

**DATE PRESENTING CLINICAL SIGNS**

8/24/21

History: Mildly increased ALT (was noted on adult wellness bloodwork in Feb. of 2021. Recheck chemistry on 8/20/21 revealed further increased ALT and new increases in both ALP and GGT. Lilly has a history of urinary incontinence, lenticular sclerosis and moderate to severe dental disease.

PATIENT

Lilly Salvas

Current Medications: Proin 50mg q 12 hours since 2/25/2021

SPECIES

Canine

Lab Results: 2/25/21: Chemistry - ALT 172IU/L. Cholesterol 346mg/dL. Urinalysis - USG 1.028, pH9.0, Protein 3+. CBC and AccuPlex – Unremarkable. T4 – WNL. 8/20/21: Chemistry - ALT 281IU/L. ALP 159 IU/L. GGT17IU/L. Cholesterol 429mg/dl. Triglycerides: 304mg/dL.

BREED

Labrador Mix

Date of Previous IntraPet Ultrasound: No previous.

SEX

Female Spayed

Sedation: Not needed.

Stat Report: Not requested.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**AGE**

2008

Urinary System

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder is moderately distended. A small amount of suspended echogenic debris is observed within the lumen. 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.

WEIGHT

62.6 lbs.

The left kidney is normal size (6.74 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.

INTERPRETED BY

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

The right kidney is normal size (6.27 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.

HOSPITAL NAME

Bel Air Veterinary
 Hospital

Adrenal Glands

The left adrenal gland is normal size (0.72 cm at cranial pole) (0.78 cm at caudal pole) (3.11 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. Young

The right adrenal gland is normal size (0.55 cm at cranial pole) (0.62 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.

INVOICE

11696kk

Spleen

The spleen is normal in size (1.38 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. Several, small, ill-defined myelolipomas are observed in the region of the hilus. 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 is mildly distended. The wall is normal in thickness. A small amount of aggregated, echogenic debris is observed within the lumen, most of which is gravity-dependent and some of which is suspended. The cystic and common bile ducts are normal/not seen.

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 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 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.

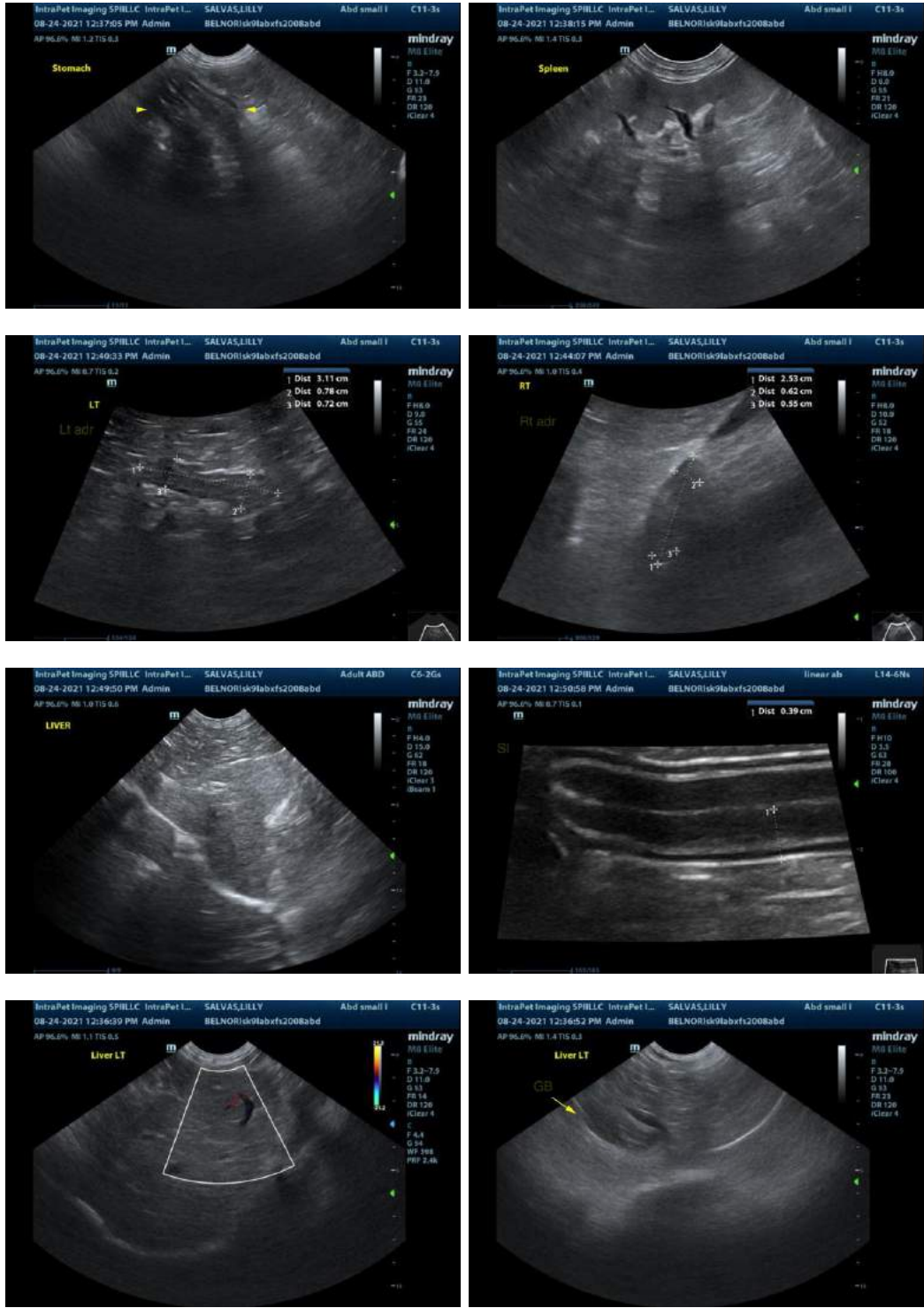
ULTRASONOGRAPHIC FINDINGS

- Gall bladder debris – incidental, non-mucocele.

**An obvious cause for the patient's elevated liver values is not identified in this study. Differentials include inflammatory/immune-mediated disease, hepatotoxicosis (i.e., copper), early infiltrative neoplasia (unlikely), reactive hepatopathy +/- concurrent age-related pathology.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

1. Cytologic evaluation of the liver should be considered in this patient if clotting status is appropriate. A fine needle aspirate using a 25-gauge needle is recommended. If cytologic evaluation is inconclusive, consider a surgical liver biopsy with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for copper quantitation.
2. If a conservative approach is desired, consider empirical treatment for bacterial cholangiohepatitis (amoxicillin-clavulanic acid, Denamarin Advanced). 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.
3. Leptospirosis testing can also be considered. However, given the chronicity of liver enzyme elevations, this differential is considered unlikely.
4. Three-view thoracic radiographs are recommended prior to any anesthetic event.



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.

Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)
Andrea.nicastro@sonopath.com