

**DATE PRESENTING CLINICAL SIGNS**

12/16/21

History: acute presentation for not eating/vomiting/lethargy over the weekend. Pt visibly jaundiced on PE. BW showed ALT >2000, ALKP > 993, GGT elevated, Bilirubin elevated. RBC and WBC NSF. Sent to ER for u/s and care. Pt's u/s showed slightly small liver, otherwise NSF, ALT/ALP/GGT improved with aggressive IV fluid therapy, but bilirubin continued to increase over 3 days maxing out at 28. Pt transferred back to rDVM for continued care due to cost of care and has been treated with Clavamox, Baytril, Metronidazole, Denamarin, Ursodiol, low dose Pred and sq fluid therapy for 8 weeks. Pt has had significant improvement in bilirubin levels (improved with 1.4) and gradual improvement of ALT and ALKP to ~500 each. Pt in last 8 days developed ascites, Fluids were reduced to 1/3 of original amount and short course of Lasix attempted, no improvement.

PATIENT

Kirin Vandergriff

SPECIES

Canine

BREED

Bulldog

SEX

Spayed Female

AGE

3/6/15

WEIGHT

56.7 Pounds

INTERPRETED BY

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(Small Animal Internal
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IMAGING PERFORMED BY

Rachel Brillhart RDMS

HOSPITAL NAME

Bayside AMC

REFERRING VET

Dr. Buchanan

INVOICE

33507

Lab Results: Attached separately within request.

Radiographs: ascites.

Date of Previous IntraPet Ultrasound: No previous IntraPet scans.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**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.

The left kidney has a normal shape and size (6.56 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (6.94 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.85 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 0.95 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.

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.

Liver

The liver is small and irregular in shape. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. While no focal lesions are observed, the liver parenchyma is severely nodular, irregular and heterogeneous.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. 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. Duodenum wall measured 0.48 cm. Jejunum wall measured 0.30 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 prominent and mottled compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

There is a moderate amount of free abdominal fluid present. There are prominent mesenteric lymph nodes in the cranial abdomen, measuring 0.85 and 0.93 cm. The omentum is hyperechoic around the enlarged lymph nodes in the cranial abdomen.

Other

A brief view of the heart was submitted. No significant pericardial effusion was seen.

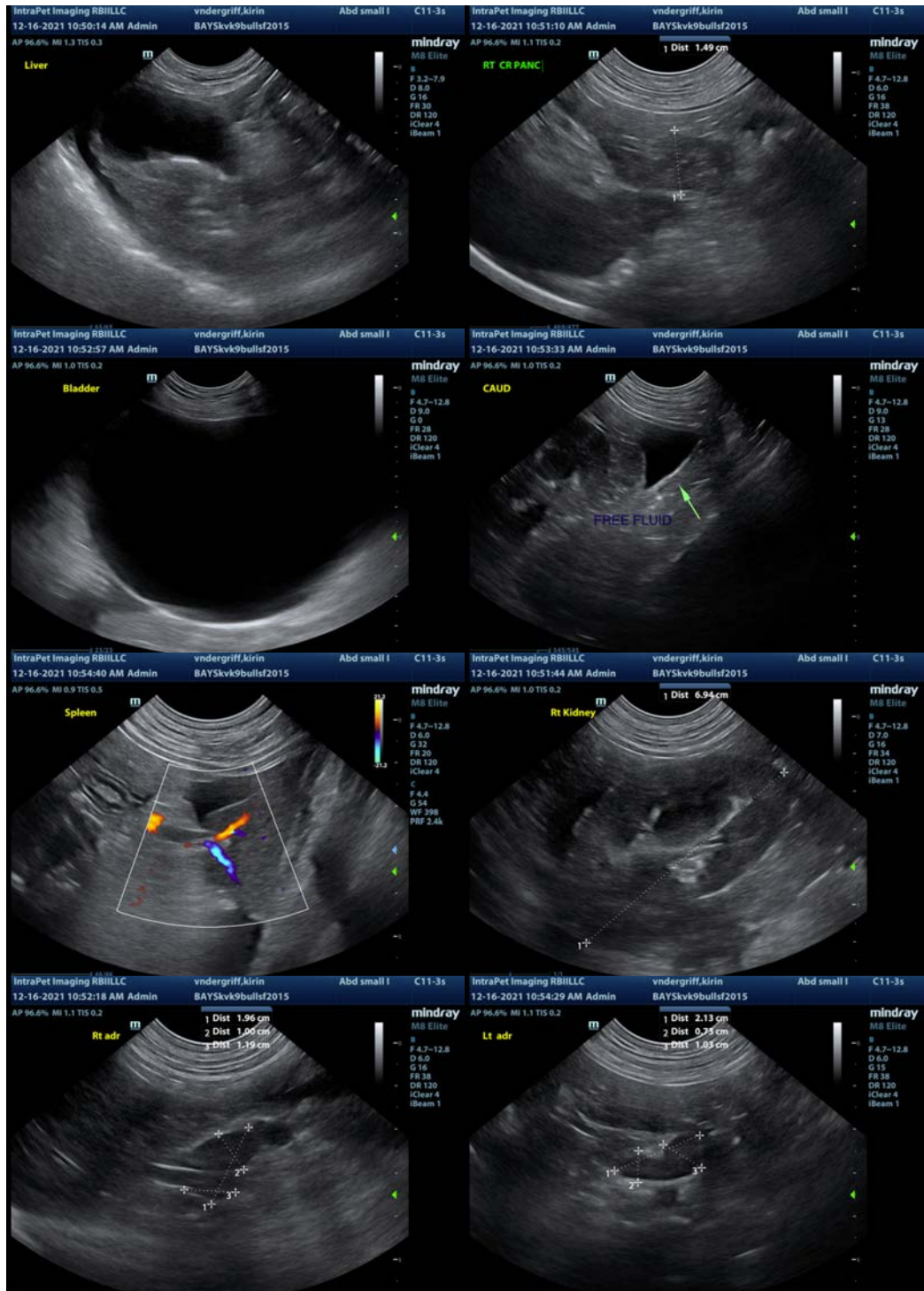
ULTRASONOGRAPHIC FINDINGS

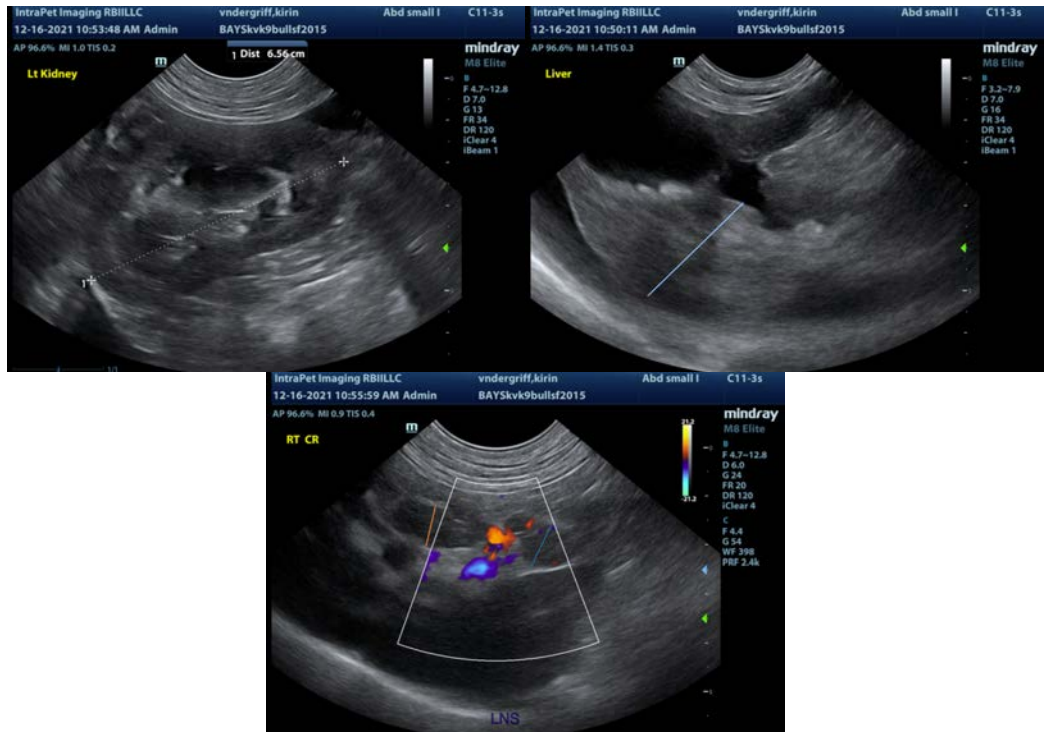
- Small, irregular, nodular liver – concerning for an end stage cirrhotic liver.
- Enlarged cranial abdominal lymph nodes – The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.
- Moderate amount of free abdominal fluid – concerning for possible portal hypertension.
- Prominent, mottled pancreas – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The liver appears small, heterogeneous, and somewhat nodular. This combined with the history given and the free abdominal fluid is concerning for and end stage liver with portal hypertension. A cause is uncertain. No obvious shunt are visualized, but cannot be 100% excluded based on ultrasound imaging. Additionally, you can see this type of scenario with either a toxic insult or infectious process resulting in eventual scarring of the liver. Prognosis is guarded, but some patients can find a middle ground where they compensate and have

some quality of life. If a more definitive diagnosis is desired, recommend liver biopsy provided coagulation parameters are ok, and advanced imaging with contrast CT scan.





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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