



PATIENT	PRESENTING CLINICAL SIGNS
Trix Copeland	Recommend we follow up with either imaging (u/s) to assess liver and adrenals; and/or LDDST Abnormal PE/Chem/CBC/UA Results: Lab work shows elevated liver enzymes with ALP most prominent. Suspect Cushings or primary liver dz. Elevate calcium, neutrophils and monocytes.
SPECIES	ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN
Canine	Urinary System
BREED	The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 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 was noted.
Beagle X	The area of the aortic trifurcation was free of pathology.
SEX	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 mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 6.1 cm in length. The right kidney measured 6.6 cm in length.
FS	
AGE	
11 years	
WEIGHT	
40.3 lbs.	
INTERPRETED BY	Adrenal Glands
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	The bilateral adrenal glands were mildly prominent in size, yet without evidence of significant hyperplasia or neoplastic criteria. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 0.52 cm width in the cranial pole and 0.76 cm width in the caudal pole. The right adrenal gland measured 0.69 cm width in the cranial pole and 0.75 cm width in the caudal pole.
IMAGING PERFORMED BY	Spleen
Sara Hansen	The spleen was normal in size and contour with subtle splenic heterogeneity exhibiting intermittent hyperechoic to intermittent subtle hypoechoic parenchymal nodules. An example of a hypoechoic nodule measured 0.42 cm. The hyperechoic nodules were noted primarily in the medial parenchyma around the hilus. Potential for focal areas of medical capsule fibrosis is possible.
HOSPITAL NAME	Liver/ Gallbladder
Pleasant Hill AH	The liver presented increased in size. The parenchyma of the liver was subjectively increased in echogenicity compared to the spleen and renal cortices. The echotexture of the liver parenchyma was mildly nonuniform with a moderate coarse echotexture. Potential for very discrete hypoechoic intraparenchymal nodules is possible. No evidence of masses was noted. The capsule of the liver was symmetrical in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non distended in size containing moderate, nondependent to mildly congealed yet nonorganized luminal debris. The gallbladder walls were sonographically normal without evidence of inflammatory changes. No evidence of peripheral gallbladder
REFERRING VET	
Dr. Larsen	
INVOICE	
13614	
DATE	
4/6/22	



PATIENT

Trix Copeland

SPECIES

Canine

BREED

Beagle X

SEX

FS

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

IMAGING PERFORMED BY

Sara Hansen

inflammation was noted. The cystic duct and common bile ducts were normal without evidence of dilation.

Gastrointestinal

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.

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.

Pancreas

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

- Hepatomegaly exhibiting generalized mildly nonuniform to discretely nodular parenchyma hyperechogenicity
- Moderate gallbladder debris, possible early noninflamed mucocele
- Variably echogenic non-expansive splenic nodules - subjectively benign
- Mild chronic renal changes
- Subjective mild prominent bilateral adrenal glands, no evidence of adrenal tumors

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overall, the liver was nonspecific yet most consistent with benign hepatopathy. Considerations include steroid or other vacuolar hepatopathies, chronic hepatitis / cholangiohepatitis, early fibrosis, and cirrhosis, with neoplastic disease considered less likely.

A full adrenal workup is warranted in this patient if clinical signs consistent with adrenal hyperfunction are present.

Assuming normal clotting status, ultrasound-guided FNA of the spleen could also be considered for screening cytology. Hepatosupportive medications including Ursodiol, given the presence of gallbladder debris, with serial monitoring for evidence of increasing cholestasis is warranted.



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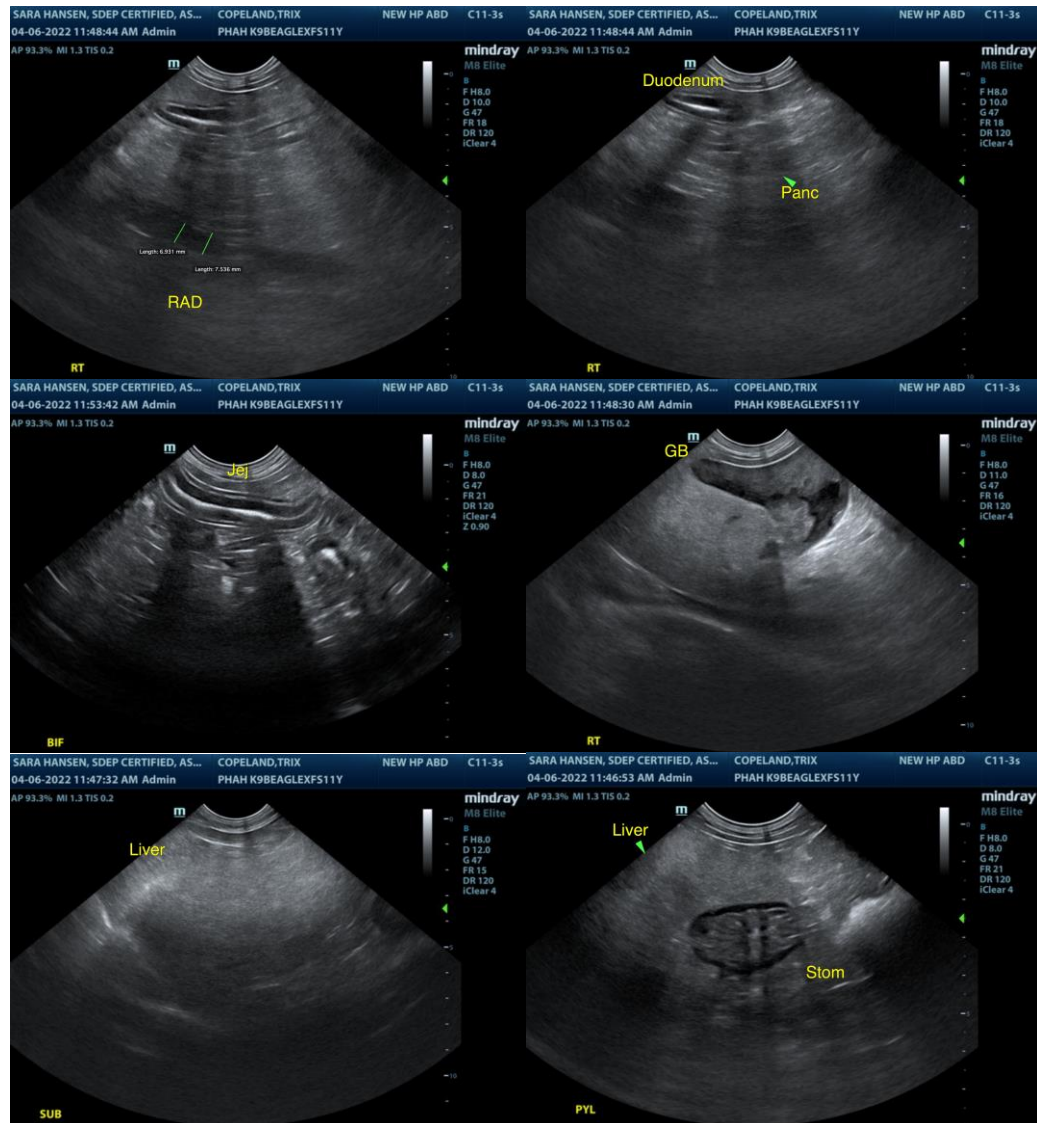
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Given the hypercalcemia, and if not done, rectal palpation, as well as three view chest radiographs to rule out occult pathology as contributing factors to the hypercalcemia, is suggested. A hypercalcemia panel could also be considered for further assessment.





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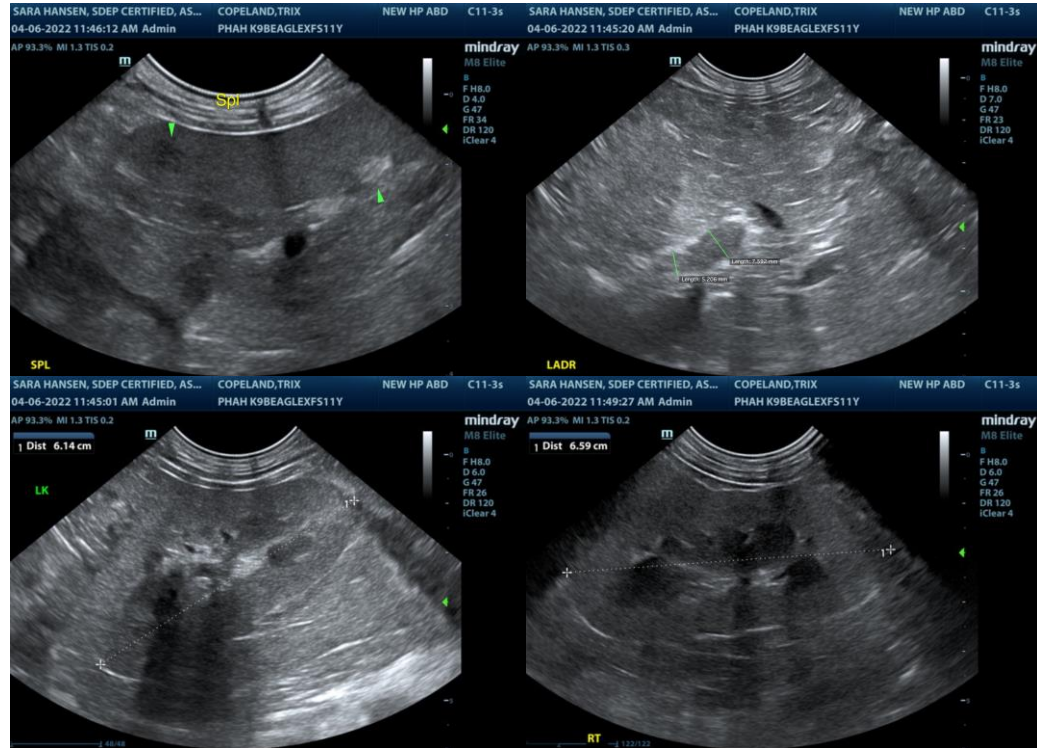
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com