



PATIENT PRESENTING CLINICAL SIGNS

PATIENT Joe Sater Found on side of road 6/18, presumed HBC. Treated at Salem ER and transferred here this am. Labored breathing, weak unable to stand without assistance. Abrasions, but no obvious fractures. QAR. Current Medications; Unasyn, buprenorphine

SPECIES Abnormal PE/Chem/CBC/UA Results: Elevated ALT improving (825, then 556), declining PCV (40%, then 32%, now PCV checked today @ 12pm = 29% Radiographs from Previous ER (See attached) = Pleural fluid and pulmonary contusions. ER thought they saw damage to sacrum and left ilium.

Canine

BREED ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

Labrador Retriever

SEX

Intact Male

AGE

3 Years

WEIGHT

69.5 Pounds

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	<1.6	28-40	40-100	<0.6
PATIENT			1.3		24.2	52.6	0.2
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	BELOW	BELOW	BELOW	BELOW
PATIENT	NM	NM	NM		3.7	3.3	

INTERPRETED BY

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

IMAGING PERFORMED BY

Amanda Lace-Crook –
SDEP Certified

HOSPITAL NAME

Rivers Edge PMC

REFERRING VET

Dr. Bridget Hayes

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6/20/22

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 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 LV walls was mildly subnormal as evidenced by the fractional shortening measurement and subjective evaluation of the different regions of the myocardium. The **left ventricular outflow** tract demonstrated subjective normal laminar systolic flow and 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 revealed subjective normal valve structure, laminar systolic flow, and diameter. No visible **pericardial** free fluid noted, yet moderate volume free pleura fluid exhibiting echogenic changes suggestive of cellularity was present. The cranial **mediastinum and pericardial and extra-cardiac 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 – cm exhibited normal thickness and tone. Intact walls present. Anechoic urine was present in the lumen with



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Joe Sater

moderate non-dependent particulate 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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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 6.9 cm. The right kidney measured 7.7 cm.

Adrenal Glands

BREED

Labrador Retriever

The adrenal glands were uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 2.2 cm length x 0.63 cm at the caudal pole. The right adrenal gland measured 2.5 cm length x 0.60 cm at the caudal pole.

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Intact Male

Spleen

The spleen exhibited normal subjective size. Mild areas of medial capsule asymmetry were present and subtle generalized splenic parenchyma heterogeneity. No masses or nodules noted. A mild amount of anechoic perisplenic free fluid exhibiting mild echogenic changes was present around the medial spleen and potentially within the area of the hilus.

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Liver

The liver presented normal in size. The hepatic parenchyma revealed diffuse reduced echogenicity compared to the spleen and renal cortical parenchyma with a mild coarse echotexture. Increased portal vein prominence was evident. The capsule of the liver was normal in margination. Distinct masses or nodules were not evident. The hepatic and portal vasculature were normal in appearance. 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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The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained moderate, primarily no-shadowing (yet with focal areas of distal acoustic shadowing) ingesta most consistent with post prandial presentation without 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

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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ULTRASONOGRAPHIC FINDINGS

- Overtly normal cardiac structure, mild decreased LV contractility
- Moderate volume pleural free fluid exhibiting echogenic changes, suggestive of cellularity

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- Intact urinary bladder with moderate particulate sediment – suspect cellular debris/protein, potential for blood.

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- Normal splenic size exhibiting mild parenchyma heterogeneity, focal area of mild concurrent perisplenic free fluid exhibiting mild echogenic changes – potential for minor perisplenic hemorrhage.

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- Hypochoic liver – Non-specific, metabolic, reactive, resolving inflammatory hepatopathy, non-cardiogenic congestion all possible.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Aside from the mild amount of medial perisplenic free fluid, no overt evidence of significant abdominal trauma or other pathology. Urinalysis is recommended to assess for evidence of hematuria. Coagulation profile is recommended if possible.

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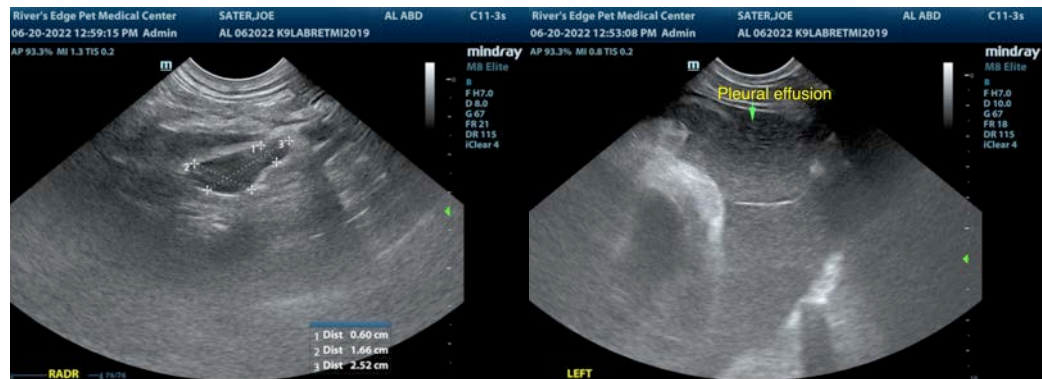
Thoracocentesis for effusion analysis, cytology +/- culture and sensitivity if evidence of inflammatory cells, recommended. Overall, no overt evidence of significant cardiomyopathy. The mild decreased LV contractility could be a normal patient variant, or possibly secondary to athletic state, given the young age of the patient. Some degree of cardiac shock could also be possible. If hemothorax is confirmed, potential for intrathoracic bleed, given presumed trauma, may be of high concern.

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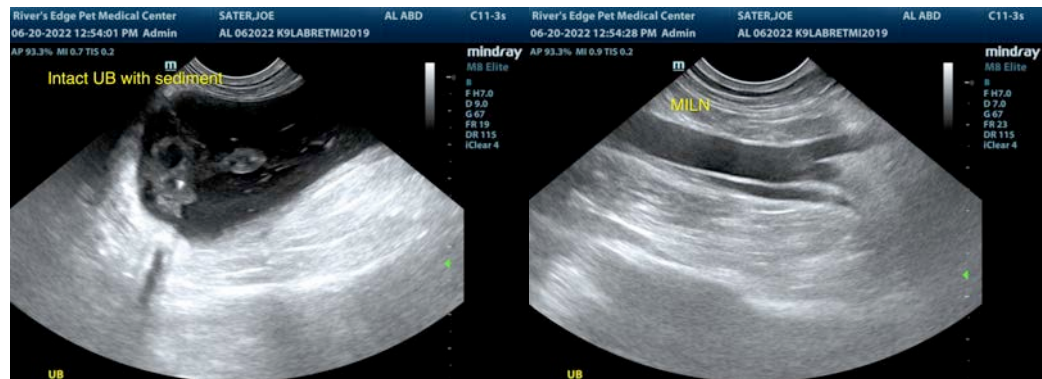


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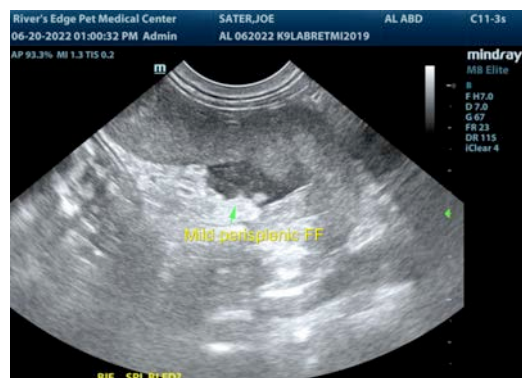
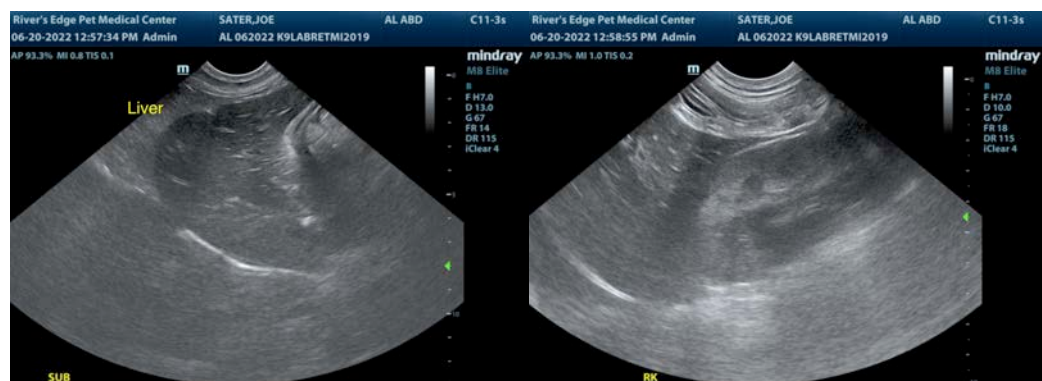
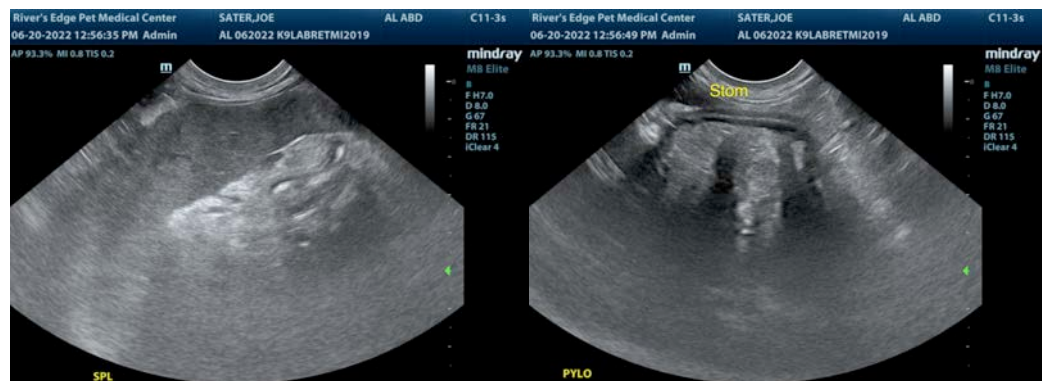
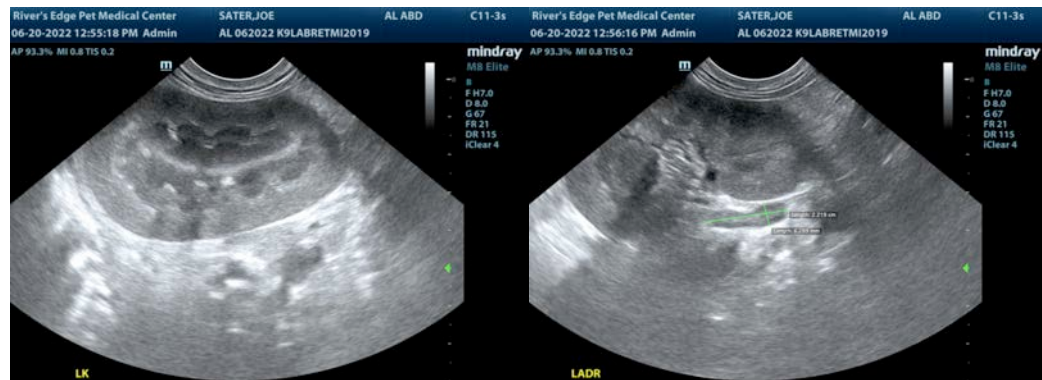
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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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