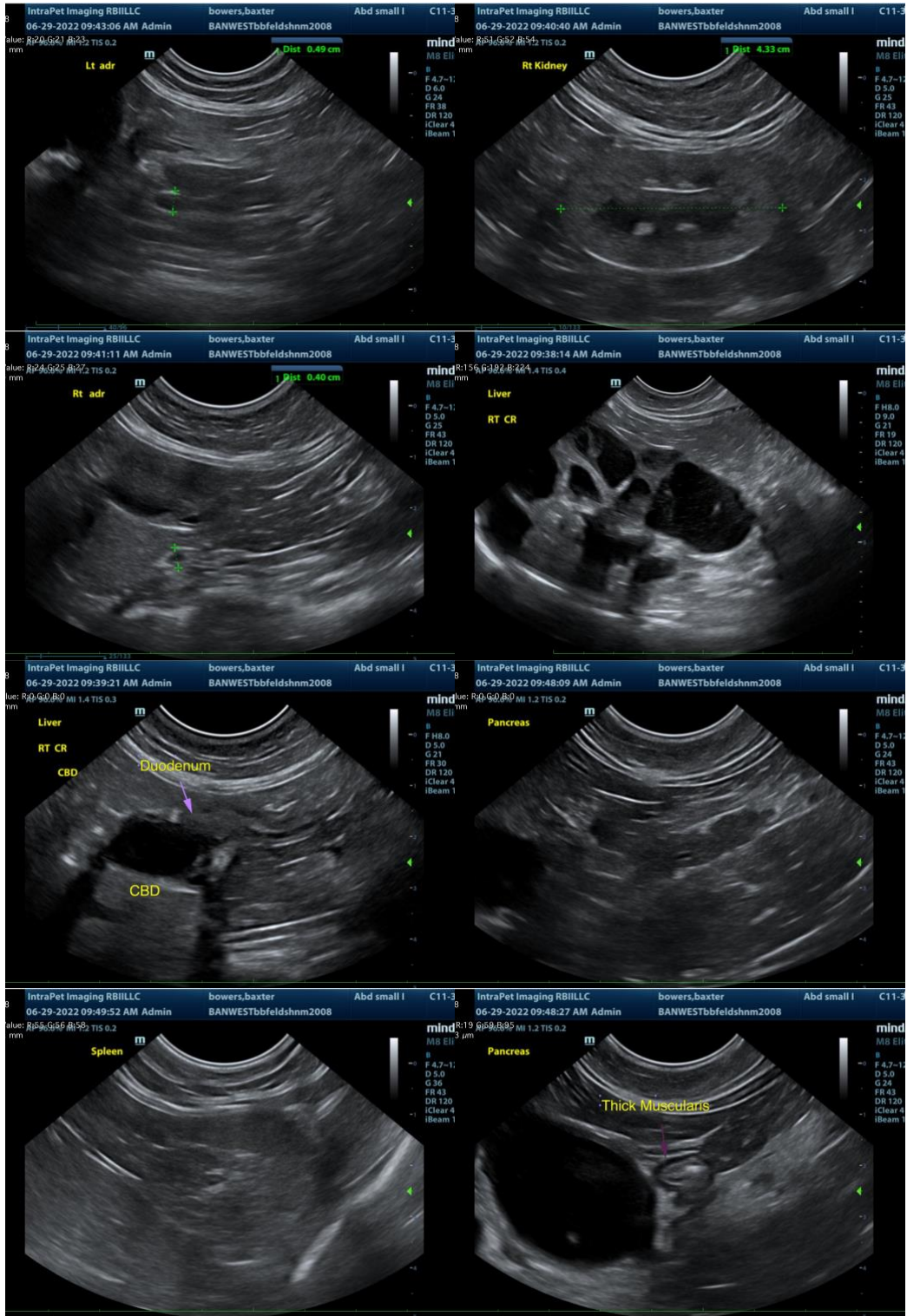
## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Medical management of pancreatitis/cholangiohepatitis with anti-emetics, gastroprotectants, appetite stimulants or nutritional support as needed, pain management, broad spectrum antibiotics, and fluid support is recommended. Monitoring of the pancreas with power doppler is recommended to identify possible necrosis as well as other potential sequelae such as abscesses, etc. Close monitoring of the biliary distention, as well as liver enzymes, total bilirubin, etc. is also warranted, because if improvement isn't noted and/or there is progression, surgical intervention for obstruction alleviation may be necessary.

Other diagnostic recommendations in the meantime, especially given the reported pulmonary changes could include a fine needle aspirate of the liver and the spleen, if patients coagulation status is appropriate, for further evaluation of possible infiltrative round cell neoplasia such as lymphoma.

If a diagnosis of lymphoma is not obtained less invasively and/or surgery is pursued for further assessment of a posthepatic biliary obstruction, biopsies of the bowel, being sure to include ileum, if possible, are recommended.





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.

**Beth Johnson, DVM DACVIM**

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