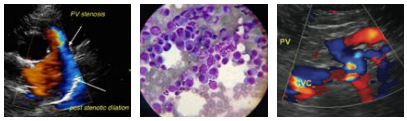
IMAGING PERFORMED BY

IntraPet.com



SonoPath
Clinical Sonography & Telecytology
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DATE

1/9/23

PATIENT

Averi Simms

SPECIES

Canine

BREED

German Shepherd mix

SEX

Spayed Female

AGE

2/1/15

WEIGHT

57 lbs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

HOSPITAL NAME

Essex Middle River VC

REFERRING VET

Dr. Hicks

INVOICE

42591

PRESENTING CLINICAL SIGNS

CC- last several years (since 2/1/2016) chronic lymphoplasmcytic rhinitis; originally treated with Doxy/Pred; tried Temaril P, did not help; is on Pred 5 mg SID- EOD chronically last few years; in past SAP has been elevated but this time also ALT and GGT; now liver values are very high; did try adding in Apoquel then decreasing Pred but rhinitis did return. P's US in 2017 pointed to pnacreatitis
Current Medications: Prednisone 5mg EOD, HG +
Lab Results: Alk phos- 4738, ALT- 244, GGT- 20
Date of Previous IntraPet Ultrasound: 5/25/2017. See attached,
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Stephanie Warga RDCS, RVT.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

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.

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 right kidney measured 6.46 cm. The left kidney measured 5.87 cm.

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 2.85 x 0.55 cm at the caudal pole and 0.47 cm at the cranial pole.

Spleen

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.

Liver

The **liver** was mildly enlarged and diffusely hyperechoic to the falciform fat. Mildly increased portal markings were noted. The gallbladder revealed some striating bile with over distension and mild rounding. This is consistent with emerging mucocele.

Gastrointestinal

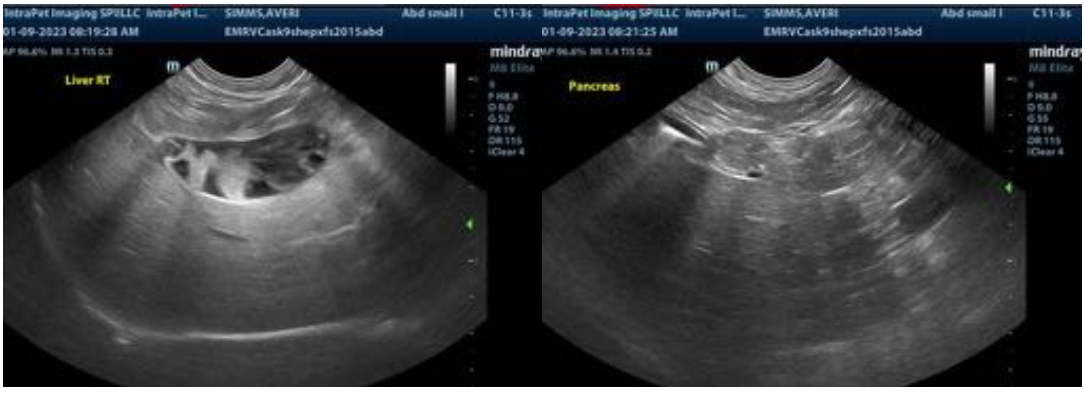
Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt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

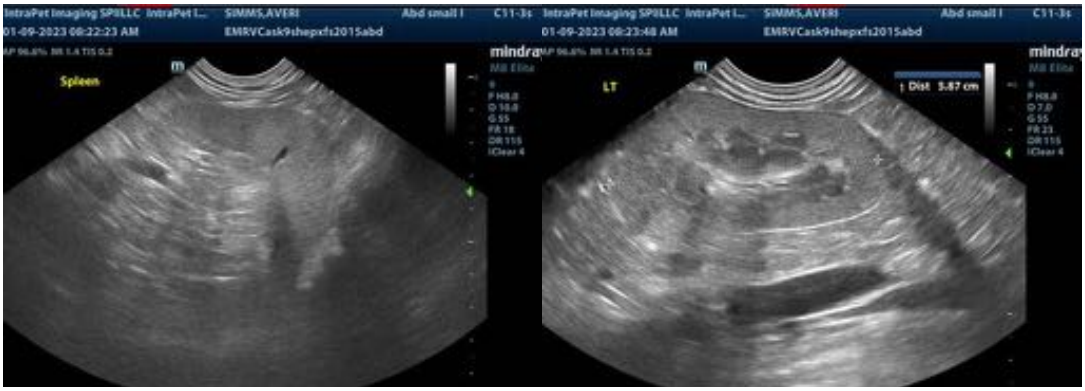
Pancreas
The **pancreas** revealed mild irregular contour with uniform parenchyma and slight heterogeneity.

ULTRASONOGRAPHIC FINDINGS
Subjectively benign hepatopathy with emerging mucocele.
Heterogenous pancreas, likely sequelae from prior insult, appears stable.
Otherwise, unremarkable abdomen.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS
Ursodiol Therapy is warranted for further definition. FNA of the liver can be considered for further definition of liver elevations. However, possibly reactive hepatopathy. Ursodiol therapy over the next 6 weeks is recommended with a recheck sonogram.

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.





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.

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