


**PATIENT**

Harley Davidson

**SPECIES**

Canine

**BREED**

Boston Terrier

**SEX**

NM

**AGE**

13 y

**WEIGHT**

19.6

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Hope Brossman

**HOSPITAL NAME**

Animal Mansion VH

**REFERRING VET**

Shelly Parker DVM

**INVOICE**

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**DATE**

1/27/23

**PRESENTING CLINICAL SIGNS**

 Rapid weight loss, Grade V/VI murmur. This is not a normal patient of ours- unknown full history  
 Abnormal PE/Chem/CBC/UA Results: RDVM states "Declining kidney and liver values"

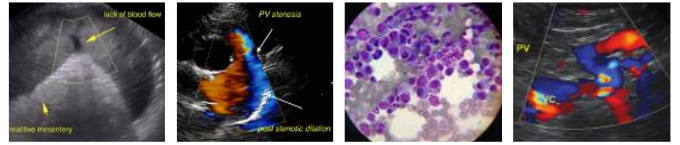
**ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN**

CANINE	MR	TR	LA/AO	LA/AO	FS	EF	EPSS
<b>CARDIAC PARAMETERS</b>	<b>VMAX</b> (m/s)	<b>VMAX</b> (m/s)	(Boon method)	(Heart Base; Swe)	(%)	(%)	(cm)
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
<b>PATIENT</b>			NM	1.4	45	80	0.22
<b>CANINE CARDIAC PARAMETERS</b>	<b>HR</b> (BPM)	<b>AV VMAX</b> (m/s)	<b>PV MAX</b> (m/s)	<b>BODY WEIGHT</b> (kg)	<b>LA</b> 2D short axis Base view (cm)	<b>LVIDd</b> Avg; 2D and m-mode short axis (cm)	<b>LVIDs</b> Avg; 2D and m-mode short axis (cm)
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6				
<b>PATIENT</b>	NM	NM	NM		4.0	4.0	

**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 mild to moderate thickening consistent with endocardiosis. Doppler indicated moderate 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 to a depth of 2 cm exhibited normal thickness and tone. Mild asymmetrical luminal surface to micropolyploid changes were present likely associated with age related mural changes. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

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The area of the aortic trifurcation was free of pathology.

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The area of the iliac trifurcation was free of pathology including no evidence of medial, iliac or sublumbar lymphadenopathy.

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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 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 4.8 cm in length. The right kidney measured 4.6 cm in length.

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**Adrenal Glands**

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The left adrenal gland was indistinctly visualized with overtly normal size, position and shape. The left adrenal gland measured 0.4 cm width at the caudal pole. The right adrenal gland was not definitively visualized.

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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.

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**Liver/ Gallbladder**

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The liver presented enlarged in size. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. 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 primarily anechoic luminal content. The cystic and common bile ducts were normal.

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**Gastrointestinal**

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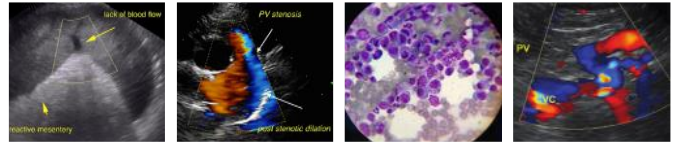
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The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained moderate ingesta exhibiting areas of distal acoustic shadowing with no signs of ileus, obstruction, or foreign material.

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The small intestine presented primarily intact wall layering with 1:3 muscularis/mucosa ratio. Intermittent mild duodenojejunal mucosal speckling was present. An unspecified segment of the GI tract in the subjective right cranial abdomen exhibited mural hypertrophy, indistinct wall layer detail and segmental non-obstructive ileus measuring 3-4 cm in length and approaching 1.0 cm in wall width. The



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lumen of the small intestine was empty with no signs of obstruction, or foreign material. The intact duodenum wall measured 0.35 cm width. The intact jejunum wall measured 0.32 cm width.

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

***Pancreas***

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum, likely consistent with age related changes and considered incidental. No signs of active inflammation or neoplasia.

***Free Abdomen***

No overt lymphadenopathy or peritoneal effusion was present.

**ULTRASONOGRAPHIC FINDINGS**

***Primary Findings***

- Compensated chronic mitral valve disease ACVIM B1
- Moderate shadowing gastric ingesta
- Segmentally thickened unspecified segmental GI tract subjective cranial abdomen likely jejunal involvement
- Hepatic parenchymal remodeling
- Mild heterogenous pancreas
- Mild chronic renal changes

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Sonographically the kidneys did not appear to be end stage which the liver is most consistent with benign parenchymal remodeling or chronic hepatopathy. Correlation with kidney and liver parameters is recommended. Suspect segmental GI mural disease which may include inflammatory or infiltrative neoplastic etiologies with the possibility of emerging GI mural mass. A GI panel to include PLI/TLI/Cobalamin/Folate is recommended. Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered. GI biopsies are likely required for a definitive diagnosis assuming no evidence of pathology on three view chest radiographs.



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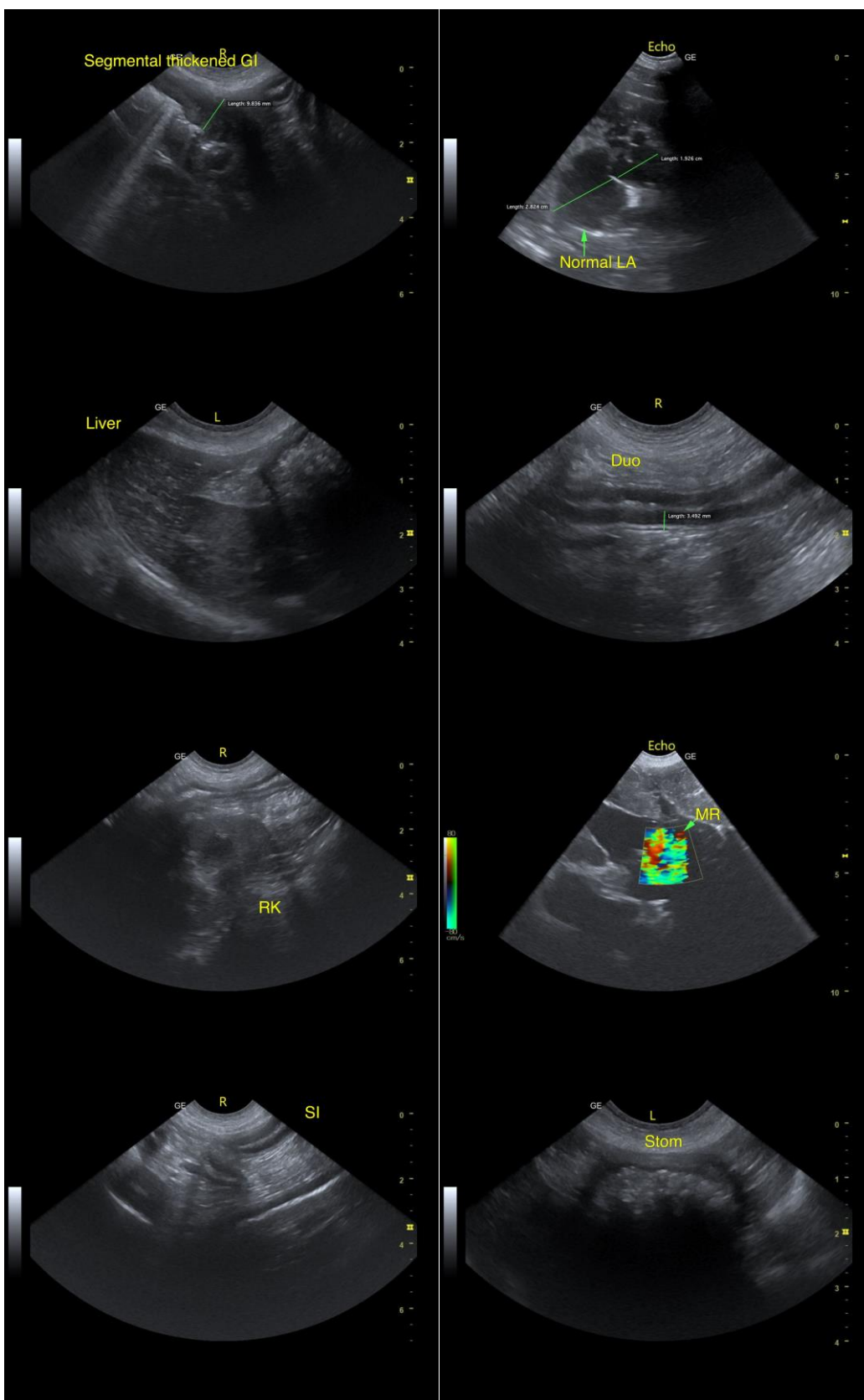
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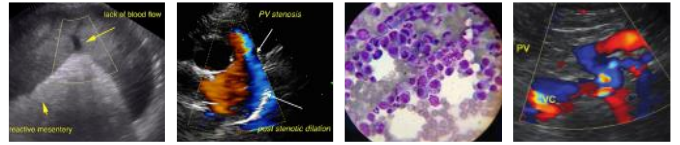
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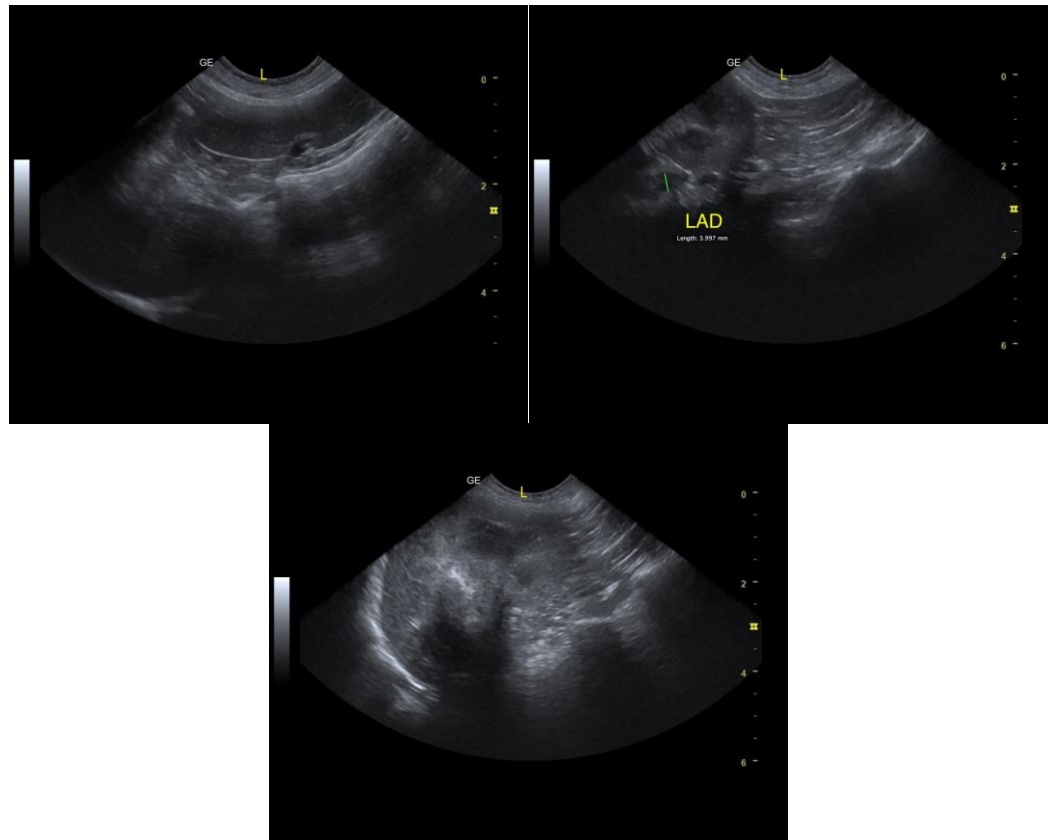
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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