

**DATE PRESENTING CLINICAL SIGNS**

11/1/21

History: Chronic mild ALT elevation. Pet is scheduled for a dental cleaning. Previous dental uneventful, but given persistent liver value elevation and age, advised screen.

PATIENT

Basil Wallace

Current Medications: No current medications.

Lab Results: 10/26/21 ALT 180, 9/26/20 ALT 208, 8/16/19 ALT 185.

Date of Previous IntraPet Ultrasound: No previous IntraPet scans.

Sedation: Not needed.

SPECIES

Canine

Stat Report: Not requested.

BREED

Chihuahua

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

Male, neutered

The prostate is normal in size (0.88 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

AGE

12/22/2011

The left kidney is normal size (4.61 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. A hyperechoic medullary band is observed adjacent to the corticomedullary junction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

WEIGHT

15.81 lbs.

The right kidney is normal size (4.58 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. A hyperechoic medullary band is observed adjacent to the corticomedullary junction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

INTERPRETED BY

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 Medicine)

Adrenal Glands

The left adrenal gland is normal size (0.57 cm at cranial pole) (0.46 cm at caudal pole) (1.94 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.

HOSPITAL NAME

Everhart Veterinary
 Center

The right adrenal gland is normal size (0.63 cm at cranial pole) (0.47 cm at caudal pole) (1.81 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**INVOICE**

12444

Spleen

The spleen is normal in size (0.88 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 prominent in size with slightly swollen peripheral contours. The parenchyma is isoechoic relative to the spleen with a finely heterogeneous parenchymal pattern. No distinct focal lesions are observed. Vascular and biliary tracts are of normal volume with no evidence of congestion. The gall bladder lumen is moderately distended. The wall is thin and smooth. A small to moderate amount of mostly gravity-dependent echogenic debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

The gastric lumen is mildly gas distended. The gastric wall in the region of the fundus is normal in thickness with a normal layering pattern. In the region of the pyloric antrum the wall is prominent (up to 0.60 cm) with a thickened muscularis layer. 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. 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:

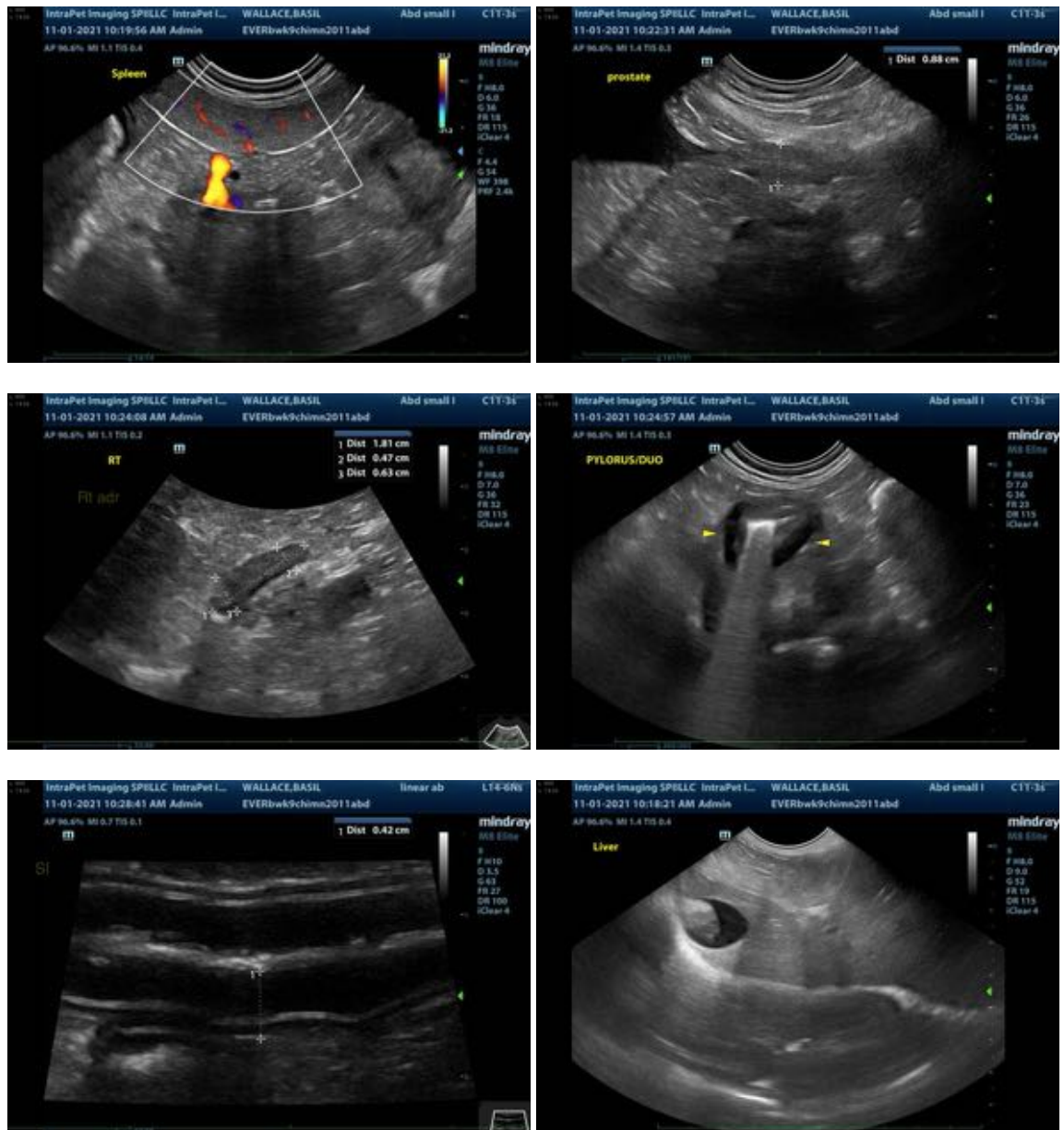
- An obvious cause for the elevated liver enzymes is not identified in the study. However, a microscopic hepatopathy (i.e., bacterial cholangiohepatitis, Leptospirosis, chronic active hepatitis, copper-associated hepatotoxicity, reactive hepatopathy, infiltrative neoplasia (less likely)) are considerations.

Secondary Findings:

- The bilateral renal medullary bands may be a benign incidental finding. Alternatively subclinical renal disease may be present. Correlation with clinical findings is recommended.
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- The prominent pyloric antral wall may be a normal variant for this patient or could be consistent with hypertrophy, inflammation or, less likely, an emerging neoplastic process.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- If a dental procedure is to be pursued, given the liver abnormalities, benzodiazepines should be avoided and opioids should be used judiciously.
- To further investigate the liver changes, hepatic tissue sampling (i.e., fine needle aspirate) or surgical biopsy with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for copper quantitation can be considered. Clotting times (i.e., PT/PTT) should be assessed prior to any tissue sampling. Three-view thoracic radiographs should be also be performed prior to anesthesia.
- Leptospirosis testing can also be considered. However, in light of the chronic liver enzyme elevations, this differential is considered less likely.





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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