
**PATIENT**

Misha Hanson

**PRESENTING CLINICAL SIGNS**

Check up due to age and chronic elevations in WBC.

Current meds: Baytril / Clindamycin

**SPECIES**

Canine

Abnormal PE/Chem/CBC/UA Results: Chronic elevated WBV from 18,000-30,000 over last month - no fever

**BREED**

Maltese

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

FS

**AGE**

15yr

**WEIGHT**

7.3lb

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
PATIENT			1.2	1.1	41	74.2	0.15
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LA 2D short axis Base view (cm)	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	175	2.0	0.8		2.2	2.2	

**INTERPRETED BY**

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

**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. Possible minor prolapse of the anterior leaflet was present. 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.

**IMAGING PERFORMED BY**

Jessica Miller

**HOSPITAL NAME**

 All Creatures Great  
 and Small

**REFERRING VET**

Dr. Ashmore

**INVOICE**

12905ag

**DATE**

02/06/2023

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2 cm exhibited normal thickness and tone. 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.



<b>PATIENT</b>	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. The left kidney measured 3.5 cm in length. The right kidney measured 3.7 cm in length.
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<b>SPECIES</b>	
Canine	The area of the aortic trifurcation was free of pathology.
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**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.55 cm width at the caudal pole and 1.8 cm length. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.48 cm width at the caudal pole and 1.5 cm length.

**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.

**Liver/Gallbladder**

The liver presented normal 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.

**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 primarily intact wall layering with 1:3 muscularis/mucosa ratio. Focally thickened mid to cranial abdominal jejunal wall exhibiting minor mural hypertrophy and loss of focal distinct jejunal wall layer detail was present measuring ~ 1.8 cm in diameter with wall width measuring 0.6 cm. 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.

**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.

**Free Abdomen**

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



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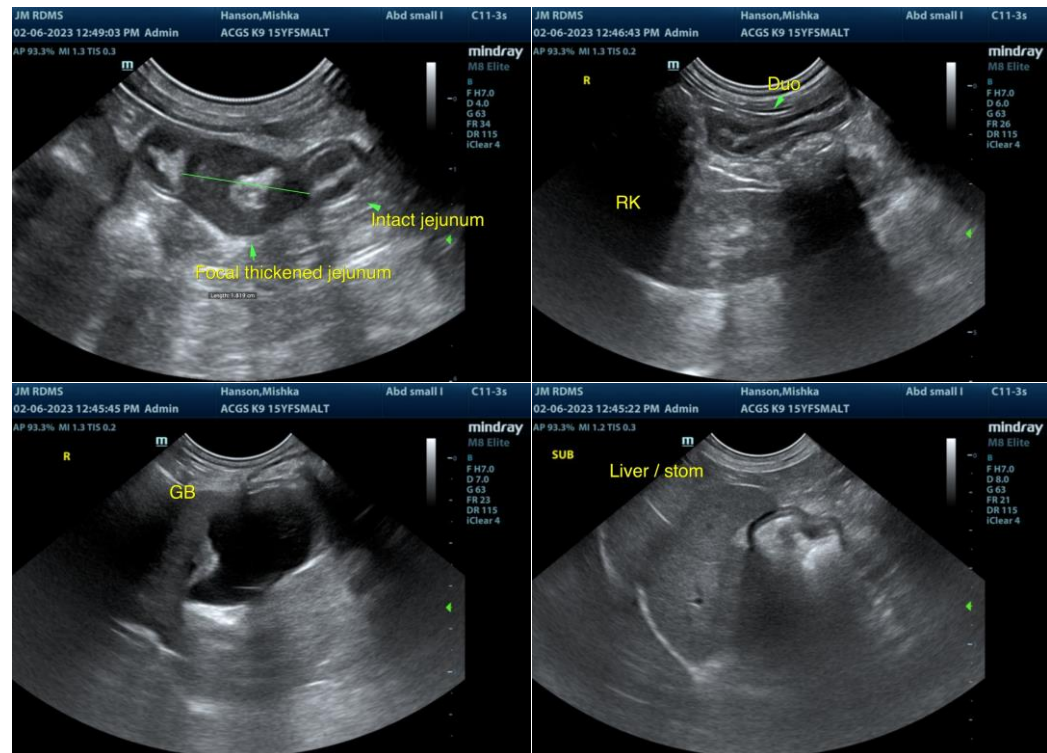
**ULTRASONOGRAPHIC FINDINGS**

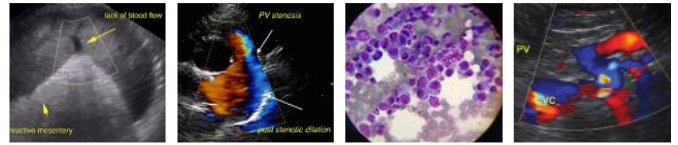
- Overtly normal cardiac structure and function
- Mildly thickened mitral valve, potential for minor prolapse-consistent with mitral valve endocardiosis
- Normal left atrium
- Moderate chronic renal changes
- Minor hepatic remodeling, normal gallbladder
- Focally thickened jejunum

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

No evidence of overt structural or functional cardiomyopathy was present. No evidence of cardiac tumors or endocarditis. If a murmur is present in this patient, compensated mitral valve insufficiency secondary to chronic degenerative valvular changes is likely. No indication for cardiac medications. Recheck echocardiogram may be considered in 6-12 months, sooner if murmur intensity increases or clinical signs suggestive of heart disease arise.

Largely a geriatric abdomen with primary abdominal finding consisting of focally thickened jejunal wall. Benign etiologies vs emerging neoplastic criteria are possible. Sampling would be required for a definitive diagnosis. The jejunal mural lesion does not appear to be obstructive to intestinal peristalsis or flow. Sonographic monitoring of the jejunal lesion for evidence of progression with initial recheck in 3-4 weeks is recommended.





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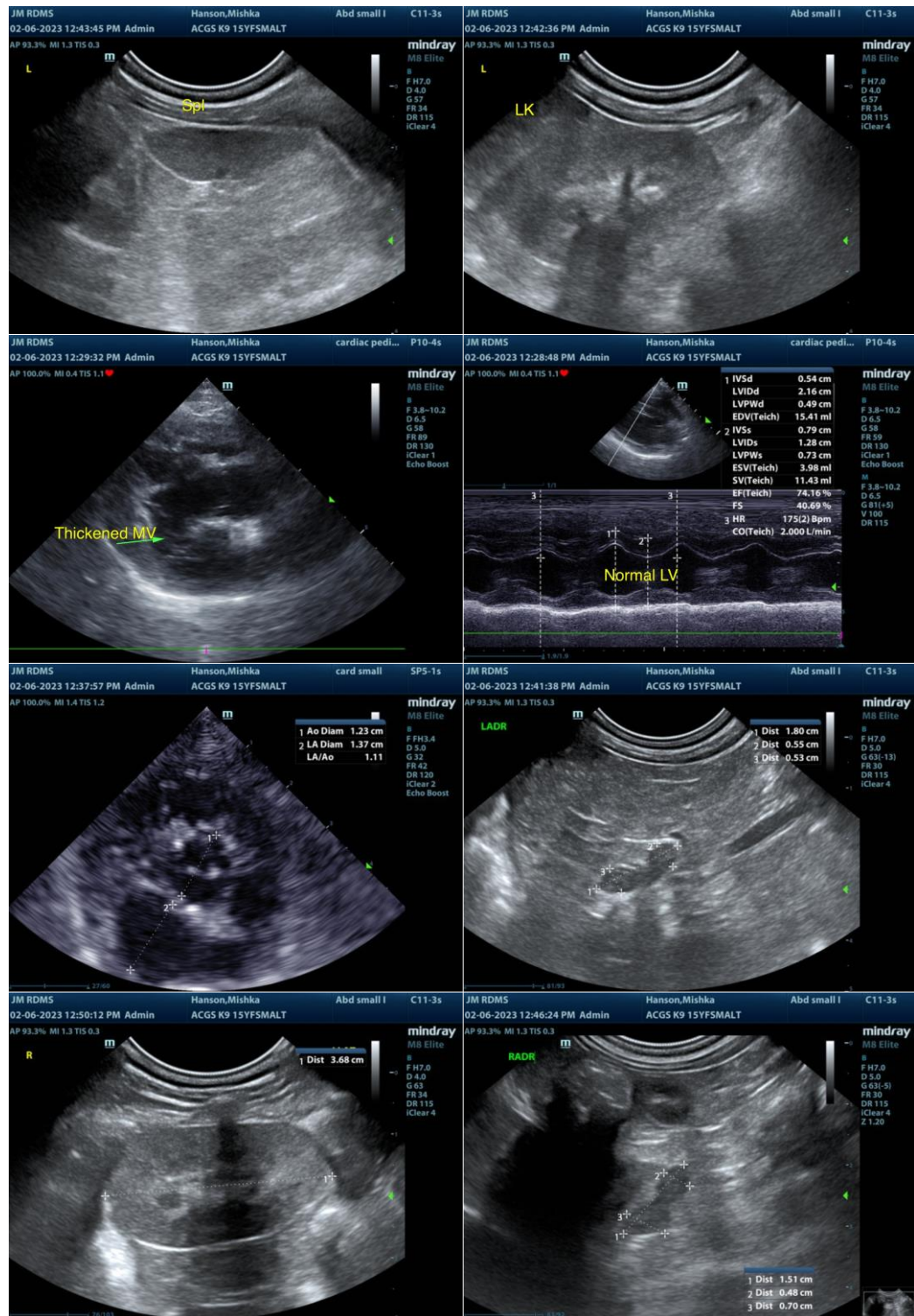
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I



**PATIENT**

can be of any further assistance, please contact me.

Misha Hanson

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