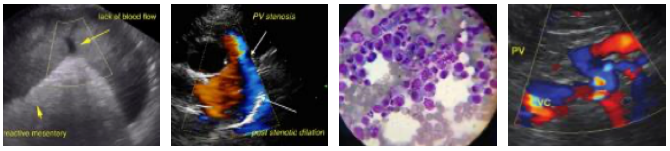
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Bruno Rivera

SPECIES
Canine

BREED
Goldendoodle

SEX
Male, neutered

AGE
12 Months

WEIGHT
21 lbs.

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

IMAGING PERFORMED BY
Dr. Ferrer

HOSPITAL NAME
Paseos VC

REFERRING VET
Dr. Bonnet

INVOICE
14557

DATE
2/7/23

PRESENTING CLINICAL SIGNS

History: The patient was referred for an abdominal ultrasound for high liver enzymes due to constant vomiting. Currently on Denamarin, Famotidine, and Metronidazole.
Abnormal PE/Chem/CBC/UA Results: PE or BW not provided

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder wall is 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 prostate is normal in size (0.92 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney is normal size (5.00 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.

The right kidney is normal size (5.40 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.

Adrenal Glands

The left adrenal gland is normal size (0.29 cm at cranial pole) (0.30 cm at caudal pole) (2.09 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 (0.45 cm at cranial pole) (0.37 cm at caudal pole) (2.53 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.

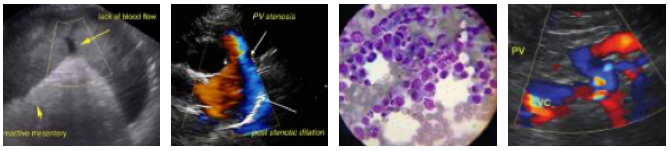
Spleen

The spleen is normal in size (1.49 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. Luminal contents are anechoic. The cystic and common bile ducts are normal/not seen.

Gastrointestinal



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The gastric lumen is mildly distended with ingesta. The gastric wall is 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 ileocecocolic junction and colonic wall are normal. There is no evidence of an obstructive pattern.

Pancreas

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

Free Abdomen

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. A few prominent mesenteric lymph nodes are visualized, the largest measuring 1.07 cm in length. The nodes are normal in shape and echogenicity.

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

- An obvious cause for the patient's elevated liver enzymes is not definitively identified in this study. Differentials include Leptospirosis, inflammatory disease, hepatotoxicity, congenital disease (i.e., microvascular dysplasia), other hepatopathy. There is no obvious evidence of a congenital extrahepatic portosystemic shunt. This differential cannot be completely excluded. However, in light of the normal liver size, it is considered less likely.

Secondary Findings:

- The lymph node changes are most consistent with reactive lymphadenitis or lymphoid hyperplasia.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Pre and post prandial serum bile acids should be considered along with Leptospirosis testing (i.e., blood and urine PCR, serology).
- Also consider a contrast abdominal CT scan to further assess for a congenital portosystemic shunt, particularly if the clinical suspicion for disease is high.
- Ultimately, liver biopsies may be necessary to get a definitive diagnosis. If pursued, aerobic and anaerobic bile cultures should also be obtained along with acquisition of additional hepatic tissue samples for potential copper quantitation.

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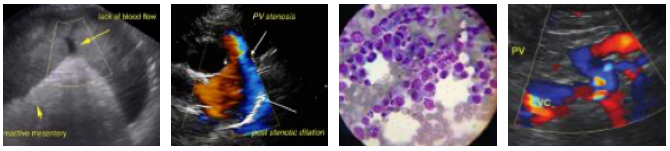

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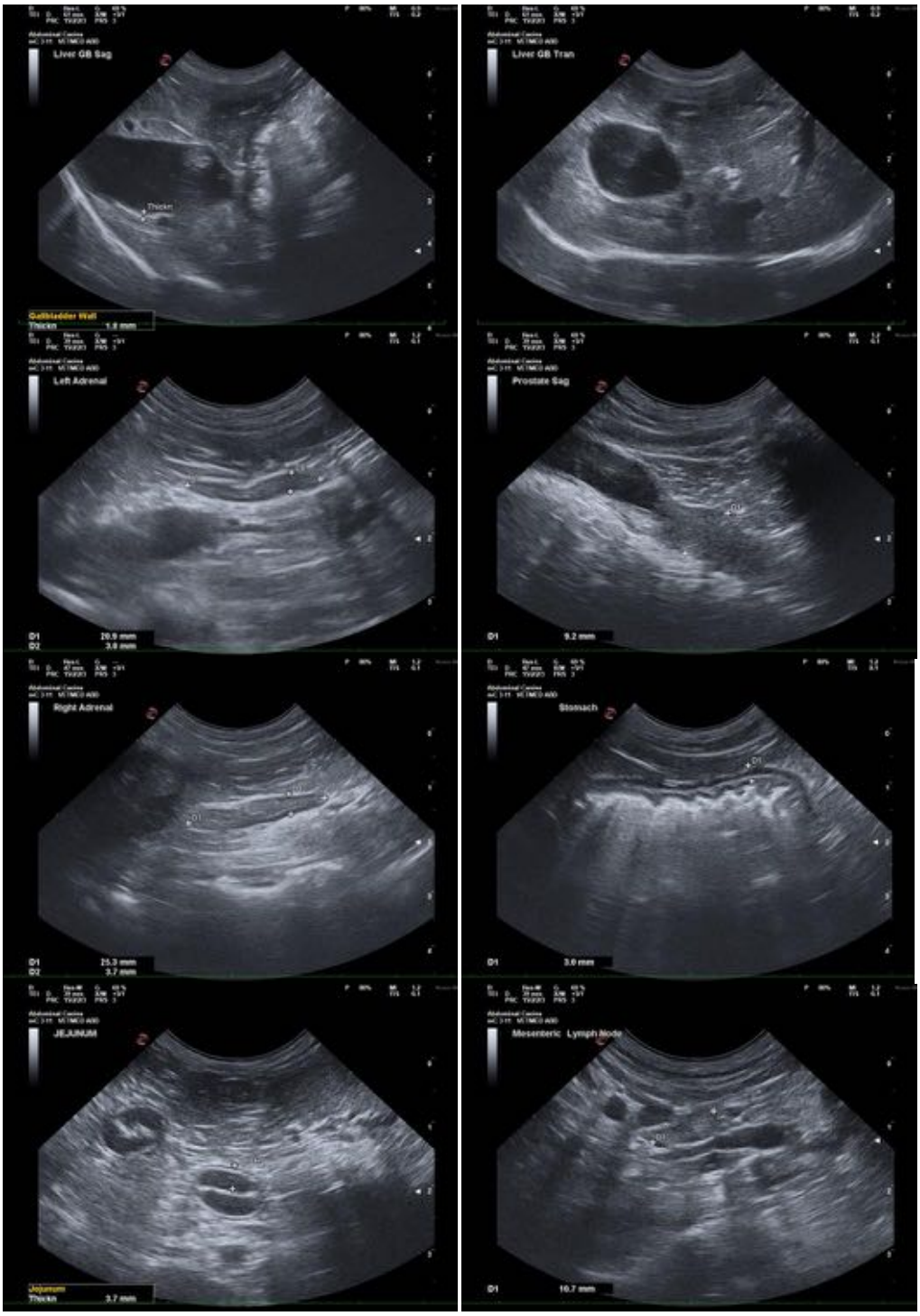

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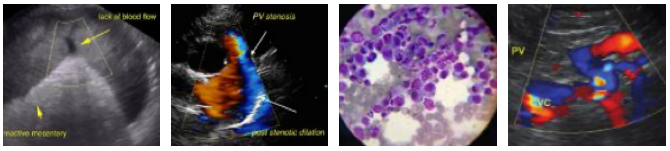

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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