

**DATE PRESENTING CLINICAL SIGNS**

8/19/21

Decreased eating and drinking last 2-3 week. Lethargic and appears to be losing weight. Vomited daily for 3 d, no vomiting noted since Monday.  
 Owner had heart attack - history past week not as clear. Seen for cystitis 8/2/21.

**PATIENT**

Jasmine Howard

Current Medications: was on Gabapentin for cystitis issue earlier in month, none past week  
 Lab Results: today's bw - ap 283, alt 763, ce 2.7 (bun normal at 29), tbil 1.0. sdma 15. pcv 50. mild - mod sample hemolysis, dehydrated, difficult draw. u/a sg 1.020, sediment pending. last T4 4/28/2021 - 3.1.

**SPECIES**

Feline

Date of Previous IntraPet Ultrasound: No previous  
 Sedation: not needed  
 Stat Report: STAT requested

**BREED**

Domestic shorthair

**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.

**SEX**

Female, spayed

**AGE**

2006

The left kidney is normal in size (2.87 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. There is moderate loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. Trace pyelectasia is present (0.11 cm in the longitudinal plane). There is no evidence of infarcts or hydronephrosis. Renal vasculature is normal.

**WEIGHT**

2.77 kg.

The right kidney is normal size (3.08 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. There is moderate loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. Mild pyelectasia is present (0.39 cm in the longitudinal plane). There is no evidence of infarcts or hydronephrosis. Renal vasculature is normal.

**INTERPRETED BY**

Andrea Nicastro, DVM,  
 Diplomate ACVIM  
 (Small Animal Internal  
 Medicine)

**Adrenal Glands**

The left adrenal gland is normal in size (0.41 cm width). Normal shape and glandular echogenicity. The phrenicoabdominal vein and surrounding vasculature are normal.

The region of the right adrenal gland is evaluated. No obvious pathology is observed.

**HOSPITAL NAME**

Banfield Towson

**Spleen**

The spleen is normal in size (0.73 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

**REFERRING VET**

Dr. mike

**Liver**

The liver is subjectively normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed. The gall bladder lumen is moderately distended. The wall is normal in thickness. Luminal contents are mostly anechoic. The cystic and common bile ducts are visible/borderline dilated (up to 0.26 cm in diameter). There is no obvious evidence of an intraluminal obstruction.

**INVOICE**

11913

**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. There is disruption in the normal 1:3 muscularis:

mucosal ratio in some segments. Discreet masses are not identified. The ileocecal colic junction and colonic wall are normal. No obstructive disease is noted.

### ***Pancreas***

The pancreas is diffusely enlarged, particularly the right limb. Peripheral margins are somewhat irregular. The parenchyma is hypoechoic relative to surrounding omental fat. No focal lesions are observed. The pancreatic duct is visible but not overtly dilated (0.18 cm in diameter). The mesentery effacing the serosal surface is hyperechoic.

### ***Free Abdomen***

There is no evidence of free fluid. Several prominent cranial to mid-abdominal lymph nodes are visualized, the largest measuring 1.79 cm in length.

## **ULTRASONOGRAPHIC FINDINGS**

### **Primary Findings:**

- The pancreatic changes are consistent with acute or chronic, active pancreatitis.
- The small intestinal wall changes are most consistent with an inflammatory process (i.e., inflammatory bowel disease) with a low possibility of emerging lymphoma.
- The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.
- The mild common bile duct dilation is likely secondary to extraluminal compression resulting from pancreatitis and/or hepatocellular swelling.

### **Secondary Findings:**

- Bilateral age-related renal changes with dystrophic mineralization and mild pyelectasia.

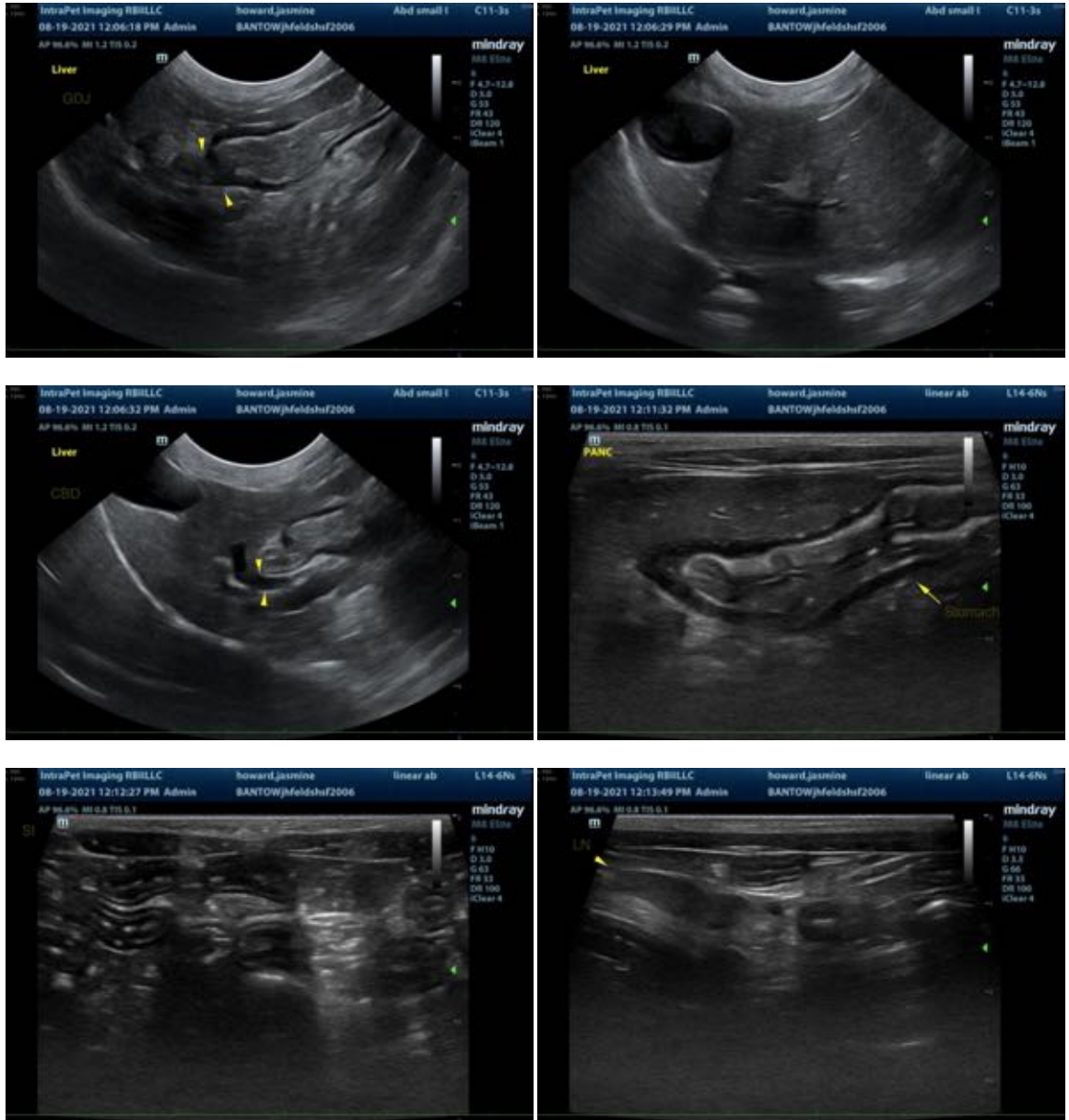
\*An obvious cause for the elevated liver values is not identified in this study. Considerations include hepatic lipidosis, inflammatory/immune mediated disease, infiltrative neoplasia (less likely), FIP, other hepatopathy. Given the clinical history and sonographic changes "triaditis" is a consideration in this patient.

## **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. If cytology results are inconclusive, a surgical biopsy with aerobic and anaerobic bile cultures can be considered. If a conservative approach is desired, consider empirical treatment for bacterial cholangiohepatitis (amoxicillin-clavulanic acid, Denamarin Advanced). If no improvement in the liver values is seen within 7-10 days of initiating therapy, antibiotics should be discontinued and hepatic tissue sampling reconsidered. If liver values improve, continue therapy for at least 4-6 weeks and 1 week beyond normalization of the liver values. Supportive care for pancreatitis is also recommended including IV fluid therapy, gastric protectants, antiemetics, pain medication as needed, +/- fresh frozen plasma. Nutritional support is strongly encouraged to help prevent/treat hepatic lipidosis. Consider a temporary feeding tube (i.e., esophagostomy).
- Other diagnostic considerations include the following:

1. Malabsorption panel including serum cobalamin, folate, TLI and PLI
  2. A fecal evaluation for ova/Giardia
  3. +/- Toxoplasmosis testing (i.e., IgM, IgG) given the pancreatitis
- Given the bilateral renal changes, consider a urine culture and sensitivity.
  - Three-view thoracic radiographs are also recommended to assess cardiopulmonary status.





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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