



PATIENT PRESENTING CLINICAL SIGNS

Layla Gardiner

History: Lab work was routine/pre-anesthetic for dentistry. Hx Persistent + progressive elevated liver enzymes. Hx hyperthyroidism diagnosed in April 2022, however was treated with R I-131 in June 2022 at Oradell and has since been doing well. TT4 now normal. Has only gained about 1 lb back since thyroid treatment but BCS seems adequate 2.5-2.75/5 April of 2022 - ALT = 235, AST = 249, BUN = 36, TT4= 6.5. Now Values - ALT 477, AST = 686, BUN = 54, TT4 = 1.8
Abnormal PE/Chem/CBC/UA Results: April of 2022 - ALT = 235, AST = 249, BUN = 36, TT4= 6.5.
Current Values - ALT 477, AST = 686, BUN = 54, TT4 = 1.8

SPECIES

Feline

BREED

Domestic Shorthair

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

SEX

Spayed female

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

AGE

13 years

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The left kidney measured 3.0 cm. The right kidney measured 3.5 cm.

WEIGHT

8.5 lbs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

Adrenal Glands

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient.

IMAGING PERFORMED BY

Amy Priest

Spleen

HOSPITAL NAME

Long Valley AH

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes was noted. The spleen measured 0.7 cm.

REFERRING VET

Dr. Welch

INVOICE

42631

Liver

The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. The common bile duct

DATE

2/7/23



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measured 0.3 cm. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

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Gastrointestinal

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

BREED

Domestic Shorthair

Pancreas

SEX

Spayed female

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

AGE

13 years

ULTRASONOGRAPHIC FINDINGS

Structurally unremarkable abdomen.

WEIGHT

8.5 lbs

Non-specific inflammatory hepatopathy, possible reactive hepatopathy.

Minor age related renal changes.

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

FNA of the liver can be considered to assess inflammatory cell type. There was no evidence of significant visceral disease.

IMAGING PERFORMED BY

Amy Priest

The hepatic clinical sonographic presentation is most consistent with Reactive Hepatopathy which is the most common cause of liver enzyme elevation in dogs and cats. The presumption is that gut and other organ antigen stimuli may be causing a low-grade immune response through portal system with which the liver is reacting to causing low-grade enzyme elevations. US-guided FNA could be performed to assess if low grade lymphoplasmacytic inflammation is present that would support this theory. If FNA is performed, please ask the cytologist to emphasize the primary inflammatory cell type. Empirical treatment measures to address this issue can include diet change to hydrolyzed diet, probiotics, deworming, nutraceuticals (SAME, Actigall...), dental exam and cleaning, and potentially antibiotics such as Clavamox. Metronidazole and Tylosin have traditionally been utilized for this purpose but new studies show that both these antibiotics can disrupt the normal intestinal bacterial flora (intestinal dysbiosis) for weeks and up to 4-6 months. Therefore, Metronidazole and Tylosin should be utilized as a last resort if other efforts have not been effective and sonographic organ appearance remains benign.

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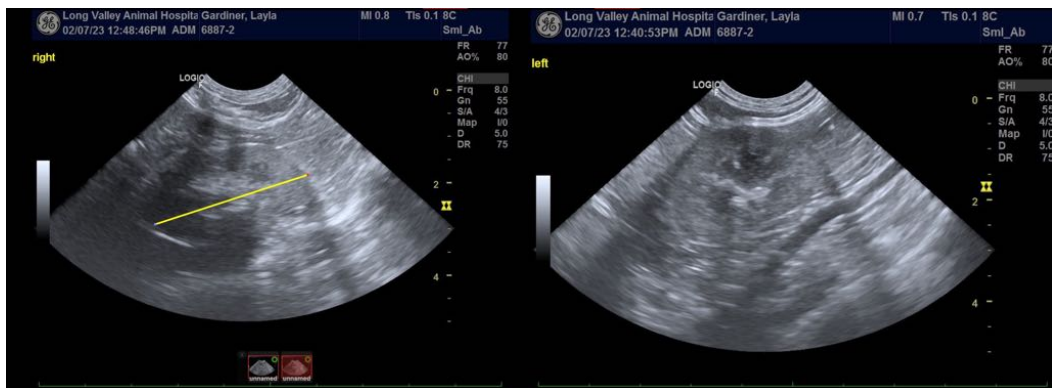
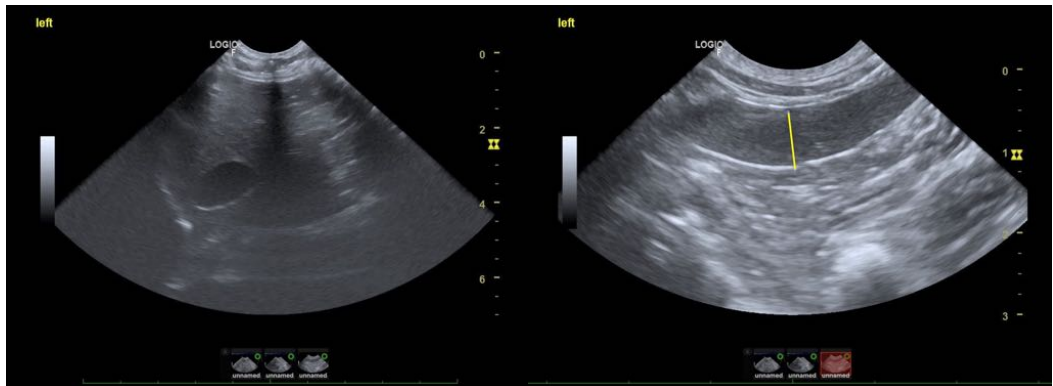
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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