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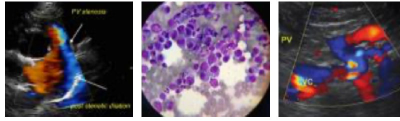


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**DATE**

10/18/2021

**PATIENT**

Fiona Patrick

**SPECIES**

Canine

**BREED**

Yorkshire terrier

**SEX**

Female, spayed

**AGE**

9/14/2016

**WEIGHT**

5.6 lbs.

**INTERPRETED BY**

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

**HOSPITAL NAME**

Docside Veterinary Medical Center

**REFERRING VET**

Dr. Loke Jin Wong

**INVOICE**

12375

## PRESENTING CLINICAL SIGNS

History: Incidental finding of significantly elevated ALT/AST. When further probed, possible intermittent vomiting and bloody diarrhea/loose stool. Pre-op blood for dental but want to rule out shunt. Discussed parents weigh about 10 lbs. each. Discussed other hepatopathy.

Current Medications: Not provided by the veterinarian.
Lab Results: CBC normal, 4DX negative, ALT 848, normal ALKP and total bilirubin
Radiographs: Not provided by the veterinarian.
Date of Previous IntraPet Ultrasound: No previous IntraPet scans.
Sedation: not needed
Stat Report: not requested

## 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.

The left kidney is normal size (3.21 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. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal size (3.30 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. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

### *Adrenal Glands*

The left adrenal gland is normal size (0.37 cm at cranial pole) (0.46 cm at caudal pole) (1.93 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.

The right adrenal gland is normal size (0.60 cm at cranial pole) (0.48 cm at caudal pole) (1.46 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.

### *Spleen*

The spleen is normal in size (0.62 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.

### *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 thin and smooth. A moderate to large amount of aggregated echogenic mostly gravity-dependent sludge is observed within the lumen. The cystic and common bile ducts are normal/not seen.

### *Gastrointestinal*

The gastric lumen is distended with ingesta consistent with a post prandial presentation. 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 segmentally dilated with chyme. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive disease is noted.

### *Pancreas*

The right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

### *Free Abdomen*

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

## ULTRASONOGRAPHIC FINDINGS

**Primary Findings:**

- An obvious cause for the patient's elevated ALT is not identified in this study. There is no obvious evidence of a congenital extrahepatic portosystemic shunt. However, due to the gastric distention, the portal hilus cannot be thoroughly evaluated. Differentials for the elevated ALT include inflammatory/immune mediated disease, microvascular dysplasia, congenital portosystemic shunt, hepatotoxicosis (i.e., copper), other hepatopathy.

- Gallbladder sludge- incidental.

**Secondary Findings:**

- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

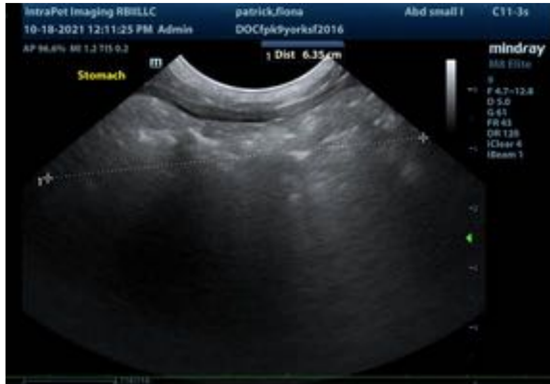
## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- To evaluate for a portosystemic shunt more thoroughly, a fasted abdominal ultrasound is recommended. Alternatively, a contrast abdominal CT scan can be considered. Pre- and post-prandial serum bile acids should also be performed.

- 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.

- Consider Leptospirosis testing (i.e., blood and urine PCR, serology).

- Given the GI signs, also consider a more advanced GI workup (i.e., fecal evaluation for ova/Giardia, resting cortisol level, malabsorption panel, limited antigen diet trial, +/- endoscopic or surgical GI biopsies).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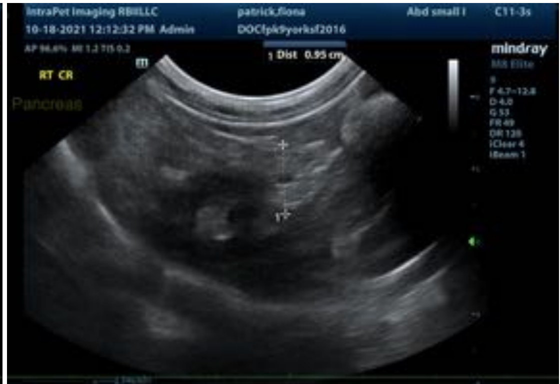
Stomach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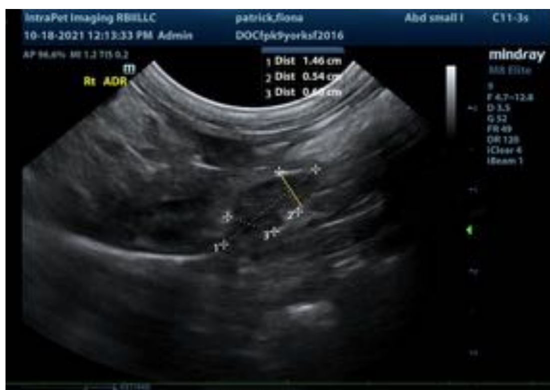
Pancreas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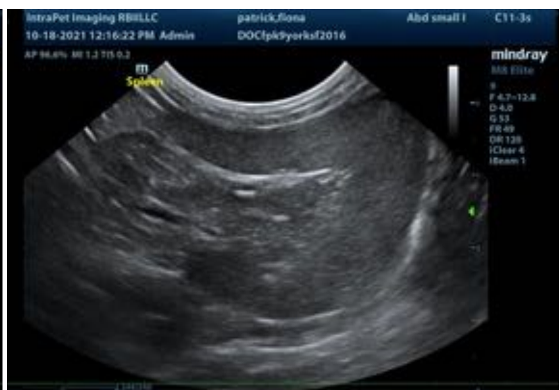
Rt ADR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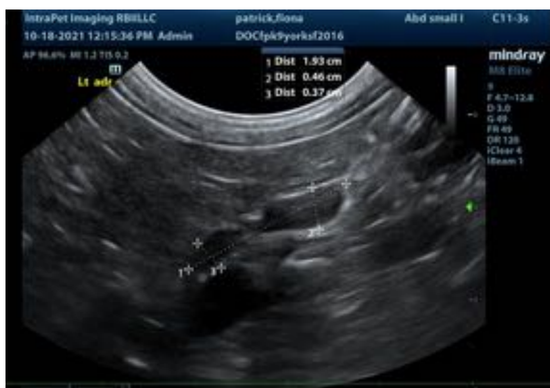
Spleen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3 Dist 0.37 cm
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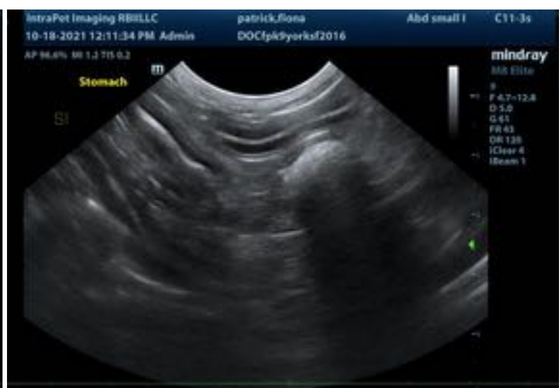
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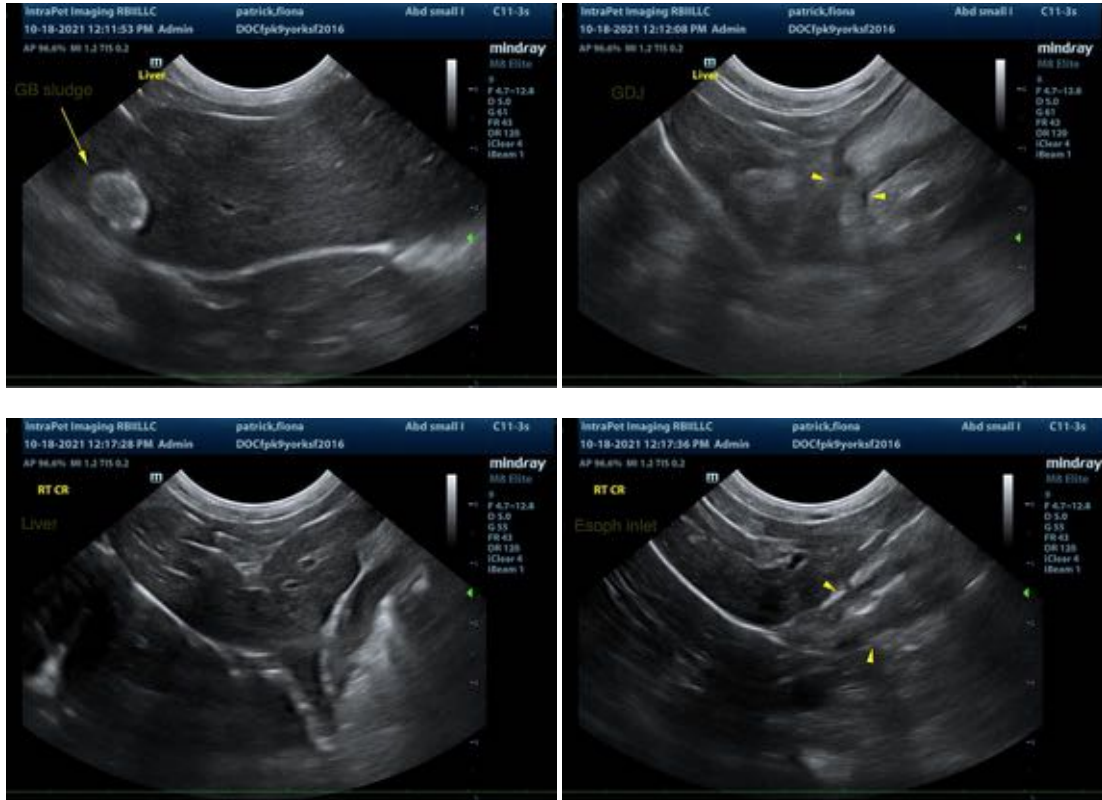


**The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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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