

**DATE PRESENTING CLINICAL SIGNS**

9/3/21

Patient presented for dental on 8/30/21, pre-operative bloodwork revealed a new, severe ALT elevation and a persistent severe ALKP elevation. Dental cleaning was postponed, and bile acids was performed, which also came back elevated. Patient has been treated by dermatologist long term for severe skin issues. Has been on low dose Temaril P for about 6 months. Patient was seen by dermatologist beginning of September for severe resistant superficial pyoderma. Bloodwork was performed at that time which showed ALKP of 1700, and normal ALT. Patient was tapered off Temaril-P over the past month, started on Apoquel and Doxycycline for pyoderma. By 8/31, patient has been completely weaned off Temaril P, but is still on Apoquel and Doxycycline. When bile acids came back elevated, we discontinued Doxycycline (9/1/21).

PATIENT

Lucy Bohne

SPECIES

Canine

Current Medications: Doxycycline 200mg BID 3 weeks, Apoquel 16mg SID 3 weeks, Temaril P, 2 tablet/day for ~ 6 months, then one tablet/day for 1 week, then one tablet EOD for 2 weeks, now discontinued.

BREED

Pit Bull

Lab Results: (8/3/21) - CBC/Chem: ALKP 1942, otherwise WNL (from dermatologist). (8/31/21) - CBC/Chem: ALKP > 2000, ALT 699, GGT 19.
 (8/31/21) - Bile acids: pre 36.2 umol/L (ref < 13), post 87.3 umol/L (ref < 25)

SEX

Female Spayed

Date of Previous IntraPet Ultrasound: No previous IntraPet scans.

Sedation: not needed

AGE

2013

Stat Report: not requested

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**WEIGHT**

79 lbs.

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.

The left kidney is normal size (7.02 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.

The right kidney is normal size (6.72 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.

Adrenal Glands

The left adrenal gland is normal size (0.55 cm at cranial pole) (0.78 cm at caudal pole) (2.94 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.

The right adrenal gland is normal size (0.55 cm at cranial pole) (0.69 cm at caudal pole) (3.30 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 (1.80 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.

INTERPRETED BY

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

HOSPITAL NAME

Banfield Pet Hospital of
 Abingdon

REFERRING VET

Dr. Durastanti

INVOICE

11768kk

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. A small amount of aggregated, gravity-dependent, echogenic debris is observed within the lumen. 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 mildly distended with ingesta. 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

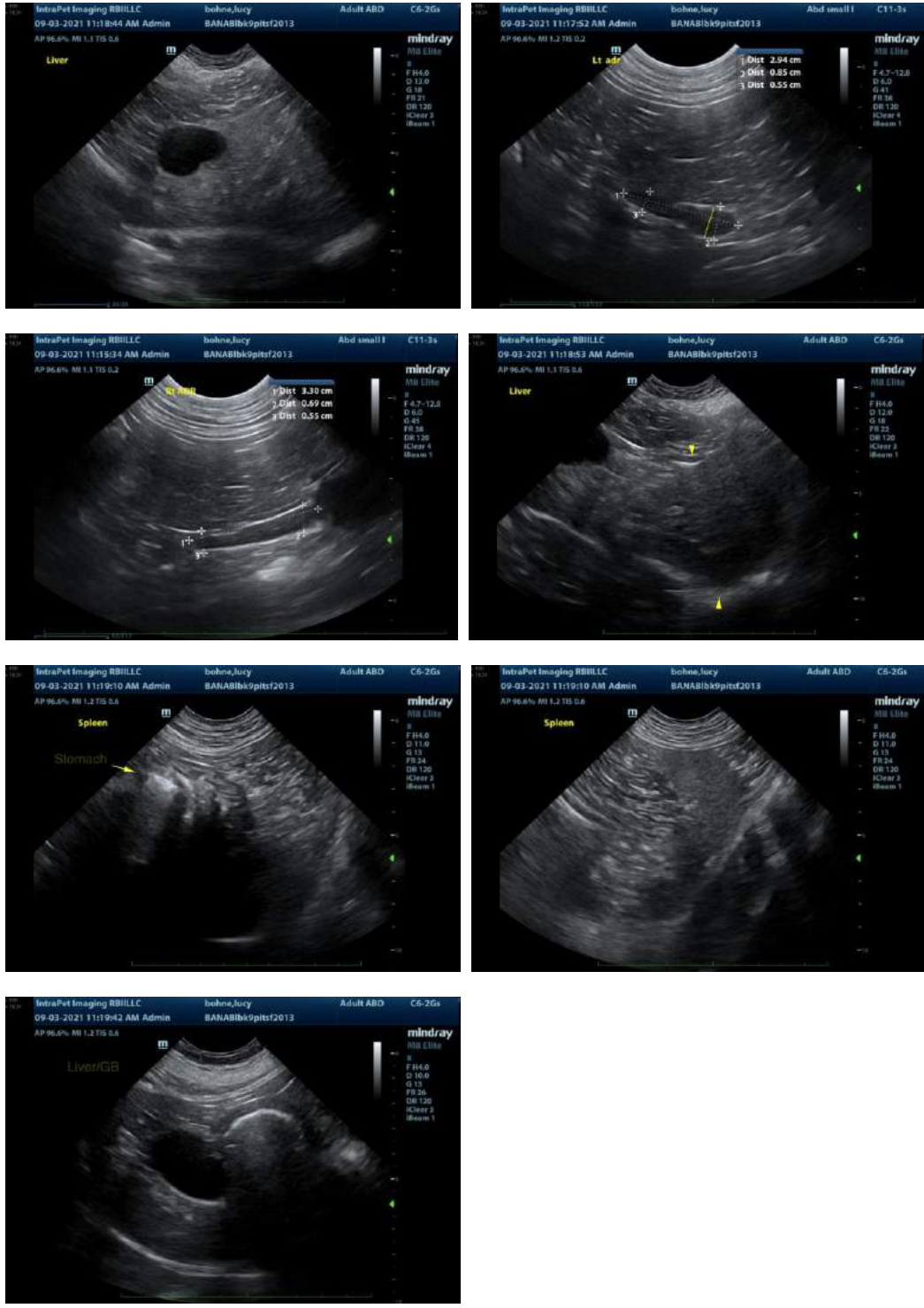
The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

ULTRASONOGRAPHIC FINDINGS

- 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 (i.e., copper, drug induced), infiltrative neoplasia (less likely)) cannot be excluded.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

1. Consider Leptospirosis testing (i.e., blood and urine PCR, serology) particularly if the disease is endemic in the patient's geographic region.
2. Also consider discontinuation of all drugs prescribed prior to the onset of the ALT elevation to help determine if a drug induced hepatopathy is present.
3. Consider a fine needle aspirate of the liver (if clotting status is appropriate). A 25-gauge needle should be used.
4. Supportive care for acute hepatopathy (i.e., broad spectrum antibiotics, liver antioxidants) is recommended while awaiting test results.
5. If the patient's liver values do not improve with supportive care and discontinuation of the previously prescribed medications, hepatic tissue sampling (i.e., fine needle aspirate or biopsy) +/- aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for potential copper quantitation) may be warranted.
6. Given the patient's age, three-view thoracic radiographs should be performed 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