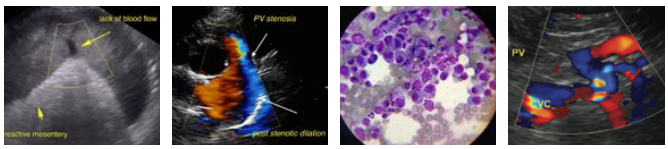
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™




SonoPath.com
1-800-838-4268 info@sonopath.com

**PATIENT**
Max Lappin

**SPECIES**
Canine

**BREED**
Labrador Mix

**SEX**
Nuetered male

**AGE**
13 years

**WEIGHT**
45 lbs

**INTERPRETED BY**
Eric Lindquist, DMV DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**
Dr. Christensen

**HOSPITAL NAME**
Tranquility VC

**REFERRING VET**
Dr. Christensen

**INVOICE**
43640

**DATE**
3/30/23

## PRESENTING CLINICAL SIGNS

History: Elevated liver enzymes. Previous Cushing disease but did not do well on Vetoryl so owner took off. Doing better but liver enzymes spiking now.
Abnormal PE/Chem/CBC/UA Results: ALT= 937. Alk Phos= 2839

## 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 7.95 cm. The left kidney measured 5.61 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 2.24 x 0.51 cm at the cranial pole and 0.57 cm at the caudal pole. The left adrenal gland measured 1.47 x 0.66 cm at the cranial pole and 0.52 cm at the caudal pole.

### *Spleen*

The **spleen** was mildly enlarged, uniform and folded upon itself.

### *Liver*

Exam of the cranial abdomen demonstrated excessive **liver** size, swollen contour, with conserved uniform architecture. Parenchymal echogenicity was diffusely isoechoic to the spleen and falciform fat. Occasional, hypoechoic, non-disruptive nodular changes. Given the liver enzyme elevations FNA, cytology and culture is indicated. The largest nodule measured 2.5 cm. Minor excessive GB debris was noted with the presence gall bladder dilation and precipitate without the overt formation of mucocele but this may be an issue in the future. Gallbladder polyps were noted. This type of liver presentation typically is associated with slow and gradual SAP elevations with low-grade ALT rise. USG-FNA sampling is encouraged if more aggressive LE profiles are present such as ALT > 200 or rapid rise in SAP. These presentations are usually reactive hepatopathies owing to other disease processes either endocrine (Diabetes, Hypothyroidism, Cushing's disease), "antigen surveillance" from the gut/pancreas, or idiopathic breed predisposed progressions.

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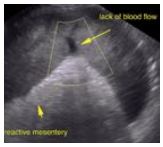
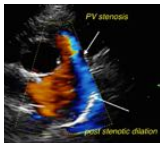
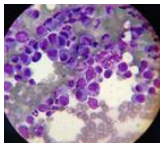
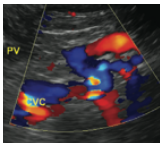

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### *Gastrointestinal*

There was some residual chyme and gas was noted in the **stomach**, yet not pathological. This is consistent with end post prandial presentation. Transit of chyme into the small intestine was normal. Curvilinear patterns were maintained throughout the GI tract. No evidence of pathology. 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 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.

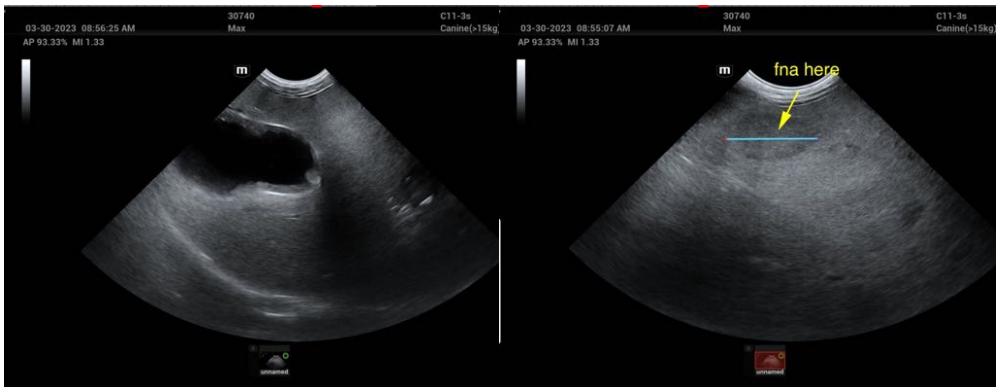
## ULTRASONOGRAPHIC FINDINGS

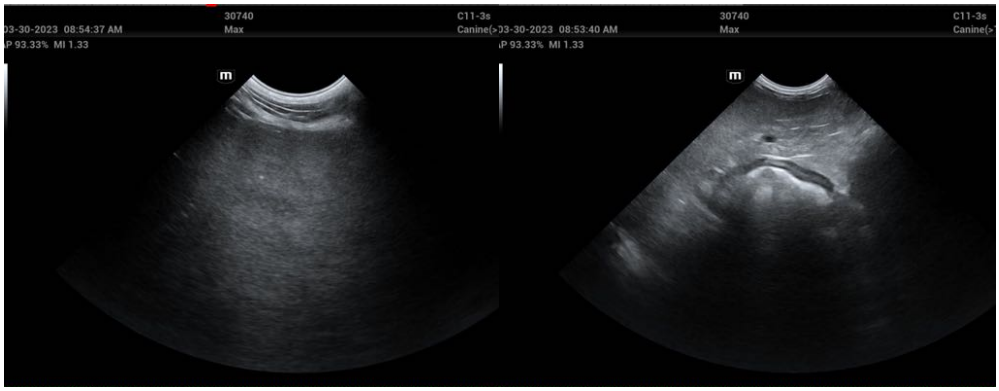
Vacuolar hepatopathy, nodular hyperplasia liver pattern.

Minor splenic enlargement.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

FNA, cytology and culture is indicated. Possible suppurative hepatitis.



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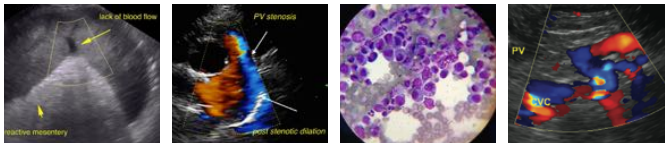

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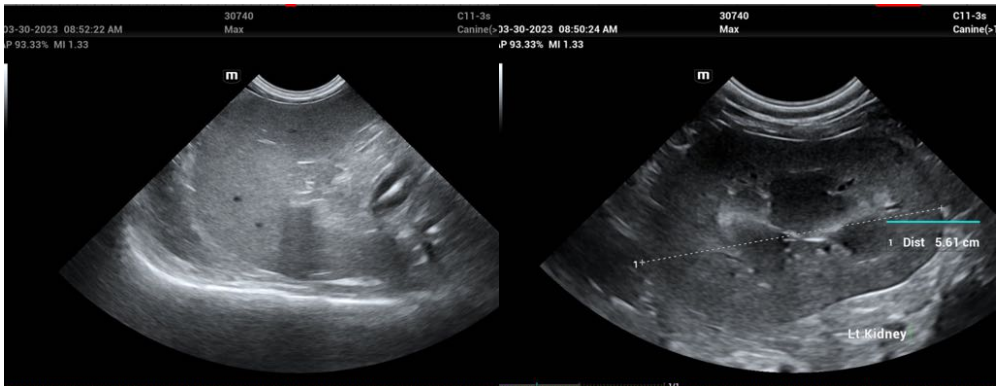


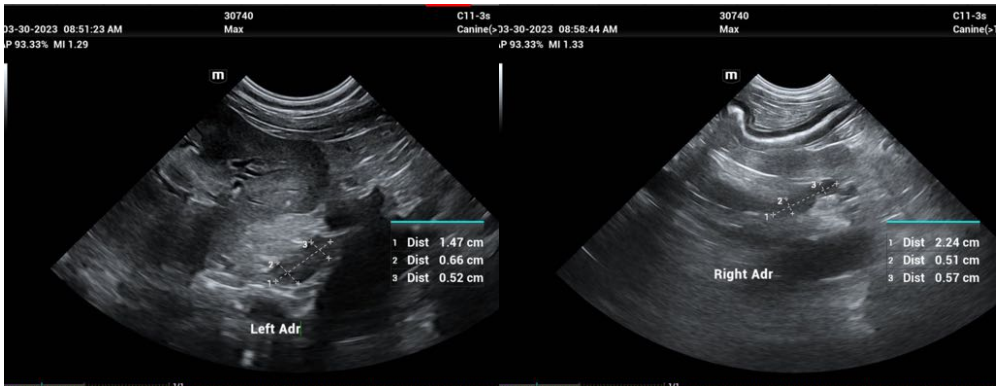


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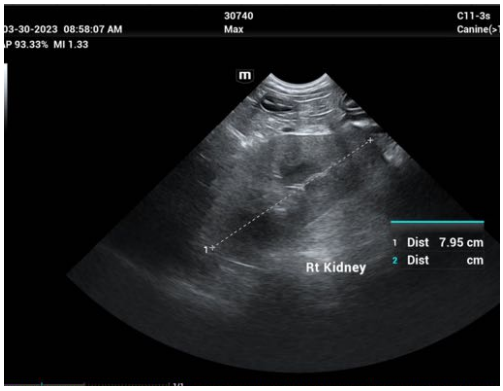


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**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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.

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