



## PATIENT

Aurora Blanchard

## SPECIES

Canine

## BREED

GSD X

## SEX

Spayed Female

## AGE

11 Years

## WEIGHT

34.6 kg

## INTERPRETED BY

R. McKenzie Daniel,  
DVM, DABVP

## IMAGING PERFORMED BY

Dr. Sarah Barthelemy

## HOSPITAL NAME

Petzco Vet Clinic

## REFERRING VET

Petzco Vet Clinic

## INVOICE

12527

## DATE

12/01/25

## PRESENTING CLINICAL SIGNS

Elevated liver enzymes and low USG

Abnormal PE/Chem/CBC/UA Results: Mild ALT elevation 254, moderate ALP elevation 547, mild hypercholesterolemia. Elevated amylase and lipase with elevated PSL. USG 1.010 with bacteria

## 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 no uroliths, urine mineral, calculi or sediment. 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. No evidence of pelvic dilation was present. The left kidney measured 7.0 cm in length. The right kidney measured 7.4 cm in length.

### *Adrenal Glands*

Nonhomogenous hyperechoic nonmineralized cranial and caudal nodules were present in the left adrenal gland with mild associated symmetrical capsule expansion. The nodule did not exhibit signs of mineralization or vascular invasion. The caudal nodule measured 1.2 cm x 0.84cm with concurrent mild caudal left adrenomegaly measuring 0.97 cm width at the caudal pole.

The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.70 cm width at the caudal pole.

### *Spleen*

The spleen exhibited primarily finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Emerging to small nondisruptive medial parenchyma to perihilar hyperechoic nodules were present. 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 or neoplastic changes were not noted. The hyperechoic nodules tend to trend benign and are most consistent with benign hyperplasia or myelolipomas.

### *Liver*

The liver presented with subjective normal hepatic size and maintained symmetrical contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild parenchymal remodeling. The hepatic and portal vasculature were normal in appearance without signs of congestion. Intermittent subtle hypoechoic to nonhomogenous hepatic nodules were visualized with an example measuring 2.6 cm in diameter.



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The gallbladder was non-distended in size with mildly thickened nonuniform hyperechoic gallbladder wall. Moderate dependent to nondependent mild congealed hyperechoic debris. No evidence of pericholecystic inflammation. The common bile duct was not visualized.

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### *Gastrointestinal*

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

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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.

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

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### *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.

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### *Free Abdomen*

No overt lymphadenopathy or peritoneal effusion was present.

## ULTRASONOGRAPHIC FINDINGS

### Primary Findings

- Hepatopathy exhibiting parenchymal remodeling and intermittent nonhomogenous to subtle hypoechoic nodules.
- Suspect mild chronic cholecystitis with congealed nonorganized gallbladder debris.
- Mildly enlarged nodular left adrenal gland.
- Heterogenous remodeled pancreas.
- Age-related renal changes.

### Secondary Findings

- Emerging small hyperechoic splenic nodules- most consistent with probable benign myelolipomas.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Considerations for the hepatopathy and hepatic nodules may include vacuolar hepatopathy, hyperplasia, lipogranulomas, inflammatory disease, fibrosis, nonobstructive cholestasis or neoplasia. Assuming normal clotting status, hepatic parenchyma and accessible nodule FNA cytology is warranted for further clarification. Left adrenal nodular hyperplasia, functional versus nonfunctional adenomas, emerging tumor or mixed pathologies are possible. Adrenal work up with LDDST if clinical signs are consistent with Cushing's syndrome as well as serial monitoring of systemic BP for hypertension which may allude to left pheochromocytoma is recommended. Hepatosupportive medications with concurrent sonographic monitoring of the gallbladder if evidence of progressive cholestasis would be reasonable.

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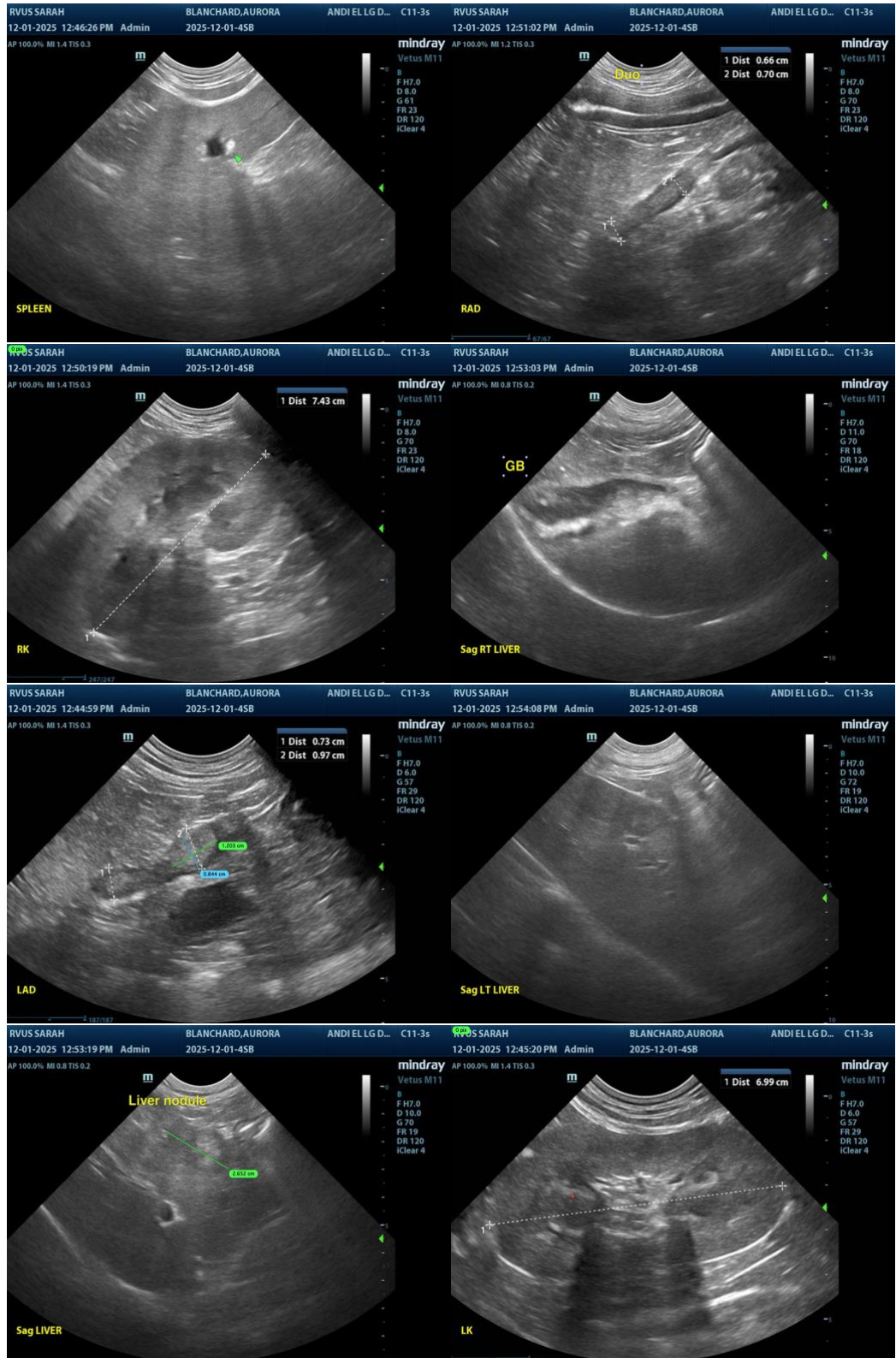
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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](mailto:info@SonoPath.com)