

PATIENT PRESENTING CLINICAL SIGNS

Pi Fitzgerald History: Hx of elevated liver values noted on pre - op bloodwork for dental cleaning; bile acids performed, and both were slightly elevated. No health concerns other dental disease.

SPECIES Abnormal PE/Chem/CBC/UA Results: Dental disease, overweight, umbilical hernia, otherwise NSF on PE.
Canine Bloodwork: CBC: Mildly hemoconcentrated. Rest UR Chem: ALT (426), AP (171) Bile acids: PRE (22.5) (should be <13) POST (31.6) (should be <25)

BREED ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Dachshund **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.

SEX

Spayed Female

The **left kidney** is normal size (4.52 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.

AGE

6 years

The **right kidney** is normal size (4.15 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.

WEIGHT

20.1 lbs

Adrenal Glands

The **left adrenal gland** is normal size (0.30 cm at cranial pole) (0.44 cm at caudal pole) (1.71 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.

INTERPRETED BY

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

The **right adrenal gland** is normal size (0.37 cm at cranial pole) (0.51 cm at caudal pole) (1.72 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.

IMAGING PERFORMED BY

Jessica Bailes

Spleen

The **spleen** is normal in size (1.55 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.

HOSPITAL NAME

All Creatures
Great&Small/Corvalis

Liver

The **liver** is subjectively prominent in size with normal curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely homogeneous in appearance. No distinct focal lesions are observed. Vascular and biliary tracts are of normal volume with no evidence of congestion. The portal vein to caudal vena cava ratio is approximately 1: 1.

REFERRING VET

Dr. Beth Marszewski

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.

INVOICE

11394

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 pyloric

DATE

8.11.22

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. 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. The abdominal **lymph nodes** are normal/not visible.

ULTRASONOGRAPHIC FINDINGS

resection and astimosous

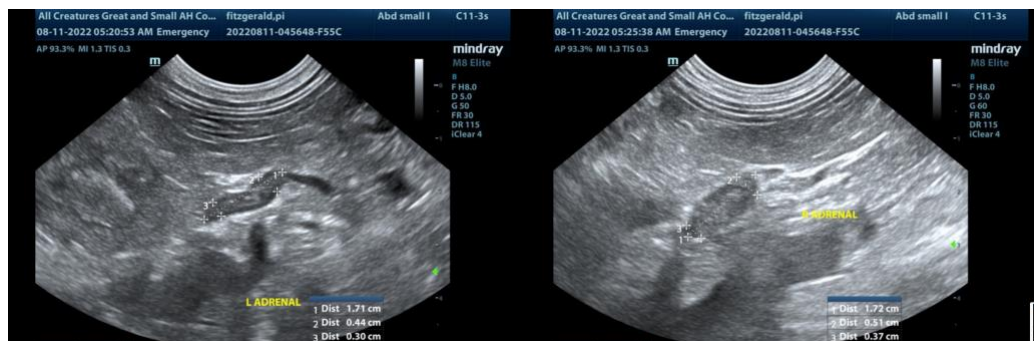
- Nonspecific diffuse hepatopathy. Considerations include inflammatory disease (i.e., bacterial cholangiohepatitis, chronic active hepatitis), hepatotoxicosis (i.e., copper), Leptospirosis, reactive hepatopathy, infiltrative neoplasia (unlikely), other.

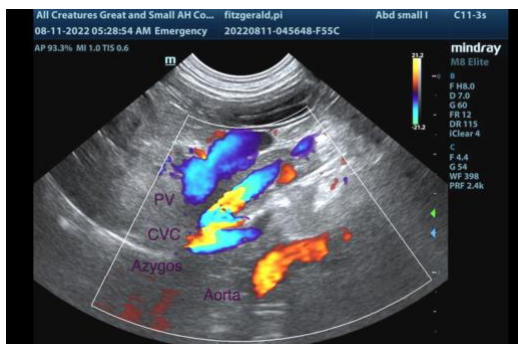
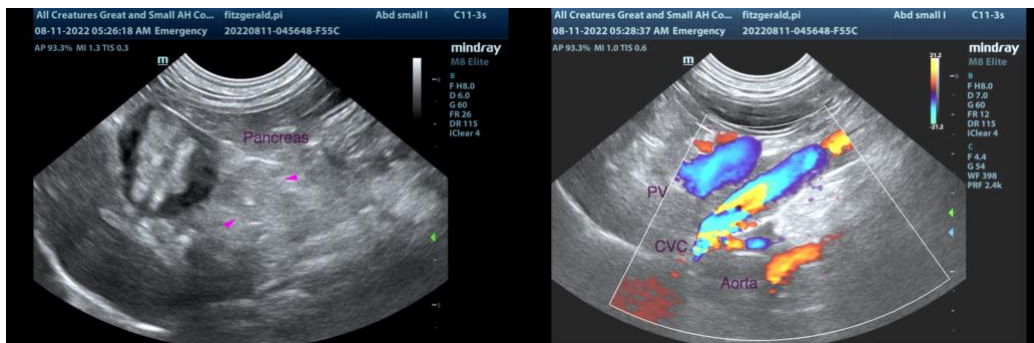
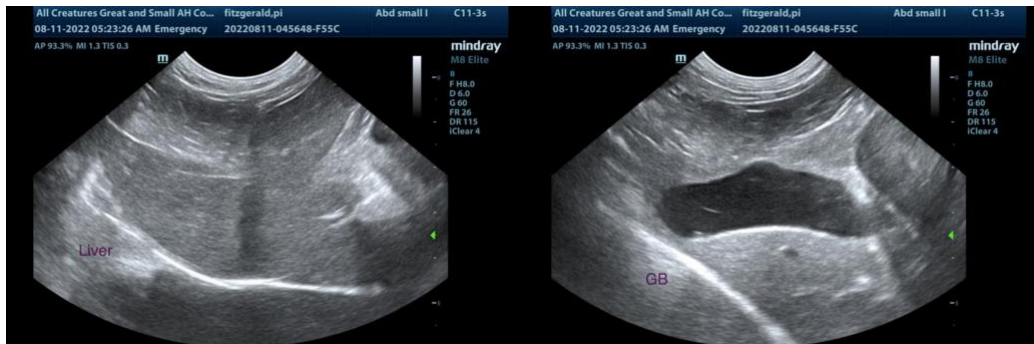
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Consider Leptospirosis testing (i.e., blood and urine PCR, serology), particularly if the liver enzyme elevations are acute in nature.
- Surgical biopsy may be necessary to get a definitive diagnosis if cytologic evaluation is inconclusive. Prior to anesthesia, three-view thoracic radiographs and clotting times (PT/PTT) are recommended.
- If a conservative approach is desired, consider empirical treatment for bacterial cholangiohepatitis (amoxicillin-clavulanic acid, +/-metronidazole, Denamarin). 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.

ADDENDUM (8/15/22)

- Upon further review of the portal hilus, the fourth vessel that is abnormally dilated with flow, appears to be a vena caval azygous connection that is abnormal, but not pathologic. Given the normal portal vein volume and lack of other shunting vessels, this anomaly does not need intervention, and is considered an abnormal variant without functional issues. CT could be performed for further definition.





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.

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