

**PATIENT PRESENTING CLINICAL SIGNS**

Milo Borroto Recheck echo, HM louder than prev. Burps with foul smell. Grade 4 hm  
Abnormal PE/Chem/CBC/UA Results: BUN-28 cpl-258 chol-99

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN AND HEART**

Canine

**BREED**

Terrier

**SEX**

MN

**AGE**

5yr

**WEIGHT**

19lb

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	6.0	--	--	1.5	45	78	0.2
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	NM	2.0	1.0	19lb	3.0	3.0	--

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Kerri Becker

**HOSPITAL NAME**

Rockaway Animal Hospital

**REFERRING VET**

Dr Salazar

**INVOICE 24414**

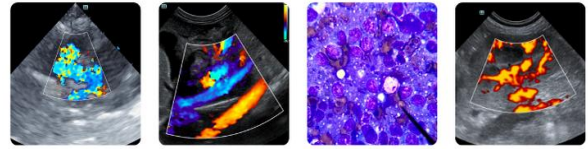
**DATE 04/07/2026**

**Cardiac Presentation**

The echocardiogram in this patient demonstrated normal to borderline increased left atrial size based on 2 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 significant eccentric insufficiency with borderline increased measured MR velocity. 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 mild thickening with mild TR on Doppler. 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**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no evidence of



**PATIENT**

Milo Borroto

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 and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 4.5 cm in length. The right kidney measured 4.8 cm in length.

**BREED**

Terrier

The area of the aortic trifurcation was free of pathology.

**Adrenal Glands**

The left adrenal gland was subjectively subnormal in size with symmetrical contour and homogenous parenchyma. The left adrenal gland measured 0.32 cm width at the caudal pole. The right adrenal gland was not definitively visualized.

**SEX**

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**Spleen**

**AGE**

5yr

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**

19lb

**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. 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 congealed cranial lumen hyperechoic debris. The cystic and common bile ducts were normal.

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DVM, DABVP  
(Canine and Feline)

**Gastrointestinal**

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Kerri Becker

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 mechanical/metabolic ileus, obstruction or foreign material.

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

**Pancreas**

**REFERRING VET**

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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**

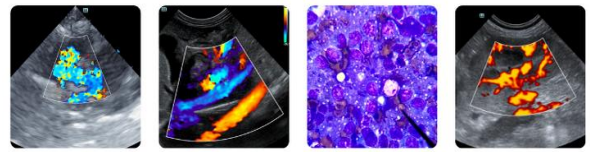
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No omental masses, overt lymphadenopathy or peritoneal effusion was present.

**ULTRASONOGRAPHIC FINDINGS**

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**Primary**

- Static compensated chronic mitral valve disease (B1)
- Mild tricuspid valve insufficiency- no evidence of clinical pulmonary hypertension
- Sonographically normal bilateral kidneys
- Normal area of pancreas
- Normal empty gastrointestinal tract
- Subjective subnormal left adrenal gland, non-visualized right adrenal gland

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Although reported increase in murmur intensity, no evidence of associated progressive structural cardiomyopathy. The continued lack of LA enlargement indicates the current and future risk of complications secondary to MR at this stage is low. No obvious indication for cardiac medication yet the prognosis is highly variable and sonographic monitoring is advised. Recheck echo recommended in 6 months, sooner if clinically indicated. Anesthetic risk is considered mild. 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.

No evidence of abdominal visceral pathology. The subnormal left adrenal gland and non-visualized right adrenal gland are non-specific. Resting cortisol level is recommended given concurrent mild azotemia. Mild pancreatitis at times may present sonographically normal and may be suspected if concurrent gastrointestinal signs and/or cranial abdomen discomfort on palpation. Gastrointestinal support is recommended.

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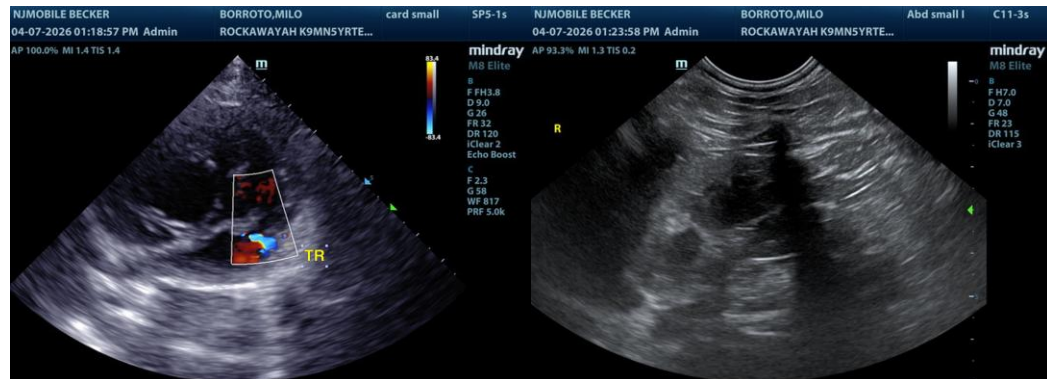
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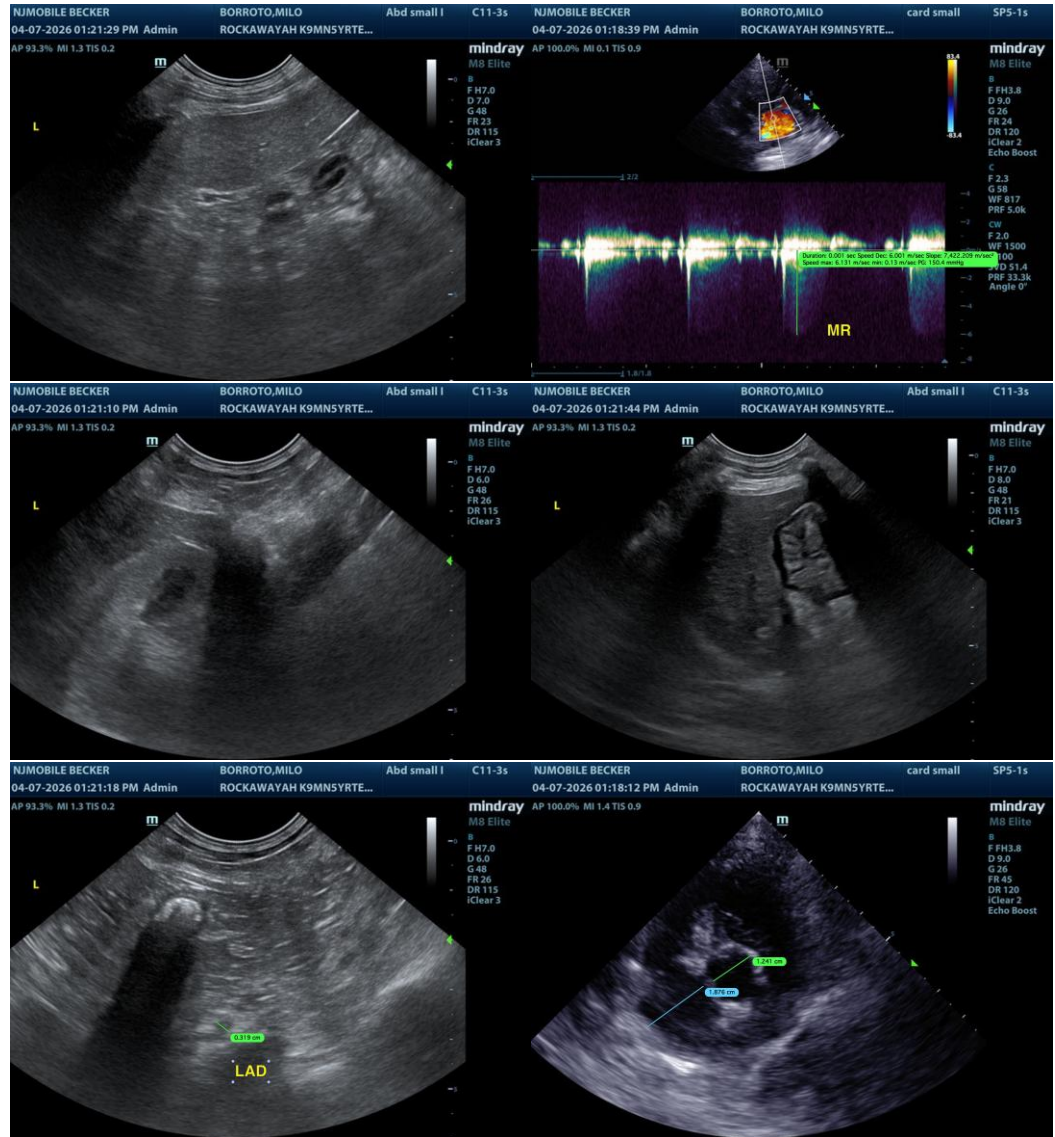
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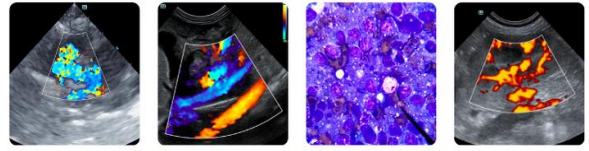
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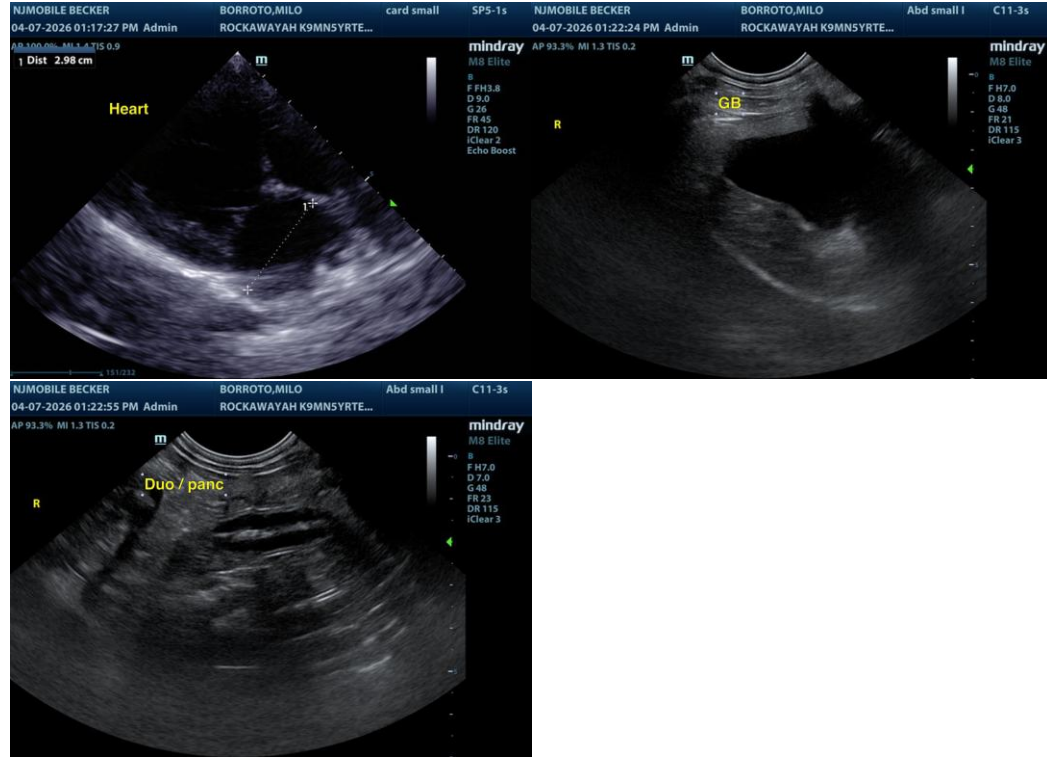
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**IMAGING PERFORMED BY**

Kerri Becker

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

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