

PATIENT PRESENTING CLINICAL SIGNS

Roxy Cabral

SPECIES

Canine

BREED

Pomeranian Mix

SEX

Spayed Female

AGE

16 Years

WEIGHT

8.3 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

Mountain Animal
 Hospital

REFERRING VET

Dr. Woodward

INVOICE

13648

DATE

02/09/26

- Weight loss, lethargy, poor appetite, vision loss, MM pink, absent PLR OD, sluggish PLR OS, grade 6/6 left systolic heart murmur first heard in March 2023, hyperpigmented skin axilla and ventral abdomen.
- Has been on Maropitant
- Recommend ultrasound to assess reason for anemia, pancreatitis? evaluate pulmonary mass and hepatomegaly

Abnormal PE/Chem/CBC/UA Results: Please see attached radiographs and lab results

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

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	5.6	--	NM	1.45	44	77	0.2
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	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	1.3	--	8.3	3.2	3.8	--

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 2 different LA measurement methods. The cranial and caudal **mitral** valve leaflets presented thickening consistent with endocardiosis. Doppler revealed measurable moderate to significant eccentric MR. 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. Mild aortic valve insufficiency on doppler. 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 cardiac / pericardial / pulmonary tumors in the visible window.



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Urinary System

The urinary bladder was normal in size and tone. Mild to variably thickened primarily ventral urinary bladder wall with mild asymmetrical luminal surface contour. Mild nonhomogenous wall echogenicity. The thickened wall measured 0.60 cm in diameter. Anechoic urine was present with no mineral, sediment or calculi visualized. The urethra was normal in structure and tone to a depth of 3.0 cm.

The area of the aortic trifurcation was free of pathology.

Normal renal size with asymmetrical margination was present in both kidneys. The renal cortex presented uniformly increased in echogenicity with uniform echotexture. The renal cortex appeared to be hypertrophied resulting in an altered cortex: medulla ratio. Moderate loss of corticomedullary border demarcation was also present. Areas of mild medullary mineral and mild pyelectasia was present bilaterally. The left kidney measured 4.1 cm in length. The right kidney measured 3.7 cm in length.

Adrenal Glands

The left adrenal gland was overtly normal in size and position. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 0.50 cm width in the caudal pole.

The right adrenal gland was not definitively visualized.

Spleen

A large to expansive nonhomogenous mass involving the spleen with concurrent subjective separate to possible coalescing similar appearing nonhomogenous cranial splenic mass. The larger splenic mass measured 6.0 cm to 8.0 cm in diameter. The cranial splenic mass measured 4.5 cm in diameter with associated asymmetrical splenic capsule distortion. The non-affected spleen exhibited primarily finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis.

Liver & Gallbladder

The liver presented mildly enlarged in size. Lobar mild nonhomogenous to indistinctly nodular parenchyma. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion.

The gallbladder was non distended in size with mild nonorganized biliary sludge. 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.



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Pancreas

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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.

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Free Abdomen

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No obvious visualized significant omental lymphadenopathy was present. Scant pockets of peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

SEX

- Chronic mitral valve disease (B1).
- Mild aortic valve insufficiency.
- Variably sized nonhomogenous possible coalescing splenic mass/masses.
- Noncongested mildly enlarged nonhomogenous subtle nodular liver.
- Nonorganized gallbladder debris (non-mucocele).
- Sonographically normal gastrointestinal tract.
- Chronic renal changes exhibiting mild pyelectasia and medullary mineral.
- Scant peritoneal effusion.
- Ventrally thickened urinary bladder- suspect chronic cystitis with mild potential for emerging bladder tumor.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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The lack of cardiac chamber enlargement indicates the current and future risk of complication is low. No evidence of cardiac metastasis or overt pericardial/pulmonary tumors in the visible window. Radiographic evidence of pulmonary non-visualized mass owing to pericardial lung artifact is possible.

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Although histopathology is required for definitive diagnosis, the splenic mass is most suggestive of neoplasia such as sarcoma or other. Benign pathologies are possible yet considered less likely. Vacuolar or non-obstructive cholestatic hepatopathy, inflammatory hepatic disease, hyperplasia, hematopoiesis, lipogranulomas, hepatic metastasis without evidence of hepatic congestion are all potentials.

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A GI panel to include PLI, TLI, cobalamin and folate and correlation with neurological exam to assess for non-splenic or occult disease as a contributing factor to the weight loss may be considered.

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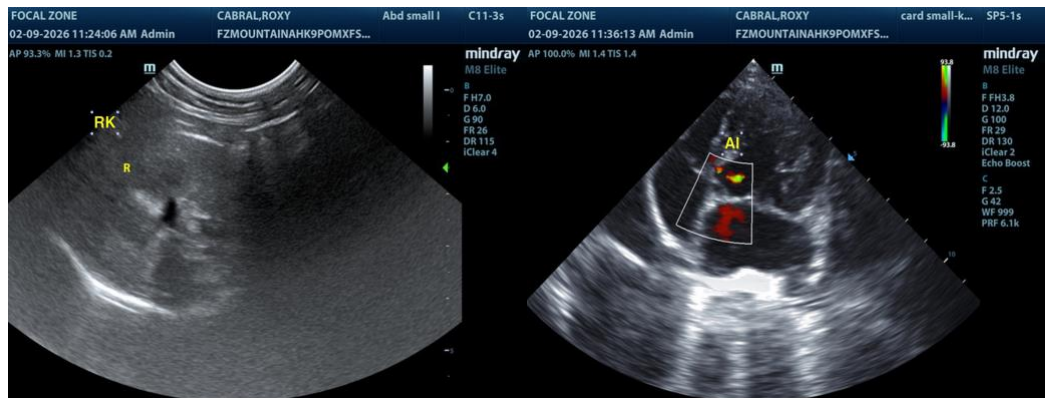
Dr. Woodward

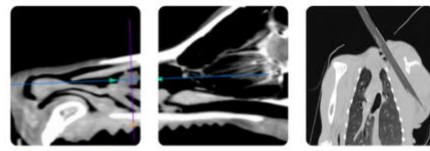
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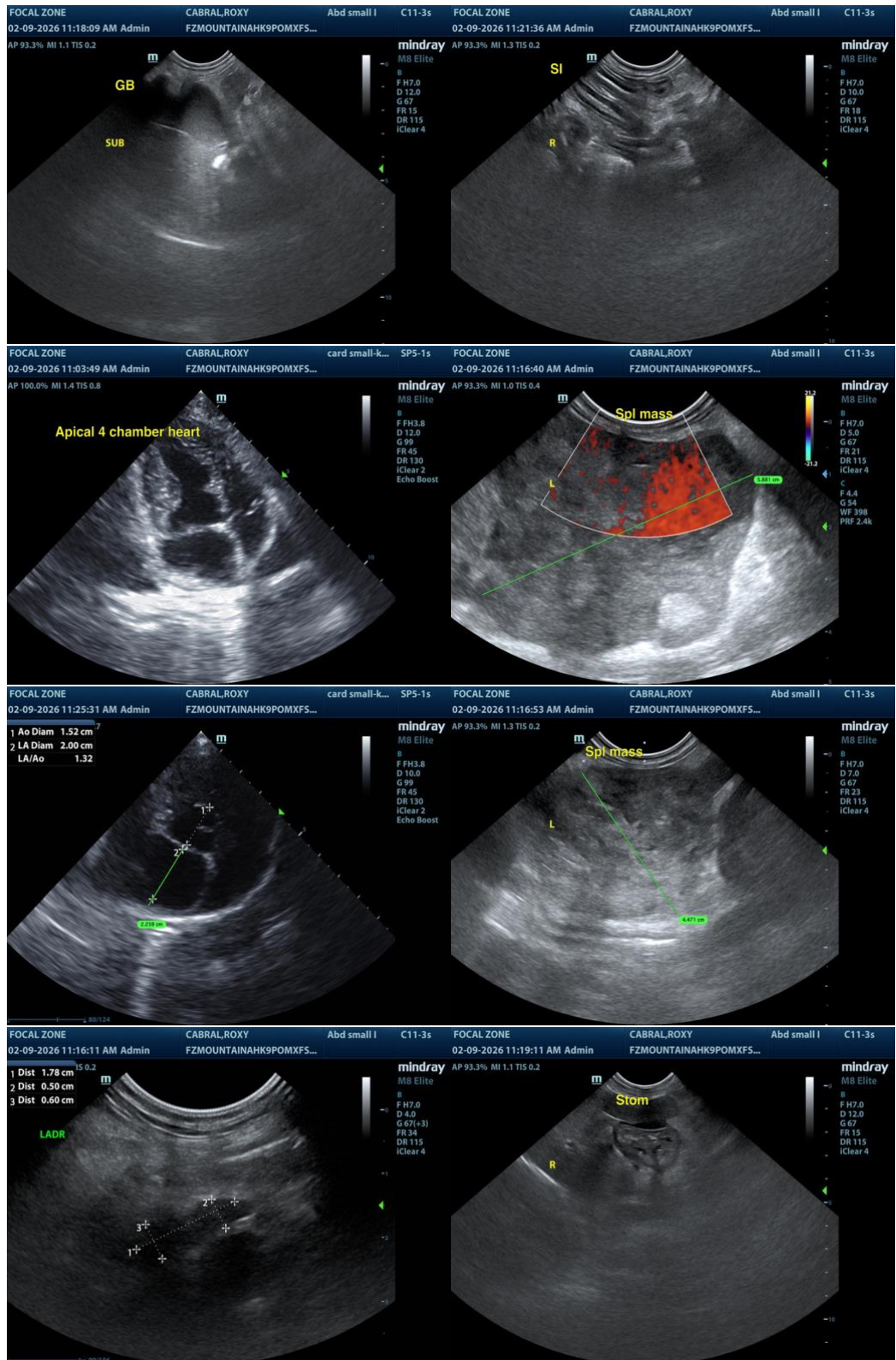
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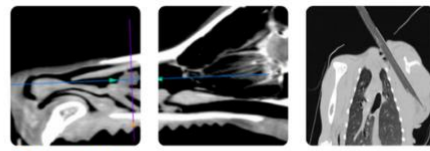
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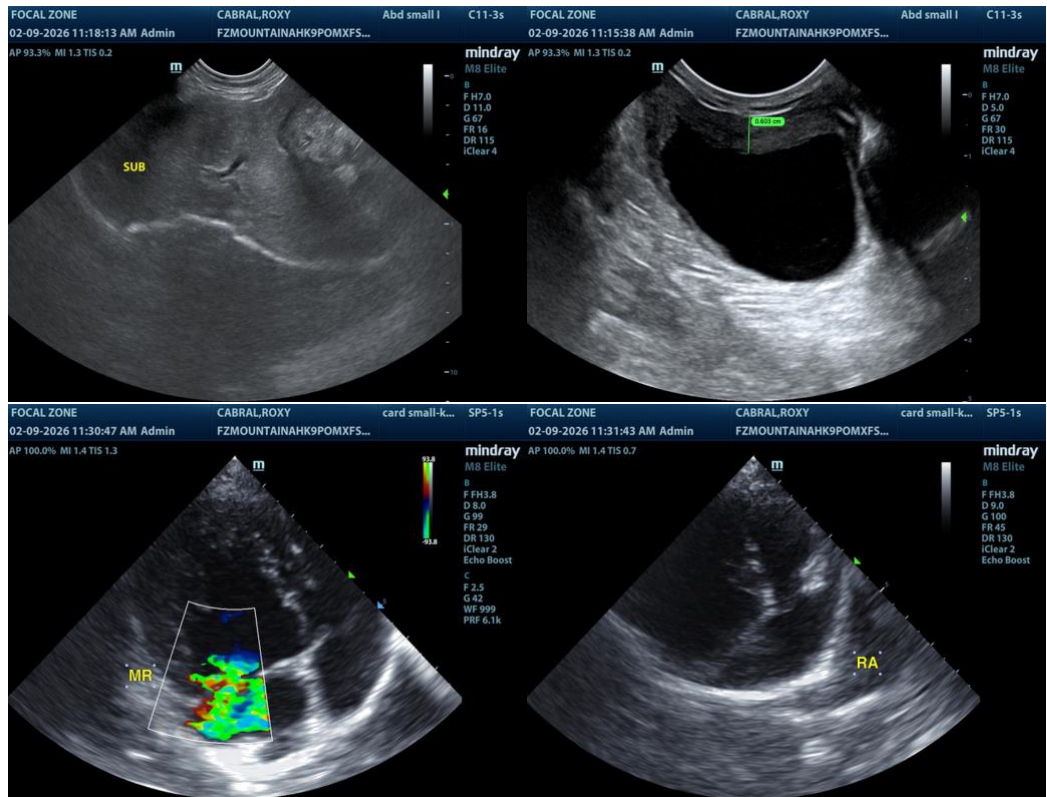
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

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