



PATIENT PRESENTING CLINICAL SIGNS

Star Arpin

History: Osteoarthritis of hips and spine - patient 3 limbed - missing LEFT FRONT She is on prednisone 10 mg EOD and gabapentin PRN with concurrent laser therapy. Abdomen has become very distended and pendulous . Recent surge in liver enzymes noted.

SPECIES

Canine

Abnormal PE/Chem/CBC/UA Results: ALT increased from 96 in 2021 to 321- (18-121) ALP from 270 to 2331 (5-160) Na and K normal

BREED

Mix

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

15 years

The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The right kidney measured 6.21 cm. The left kidney measured 5.27 cm.

WEIGHT

38 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. The right adrenal gland measured 0.57 cm at maximum width.

IMAGING PERFORMED BY

Dr. Gordon

Spleen

HOSPITAL NAME

Coral Ridge 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.

REFERRING VET

Dr. Gordon

Liver

INVOICE

40104

The **liver** images from right and left intercostal as well as subcostal views revealed subjectively normal liver contour and structure. The liver size was slightly excessive. Some age-related parenchymal remodeling was noted but likely not clinically significant at this time. Slight, hyperechoic lipogranulomatous changes were noted and non pathological. Vascular and biliary tracts were of normal volume and no evidence of congestion was noted. The gallbladder presented some dependent debris with essentially normal contour. The cystic and common bile ducts were normal. No overt evidence of active inflammatory, infiltrative or regenerative pathology was noted but should be paired with current

DATE

10/17/22



PATIENT or past LE elevations regarding any clinical significance to this presentation. The hepatic lymph nodes were unremarkable.

Star Arpin

SPECIES *Gastrointestinal*

Canine 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

Mix

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

15 years

ULTRASONOGRAPHIC FINDINGS

Benign hepatopathy.

WEIGHT

38 lbs

Benign abdomen.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

There was no evidence of significant disease. This is likely reactive hepatopathy. The changes are expected for this age patient. The prednisone therapy may be suppressing a more significant presentation, yet structurally the abdomen appeared unremarkable.

IMAGING PERFORMED BY

Dr. Gordon

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.

HOSPITAL NAME

Coral Ridge AH

REFERRING VET

Dr. Gordon

INVOICE

40104

DATE

10/17/22



PATIENT

Star Arpin

SPECIES

Canine

BREED

Mix

SEX

Spayed female

AGE

15 years

WEIGHT

38 lbs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Gordon

HOSPITAL NAME

Coral Ridge AH

REFERRING VET

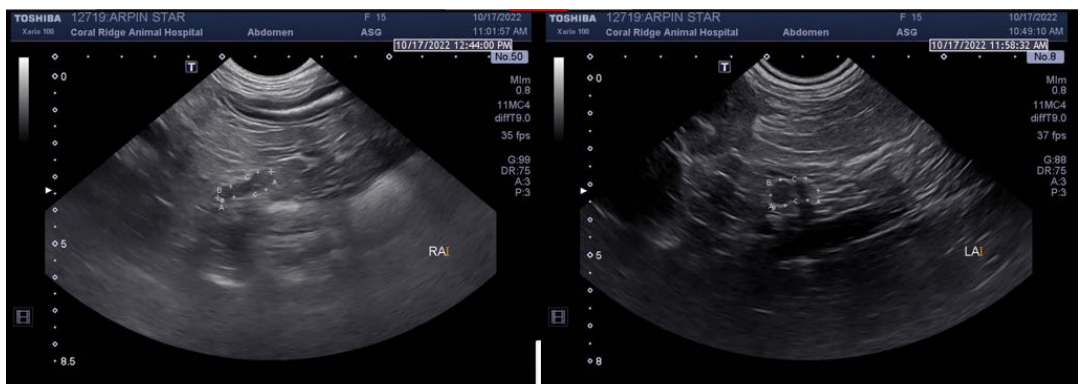
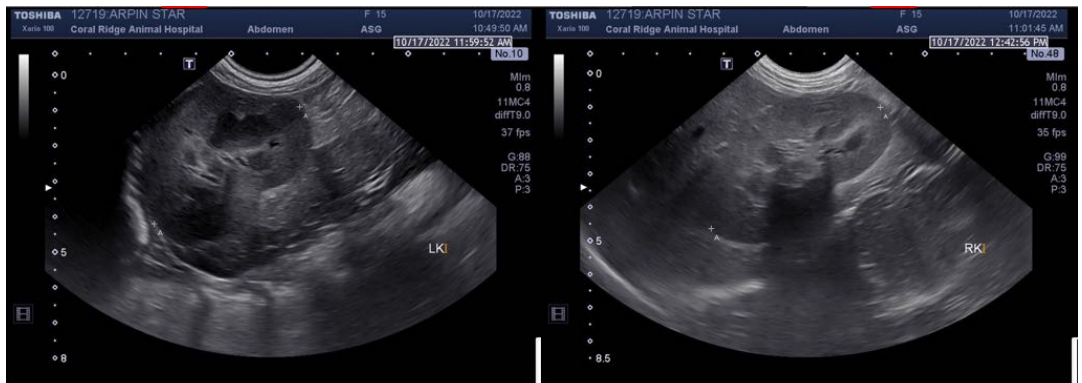
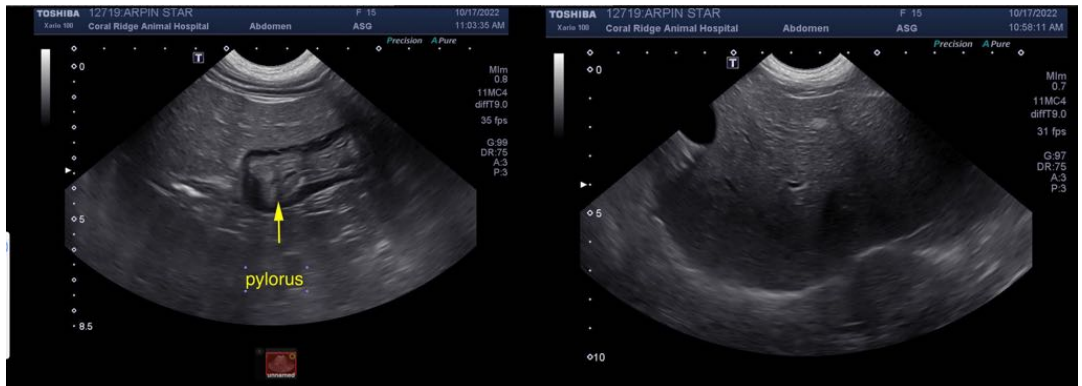
Dr. Gordon

INVOICE

40104

DATE

10/17/22





PATIENT

Star Arpin

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.

SPECIES

Canine

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.

BREED

Mix

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com
info@SonoPath.com

SEX

Spayed female

AGE

15 years

WEIGHT

38 lbs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

**IMAGING
PERFORMED BY**

Dr. Gordon

HOSPITAL NAME

Coral Ridge AH

REFERRING VET

Dr. Gordon

INVOICE

40104

DATE

10/17/22