**DATE PRESENTING CLINICAL SIGNS**

2/9/2022

History: Pet was first seen in our clinic in December 2021. Notes from that day state: O said in June P went to ER from something he ate. P got meds and was fine. P's eye began to be yellow in Sept and P had bw done and they said P had something wrong with his liver and P was given meds (Ursodiol and Denamarin). December 2021: HEPATOPATHY ALT 365, ALKP 486. Presented 1/18/22 for dental cleaning: CBC/chem/Lytes: MON L, PLT L (117), MPV H (12.8), ALB L (2.2), ALKP H (252), ALT H (319), BUN L (5), CHOL L (69), GGT H (15), TBILI H (1.8). On PE, belly was found to be mildly distended; we did aspirate a clear/light yellow tinted/straw colored fluid (client declined sending out for cytology); we also performed cystocentesis on bladder and the urine was a very dark clear yellow; Otherwise, pet was BAR and recovered well from anesthesia.

PATIENT

Dimples Olivares

SPECIES

Canine

BREED

Pitbull Terrier

Lab Results: we only have superchem/cbc results. 4dx negative. No imaging performed.
Date of Previous IntraPet Ultrasound: No previous IntraPet scans.
Sedation: Declined.
Stat Report: Not requested.
Imaging Performed By: Rachel Brillhart, RDMS.

***The large amount of ascites limits visualization of some organs.

SEX

Male Neutered

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System**

The urinary bladder. Is moderately distended. The wall is appropriate in thickness, with a smooth mucosal surface. A large amount of suspended echogenic debris is observed within the lumen, as well as a small amount of mineralized sand +/- tiny calculi. The region of the trigone and the visible portion of the proximal urethra are normal.

AGE

9-7-2015

WEIGHT

28.85 kg

The prostate is normal in size (1.64 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

INTERPRETED BY

Andrea Nicastro, DMV,
Diplomate DACVIM
(Small Animal
Internal Medicine)

The left kidney is normal size (7.05 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal size (7.40 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

HOSPITAL NAME

Banfield Pet Hospital
of Westminster

Adrenal Glands

The left adrenal gland is normal size (0.72 cm at cranial pole) (0.81 cm at caudal pole) (2.05 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.

REFERRING VET

Dr. Carrol

The right adrenal gland is normal size (0.97 cm at cranial pole) (0.88 cm at caudal pole) (2.65 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.

INVOICE

10299

Spleen

The spleen is normal in size (2.64 cm in width at the level of the hilus) with a normal capsular contour. The parenchyma is subtly mottled in appearance. No focal lesions are observed. Splenic vasculature is normal.

Liver

The liver is subjectively small in size with irregular to rounded peripheral contours. The parenchyma is hyperechoic relative to the spleen and irregular, bordering on nodular in appearance. Hepatic vasculature and intrahepatic biliary tracts appear to be of normal volume with no evidence of congestion.

The gall bladder lumen is moderately distended. The wall is thin and smooth. Luminal contents are anechoic. The cystic and common bile ducts are normal.

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 small intestinal lumen is not dilated. 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 or overt infiltrative disease is noted.

Pancreas

The pancreas is obscured somewhat by the large amount of ascites. In the visualized portions, no obvious pathology is seen.

Free Abdomen

A large amount of free fluid is present within the abdomen. A scant amount of echogenic debris is suspended within the fluid. The mesentery throughout the abdomen is hyperechoic. The abdominal lymph nodes are normal/not visible.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- The hepatic parenchymal changes are most consistent with a chronic hepatopathy (i.e., cirrhosis and/or inflammatory disease or hepatotoxicosis (i.e., copper). Neoplasia is possible but considered less likely given the hepatic size and chronicity of the liver enzyme elevations.
- The severe ascites is likely secondary to portal hypertension (i.e., due to hepatic failure), +/- low oncotic pressure.

Secondary Findings

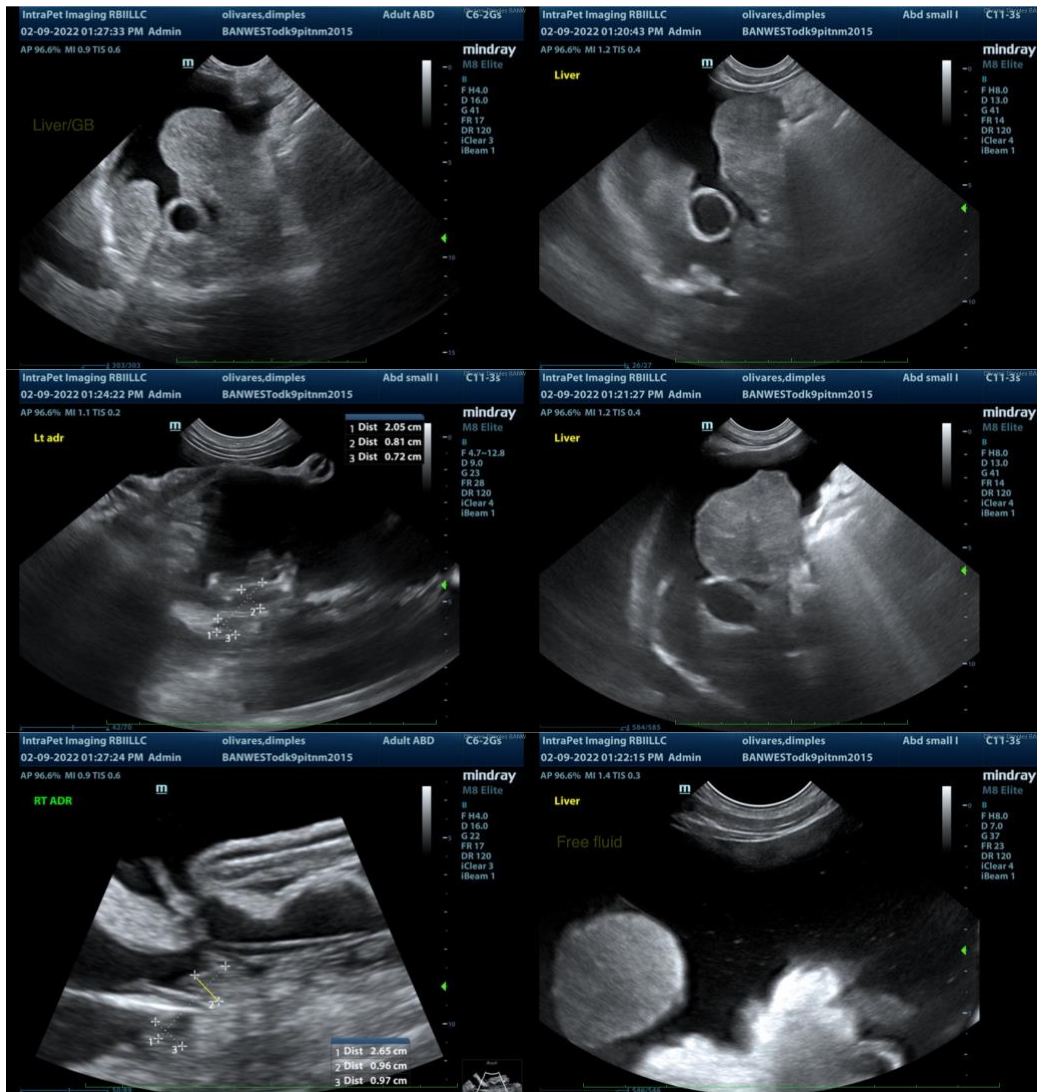
- Urinary bladder debris/sand +/- tiny calculi
- The splenic parenchyma changes are most consistent with a benign process such as lymphoid hyperplasia, extramedullary hematopoiesis or splenitis with a low possibility of infiltrative neoplasia (i.e., lymphoma, mast cell neoplasia).

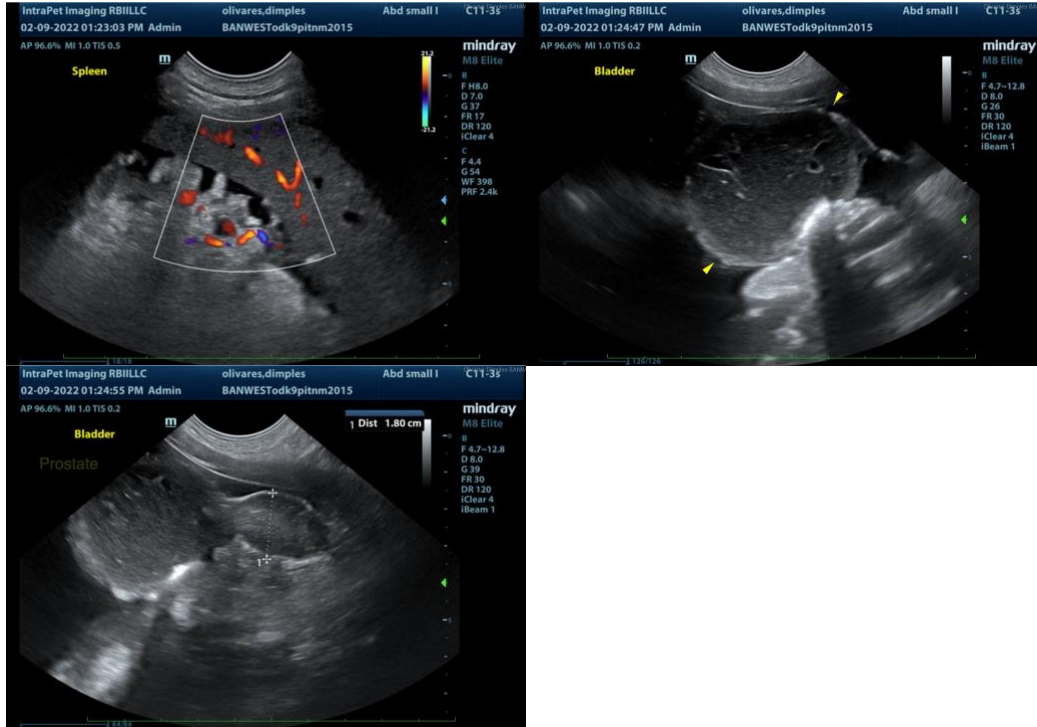
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- A surgical liver biopsy with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for potential copper quantitation would be ideal to try to get a definitive diagnosis. Oftentimes with cirrhotic livers, however, the initial underlying cause/insult cannot be identified via histopathology. Therefore, palliative care should be a consideration.
- Supportive measures such as continued antioxidant therapy (i.e., Denamarin, Ursodiol),

symptomatic management +/- empirical antibiotic treatment as well as therapeutic abdominocentesis should be considered.

- Three-view thoracic radiographs are recommended to assess cardiopulmonary status.





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.

Andrea Nicastro, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
info@SonoPath.com