



**PATIENT**

Peanut Parent

**PRESENTING CLINICAL SIGNS**

Lethargic and shaking. Painful on neck. Likely cervical disk disease. Sudden increase in Alk-phos from 2 weeks ago?

**SPECIES**

Canine

Abnormal PE/Chem/CBC/UA Results: 1/14/2023, Alk-phos= 985. 12/22/2022, Alk-phos= 342.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**BREED**

Beagle

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

**SEX**

FS

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and moderate loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Nonobstructive renolithiasis present primarily in the lateral diverticuli. The left kidney measured 4.7 cm in length. The right kidney measured 4.5 cm in length.

**AGE**

14

The area of the aortic trifurcation was free of pathology.

**WEIGHT**

21

**Adrenal Glands**

The bilateral adrenal glands exhibited borderline prominent size with mild capsule asymmetry and non-homogenous discretely nodular parenchyma including a caudal left adrenal nodule measuring 1.1 cm x 1.0 cm. The left adrenal gland measured 1.1 cm width at the caudal pole and 0.53 cm width at the cranial pole. The right adrenal gland measured 0.69 cm width at the caudal pole and 2.2 cm length. No overt adrenal tumors.

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**Spleen**

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

**IMAGING PERFORMED BY**

Christensen

**HOSPITAL NAME**

**Liver/Gallbladder**

The liver presented enlarged in size. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. A solitary hyperechoic nodule was present measuring 2.4 cm in diameter. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion.

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Christensen

The gallbladder was non-distended in size with primarily anechoic luminal content and mild to moderate congealed echogenic debris in the mid to cranial lumen. No evidence of gallbladder or peripheral gallbladder inflammation was present. The cystic and common bile ducts were normal.

**INVOICE**

12722ag

**Gastrointestinal**

**DATE**

01/16/2023

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction or foreign material.



## PATIENT

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The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material.

Normal visible colon wall layers were present with apparent formed feces in lumen.

## SPECIES

**Pancreas**

Canine

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum, likely consistent with age related changes and considered incidental. No signs of active inflammation or neoplasia.

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**Free Abdomen**

No omental masses, overt lymphadenopathy or peritoneal effusion was present.

## SEX

FS

## ULTRASONOGRAPHIC FINDINGS

## AGE

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- Bilateral irregular to nodular adrenal glands-functional vs non-functional adenomatous change, benign hyperplasia, lipogranuloma, emerging adrenal neoplasia all potentials
- Hepatopathy with benign intraparenchymal nodule-suggestive of vacuolar hepatopathy pattern with likely nodular hyperplasia or similar
- Moderate congealed gallbladder debris (non-mucocele)
- Moderate chronic renal changes with non-obstructive renolithiasis and cortical cysts
- Mild non-specific benign splenomegaly

## WEIGHT

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## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Assuming normal clotting status and using a 25g needle, a hepatosplenic FNA for screening cytology could be considered for further assessment.

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A screening BP is advised to assess for evidence of hypertension which may allude to emerging adrenal neoplastic criteria i.e. pheochromocytoma. Adrenal testing recommended if clinically indicated. Ideally sonographic monitoring of the bilateral adrenal glands for evidence of progressive changes with initial recheck in 4-6 weeks is suggested. Hepatosupportive medications such as Denamarin and Ursodiol may prove beneficial.

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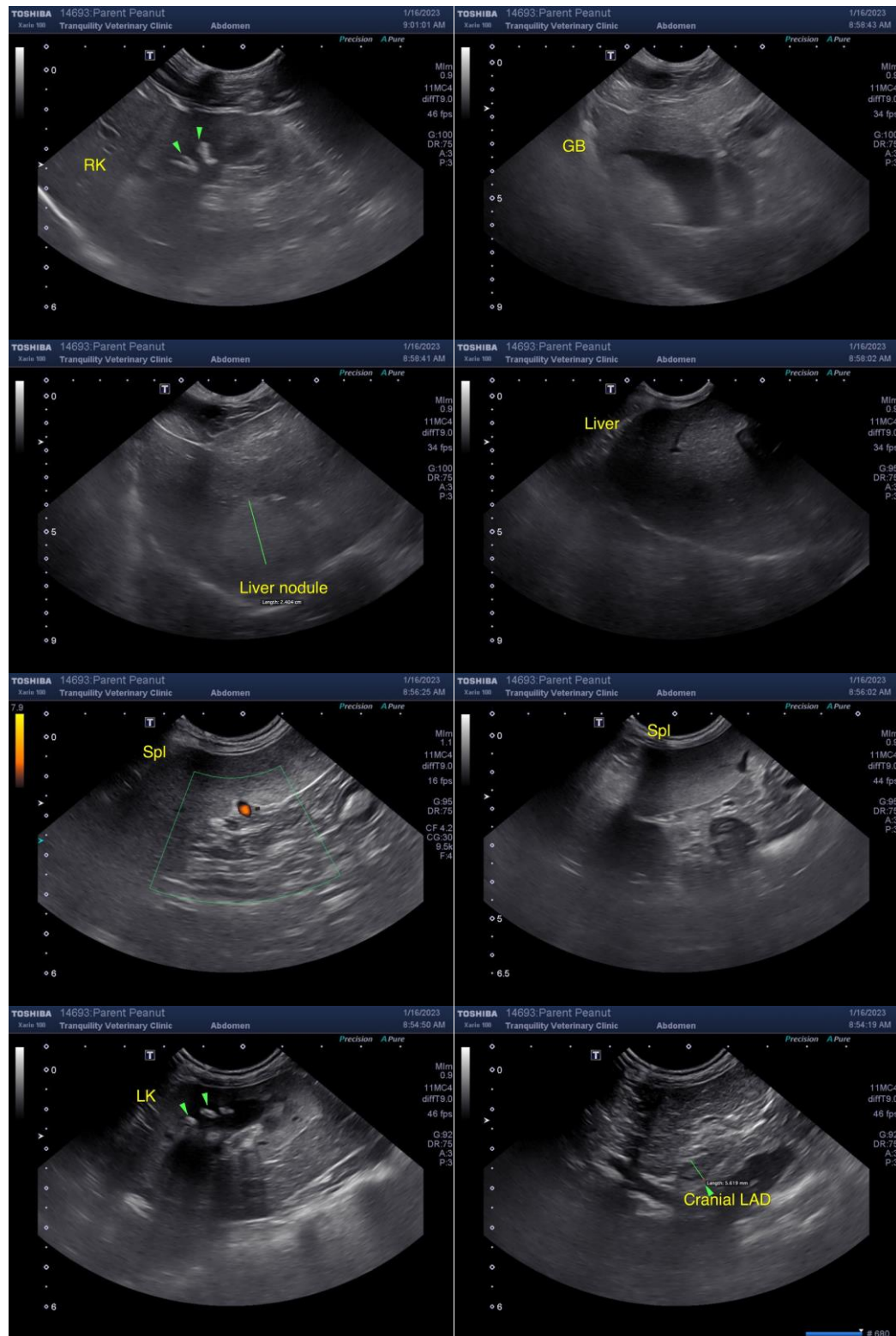
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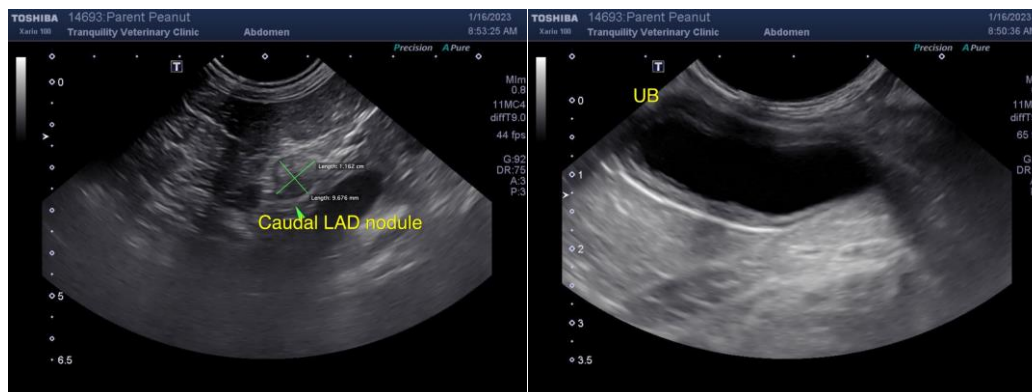
Christensen

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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.

R. McKenzie Daniel, DVM, DABVP (Canine/Feline Practice)  
[mac.daniel@sonopath.com](mailto:mac.daniel@sonopath.com)