



## PATIENT

Gizmo Hawkins

## SPECIES

Canine

## BREED

Labrador Retriever

## SEX

MN

## AGE

11 years

## WEIGHT

33.3 kg

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Dr. Sarah Barthelemy

## HOSPITAL NAME

Healing Traditions  
Holistics Vet

## REFERRING VET

Dr. Vockeroth

## INVOICE

17484

## DATE

9-28-22

## PRESENTING CLINICAL SIGNS

Had a few days of lethargy with reduced appetite and diarrhea. RH lameness.  
Abnormal PE/Chem/CBC/UA Results: Regenerative anemia with leukocytosis characterized by monocytosis.

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

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	--	--	NM	1.2	30.8	60.3	0.25
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	123	1.2	1.0	--	3.8	3.9	--

### Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. The cranial and caudal **mitral** valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. The **left ventricle** presented normal in thickness 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. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonary outflow** 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. Moderate to severe volume subjectively anechoic pleural effusion without evidence of fluid echogenic changes. No obvious or visualized mass lesions in the area of the cranial **mediastinum cardiac base, pericardial and extra-cardiac regions.**

### Urinary System



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The urinary bladder, trigone and cystourethral junction 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 was noted.

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No overt pathology in the area of the residual prostate.

The area of the aortic trifurcation was free of pathology.

**BREED**

Labrador Retriever

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 – cm in length. The right kidney measured – cm in length.

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**Adrenal Glands**

**AGE**

11 years

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured – cm width at the caudal pole and – cm width at the cranial pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured – cm width at the caudal pole and – cm width at the cranial pole.

**WEIGHT**

33.3 kg

**Spleen**

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The spleen exhibited subjective mild enlargement, maintained symmetrical to mildly rounded splenic contour and generalized mild splenic parenchyma heterogeneity. No evidence of splenic masses or nodules. Splenic vascularity was normal.

**Liver/ Gallbladder**

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The liver exhibited subjective mild enlargement. 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. No overt intraparenchymal masses or nodules noted.

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The gallbladder was non distended in size mild nondependent mildly congealed yet nonorganized debris. The cystic duct and common bile ducts were normal without evidence of dilation. No evidence of gallbladder or peripheral gallbladder inflammation.

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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 ileus, obstruction, or foreign material.

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

**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 were evident.

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**Free Abdomen**

A solitary mild to moderately enlarged, symmetrical homogeneous to mildly hypoechoic medial iliac lymph nodes was present, measuring 2.7 cm x 1.0 cm in the area of the iliac trifurcation.

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Labrador Retriever

No omental masses, omental lymphadenopathy or evidence of concurrent ascites.

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**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings**

**AGE**

11 years

- Overtly normal structure and function
- Moderate to severe volume anechoic noncardiogenic peritoneal free fluid
- Subjective mild hepatosplenomegaly
- Sonographically unremarkable GI tract
- Mild gallbladder debris (non-mucocele)
- Focal nonspecific yet suspicious medial iliac lymphadenopathy- hyperplasia, lymphadenitis, suspicion for possible emerging lymphatic neoplastic criteria warranted.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Thoracocentesis for pleural effusion, analysis, cytology +/- culture and sensitivity if evidence of inflammatory cells is recommended for further assessment. Given no evidence of structural or functional cardiomyopathy as a cause of the pleural effusion, infectious/inflammatory disease, lymphatic obstruction, neoplasia, nonvisualized intrathoracic pathology are all potentials. Concurrent screening hepatosplenic FNA cytology, as well as (if accessible) ultrasound guided FNA of the solitary enlarged medial iliac lymph node for further assessment is recommended. Thoracic CT is likely ideal for further assessment yet pending pleural effusion analysis.

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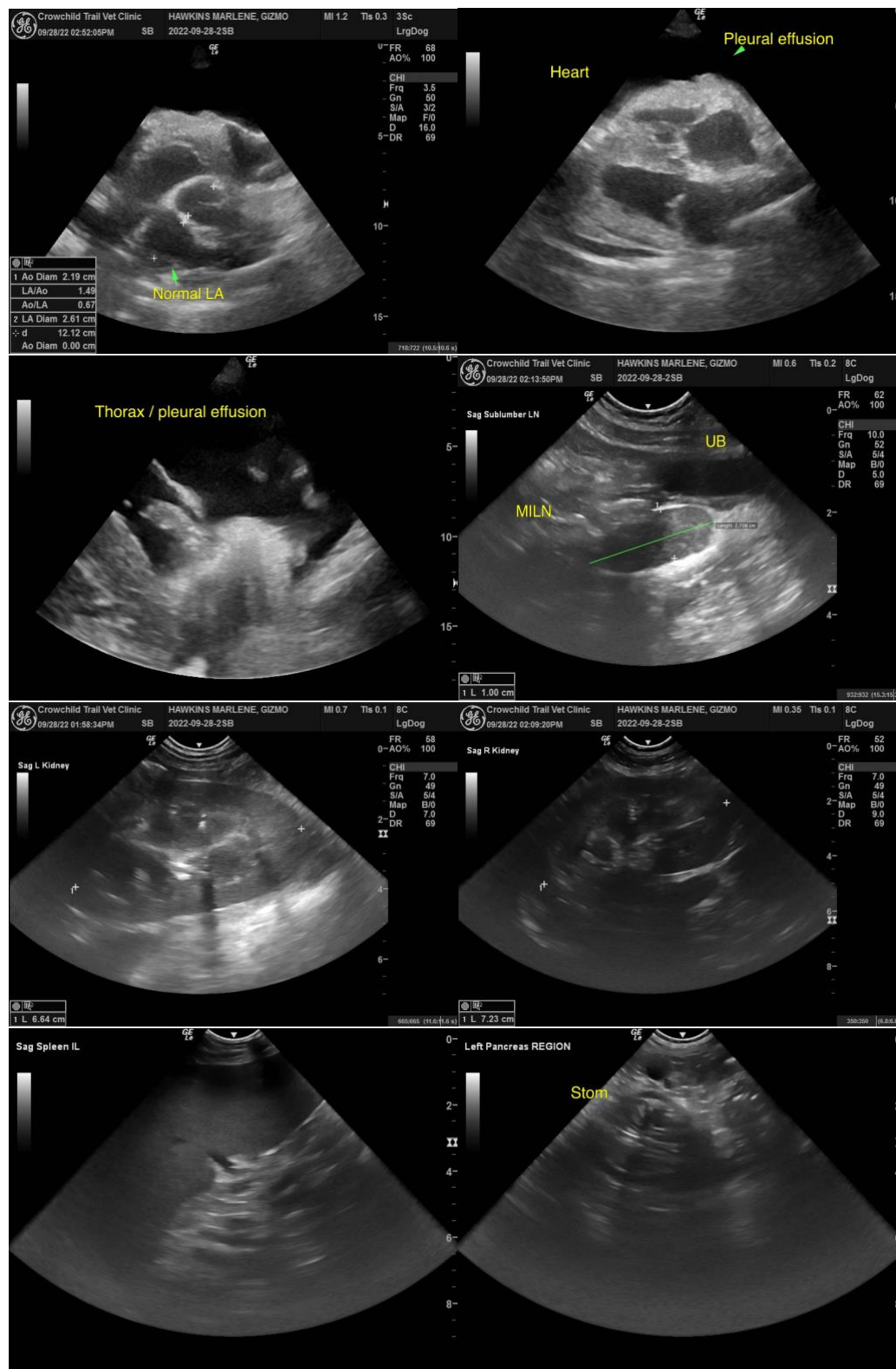
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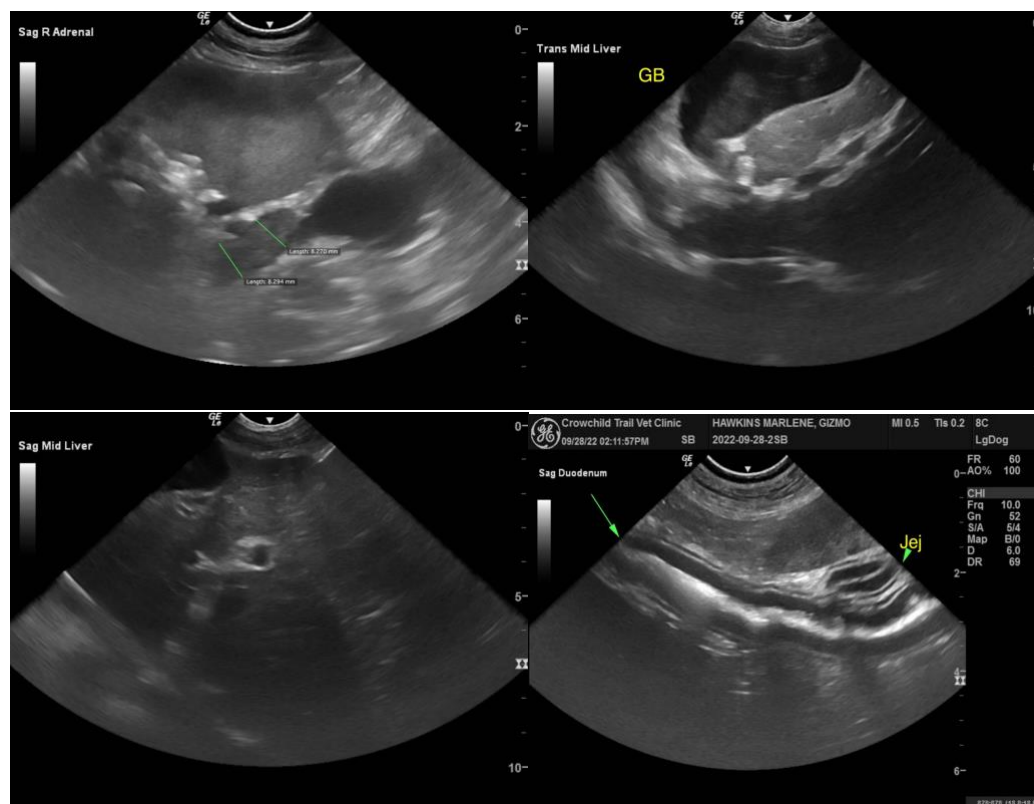
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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