



## PATIENT

Maggie Dicks

## SPECIES

Canine

## BREED

Bichon/Shih Tzu Mix

## SEX

Spayed Female

## AGE

14 Years

## WEIGHT

6.2 kg

## INTERPRETED BY

R. McKenzie Daniel,  
DVM, DABVP (Canine  
/ Feline Practice)

## IMAGING PERFORMED BY

Dr. Gira

## HOSPITAL NAME

Willow Park AC

## REFERRING VET

Dr. Kim

## INVOICE

16571

## DATE

05/29/26

## PRESENTING CLINICAL SIGNS

Liver enzyme elevation. Vomiting on occasion

Abnormal PE/Chem/CBC/UA Results: Liver enzymes have significantly worsened ALT 798 10 - 125 U/L HIGH ALKP 298 23 - 212 U/L HIGH GGT. 19 0 - 11 U/L GLOB 51 25 - 45 g/L

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### Urinary System

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 dependent to nondependent hyperechoic sediment/mineral. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic change were noted.

The area of the aortic trifurcation was free of pathology.

Normal size and margination was 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. Areas of mild medullary mineral were present. The left kidney measured 4.0 cm in length. The right kidney measured 4.3 cm in length.

### Adrenal Glands

The left adrenal gland revealed asymmetrical adrenomegaly primarily owing to mildly expansive mixed echogenic nodule in the mid to cranial left adrenal gland measuring 1.4 cm x 1.4 cm. The nodule itself contained a hyperechoic nodule. The left adrenal gland measured 0.36 cm width at the caudal pole.

An asymmetrical mixed echogenic mid right adrenal nodule was present with associated asymmetrical capsule distortion measuring 1.4 cm x 0.85 cm. The right adrenal gland measured 0.54 cm width at the caudal pole.

### 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.

### Liver & Gallbladder

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture and subjective adequate vascular volume.

The gallbladder presented non-distended, mildly thickened hyperechoic gallbladder wall. A solitary nonobstructive choleolith was present in the gallbladder lumen measuring approximately 1.0 cm in diameter. The common bile duct was not visualized.

### Gastrointestinal



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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 parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.

## Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

## ULTRASONOGRAPHIC FINDINGS

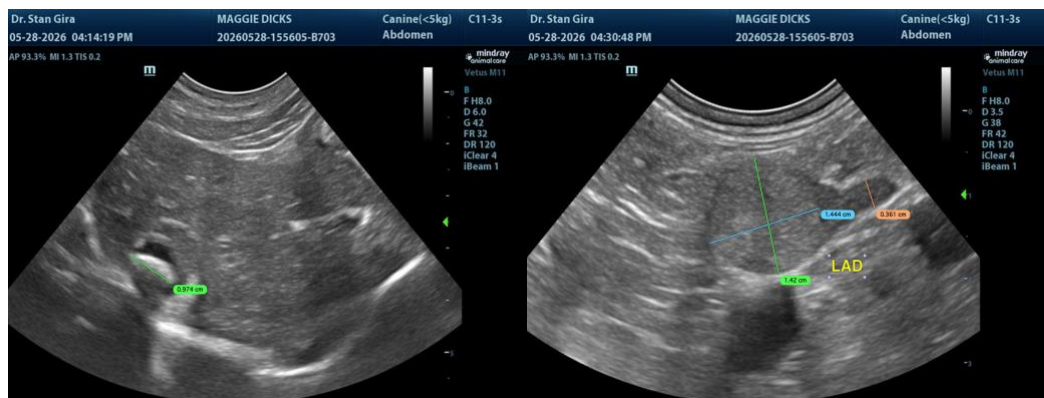
- Hepatopathy exhibiting subjective adequate vascular volume.
- Nonobstructive cholelith with suspect chronic cholecystitis.
- Bilateral nodular adrenomegaly.
- Mild chronic renal changes with mild medullary mineral.
- Mild urinary bladder dependent to nondependent lumen mineral.
- Sonographically normal empty gastrointestinal tract.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The liver is non-specific yet consistent with benign hepatopathy. Vacuolar, cholestatic, inflammatory hepatopathy hepatotoxicosis, i.e. copper or other hepatopathy are possible. The adrenal glands may indicate unilateral or bilateral hyperplasia, adenomatous change, tumors or combination.

Adrenal workup is indicated if clinical signs are consistent with Cushing's syndrome. Serial monitoring of systemic BP for hypertension +/- urine metanephrine level if concerned for pheochromocytoma is recommended.

Definitive diagnosis may require hepatoadrenal sampling for cytology or histopathology and hepatic copper assessment. Hepatosupportive medications with serial monitoring of the liver, gallbladder and bilateral adrenal glands for evidence of progressive changes would be more conservative.





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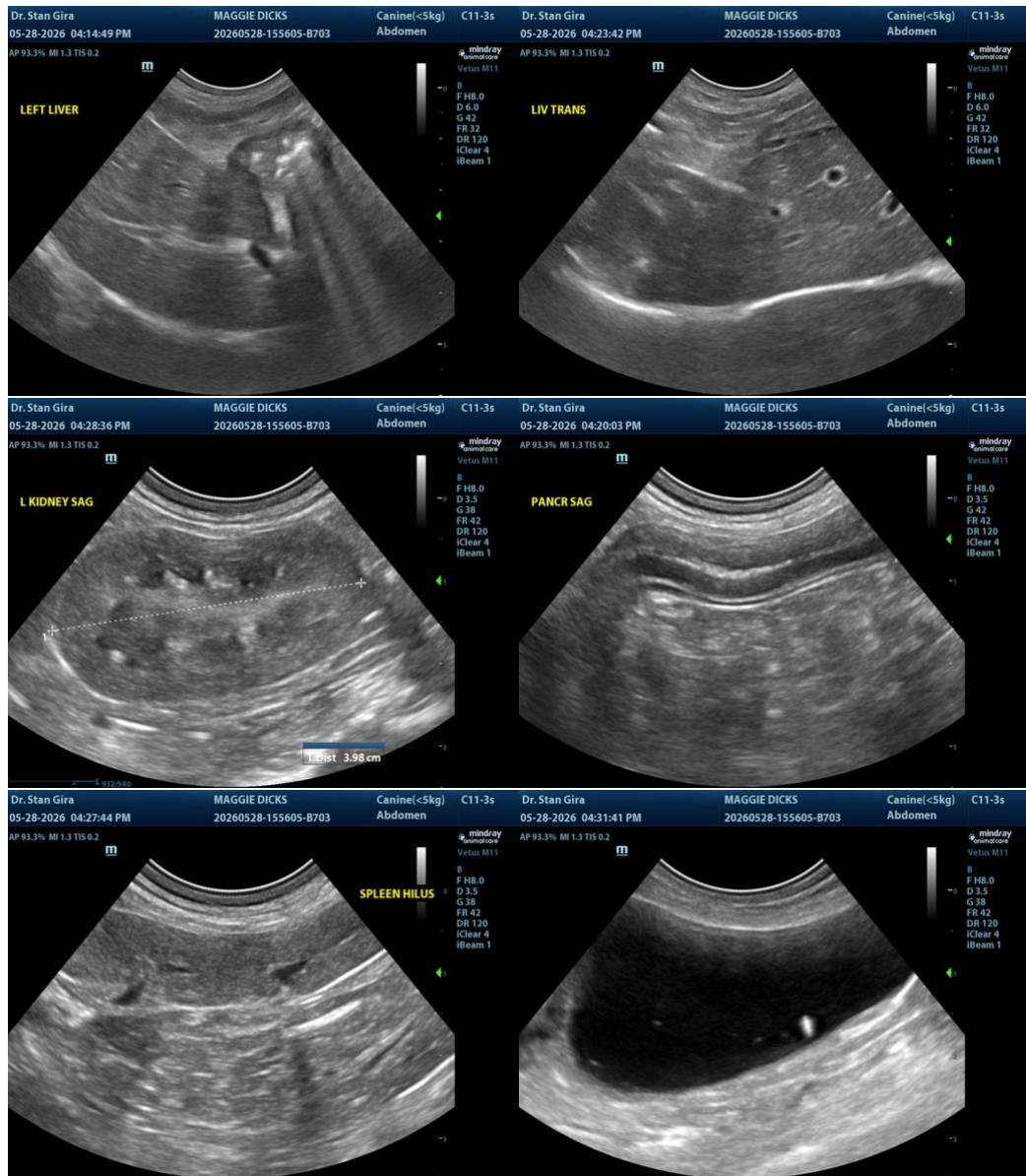
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

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