

PATIENT PRESENTING CLINICAL SIGNS

Lily Lovrinčević

- The patient appeared calm and was not coughing during the examination, despite the typical stress of a clinic visit.
- Throat: A cough was elicited on tracheal palpation. Oral: Gums appear normal.
- Cardiovascular: A heart murmur was auscultated grade 3/6
- Current Medications Isoproterenol 1ml BID
- Abnormal PE/Chem/CBC/UA Results: 2/07/2026 - ALT and ALKP levels high

SPECIES

Canine

BREED

Poodle Mix

SEX

FS

AGE

16yr

WEIGHT

8.3kg

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN AND HEART

| CANINE CARDIAC PARAMETERS | MR VMAX (m/s) | TR VMAX (m/s) | LA/AO M-mode | LA/AO (Heart Base; Swe) | FS (%) | EF (%) | EPSS (cm) |
|---------------------------|---------------|---------------|--------------|-------------------------|----------------------|--|--|
| NORMAL PARAMETER | 4.5-5.5 | <2.7 | 1.3 | Up to 1.6 | 28-40 | 40-100 | <0.6 |
| PATIENT | -- | -- | -- | 1.3 | 50 | 83 | 0.1 |
| CANINE CARDIAC PARAMETERS | HR (BPM) | AV VMAX (m/s) | PV MAX (m/s) | BODY WEIGHT | LAD LA MAX 4 Chamber | LVIDd Avg; 2D and m-mode short axis (cm) | LVIDs Avg; 2D and m-mode short axis (cm) |
| NORMAL PARAMETER | 50-100 | 0.7-1.7 | 0.7-1.6 | | | | |
| PATIENT | 98 | 1.2 | 0.95 | 8.3kg | 2.8 | 2.7 | -- |

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Reschny

HOSPITAL NAME

Beattie PH Stoney
Creek

REFERRING VET

Salib

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DATE

03/30/2026

Cardiac Presentation

The echocardiogram in this patient demonstrated normal left atrial size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal mitral valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated centralized to eccentric insufficiency. The left ventricle presented thicknesses with linear contour and was not dilated nor restricted. The myocardium presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. Contractility of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions of the myocardium. The left ventricular outflow tract demonstrated normal laminar flow and subjective structural integrity. The right atrium and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. Tricuspid valvular assessment demonstrated adequate linear morphology. The right ventricle was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. Pulmonic tract assessment revealed normal valve structure, laminar flow, and diameter (approx.1:1 pa/ao ratio). No visible pericardial or free pleura fluid was noted. No echographically detectable evidence of infiltrative disease was visible. The cranial mediastinum and pericardial regions were free of masses in the visible window.

Urinary System



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

SPECIES

Canine

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. Bilateral areas of pinpoint to focal medullary mineral were present. The left kidney measured 4.3 cm in length. The right kidney measured 4.47 cm in length.

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The area of the aortic trifurcation was free of pathology.

Adrenal Glands

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The bilateral adrenal glands were normal in size. 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 caudal pole. The right adrenal gland measured 0.54 cm width in the caudal pole.

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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.

WEIGHT

8.3kg

Liver/Gallbladder

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The liver was subjectively mildly enlarged. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild parenchymal remodeling. Normal vascular volume. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with thin walls and mild non-organized debris. The cystic and common bile ducts were normal.

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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.

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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 mechanical/metabolic ileus, obstruction or foreign material.

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

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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.

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Free Abdomen

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



PATIENT **ULTRASONOGRAPHIC FINDINGS**

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Primary

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- Chronic mitral valve disease (B1)
- Hepatopathy with mild parenchymal remodeling
- Mild gallbladder debris (non-mucocele)
- Chronic renal changes exhibiting focal medullary mineral
- Normal age-related adrenal glands

BREED

Poodle Mix

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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The cause of the murmur is subjective mild chronic degenerative valvular changes with secondary MR. No evidence of additional issues such as DCM criteria, LV systolic dysfunction or clinical pulmonary hypertension. The lack of left atrial enlargement implies that the risk of complication secondary to mitral valve insufficiency is relatively low at this time and, without current clinical signs, indicates that medical therapy is not required at this stage. Prognosis at this stage is variable and serial sonographic monitoring is recommended with a recheck echocardiogram in 6 months, sooner if clinical signs suggestive of heart disease develop.

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Anesthetic risk is considered low. Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists.

WEIGHT

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The appearance of the liver was nonspecific but most consistent with benign hepatopathy. Considerations for the liver may include benign vacuolar hepatopathy, inflammatory/infectious/immune mediated disease, hyperplasia, hematopoiesis, non-obstructive cholestasis or other with neoplasia thought less likely. Ultrasound guided FNA of the liver using a 25-gauge needle and assuming normal coagulation parameters would be warranted for screening cytology. Hepatosupportive medications such as Denamarin or Vitamin E as well as Ursodiol due to its antioxidant and immunomodulatory effects within the liver would be warranted, although these medications may not result in decreased hepatic enzyme levels. Core or surgical biopsy is likely required for definitive diagnosis. No evidence of adrenal pathology as a contributing factor in conjunction with lack of reported clinical signs.

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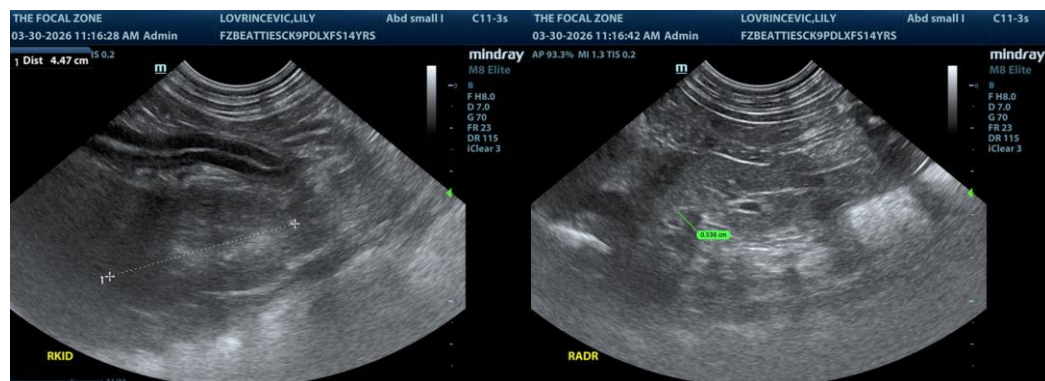
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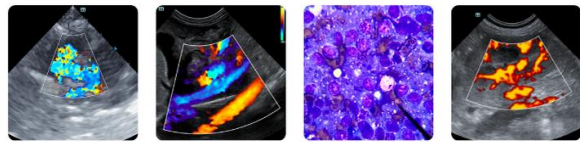
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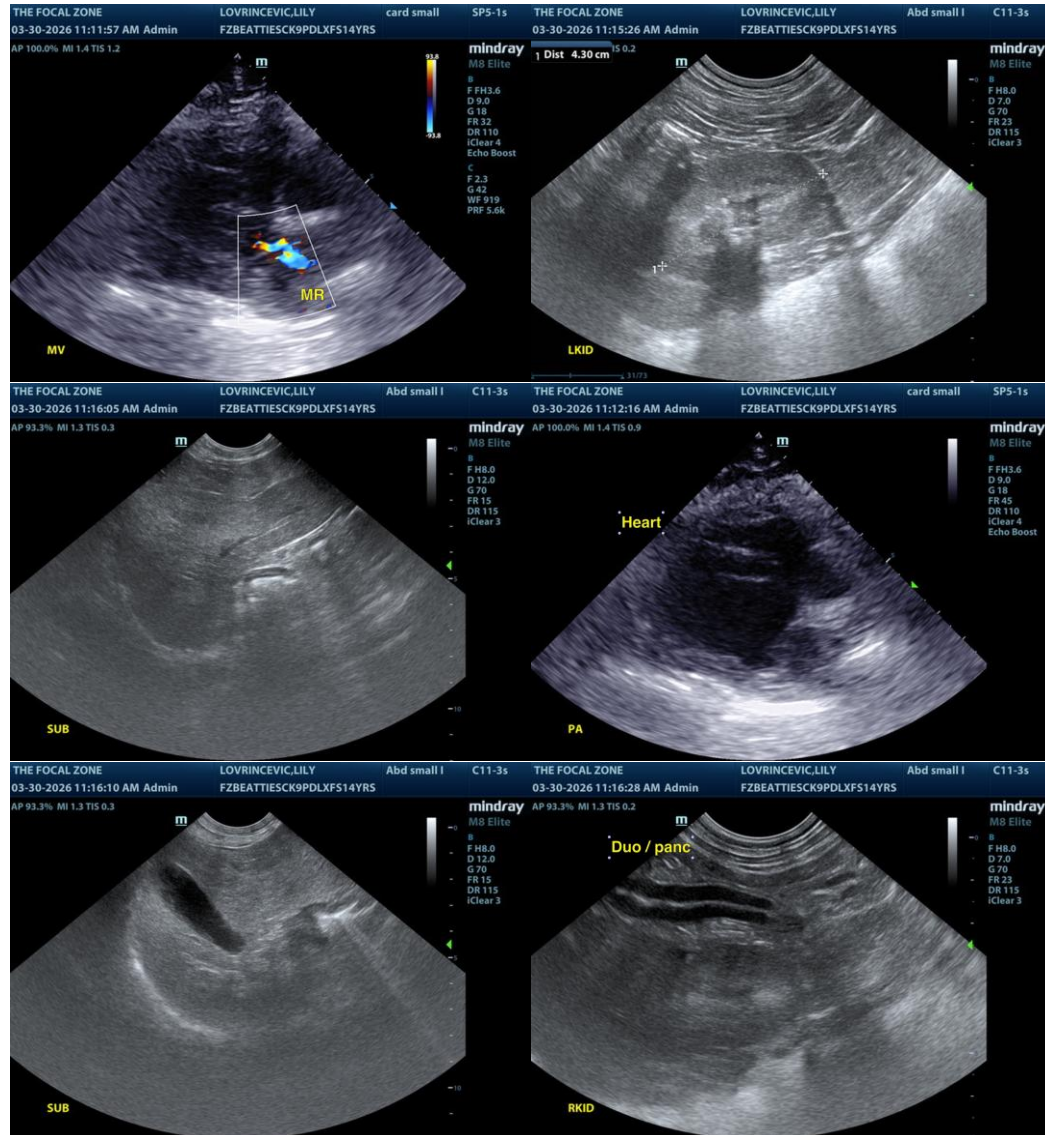
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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