


PATIENT

Happy Cramer

PRESENTING CLINICAL SIGNS

Has been bloated, vomiting, not walking right/waddling, lethargic, depressed; enlarged heart on rads, pleural effusion chest and abd.

SPECIES

Canine

Current Meds: Lasix prescribed 11/26/22 ECG Findings - atrial premature contractions

Abnormal PE/Chem/CBC/UA Results: 9/28/22 - alk phos 472 (Elevated), Glu 67 (Decreased) SG = 1.011 (decreased)

BREED

Jack Russell Mix

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN AND HEART
SEX

MN

AGE

9yr

WEIGHT

32.4lb

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	5.3	2.3	1.2	1.1	44.8	80	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				
PATIENT	NM	1.0	0.8		1.9	2.9	

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. The cranial and caudal mitral valve leaflets presented mild thickening consistent with mild endocardiosis. Doppler indicated measurable moderate eccentric insufficiency. The left ventricle presented thicknesses with linear contour and was not dilated nor restricted. Mild flattening of the IVS was present. 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 severe increased size with bulbous appearance, anechoic content primarily with potential for minor spontaneous contrast although not definitive. Subtle deviation of the interatrial septum towards the left atrium suggestive of increased right atrial pressure was noted. No evidence of formed right atrial thrombus. No evidence of masses was noted or chamber overload. Tricuspid valvular assessment demonstrated mild thickening with moderate TR on Doppler. The right ventricle was of severe increased size, normal myocardial echogenicity and mild decreased free wall thickness. Pulmonic tract assessment revealed normal valve structure, laminar flow, and diameter (approx.1:1 pa/ao ratio). Trace pulmonic insufficiency was present on Doppler. Mild decreased measured RVOT velocity. No visible pericardial fluid and moderate free pleural 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

 Animal Care Center
 Flanders

REFERRING VET

Dr. Hallihan

INVOICE

1230ag

DATE

11/29/2022

Urinary System



PATIENT	The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra 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.
Happy Cramer	
SPECIES	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 6.3 cm in length. The right kidney measured 6.3 cm in length
Canine	
BREED	The area of the aortic trifurcation was free of pathology.
Jack Russell Mix	The area of the residual prostate appeared normal and free of pathology.
SEX	Adrenal Glands
MN	The left adrenal gland was mildly prominent in size based on caudal pole width measurement in light of body weight. No evidence of neoplastic criteria. The left adrenal gland measured 2.4 cm x 0.83 cm. This is likely a patient variant or potential for minor adenomatous change. The right adrenal gland was normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The right adrenal gland measured 3.0 cm length and 0.57 cm width in the caudal pole.
AGE	
9yr	
WEIGHT	Spleen
32.4lb	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.
INTERPRETED BY	Liver
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	The liver presented enlarged in size with symmetrical yet swollen contour. The parenchyma exhibited conserved uniform parenchyma with normal echogenicity isoechoic to the spleen and falciform fat. The hepatic vasculature was dilated in appearance, most notable at the level of the hepatic vein / caudal vena cava junction, without evidence of thrombosis. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content with minor echogenic luminal debris. The cystic and common bile ducts were normal
IMAGING PERFORMED BY	Gastrointestinal
Jessica Miller	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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Dr. Hallihan	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.
INVOICE	Normal visible colon wall layers were present with apparent formed feces in lumen.
1230ag	Pancreas
DATE	The pancreas presented hypoechoic to heterogeneous echogenicity compared to adjacent omental fat. Mild asymmetrical capsule margination was present with mild variable parenchymal swelling and mild peripancreatic reactivity / inflammation. No overt evidence of neoplasia.
11/29/2022	



PATIENT

Free Abdomen

Happy Cramer

No omental masses or overt lymphadenopathy was present.

SPECIES

Canine

Moderate volume anechoic peritoneal free fluid with mild generalized uniform hyperechoic mesentery was present.

BREED

Jack Russell Mix

ULTRASONOGRAPHIC FINDINGS

- Compensated MR
- Severe RA/LV enlargement
- TR-estimated pulmonary pressure gradient suggestive of mild increased pulmonary pressure yet not consistent with overt clinical pulmonary hypertension
- Congestive hepatomegaly
- Pancreatic edema
- Mild chronic renal changes
- Overtly normal GI tract
- Moderate volume pleural and peritoneal effusion

SEX

MN

AGE

9yr

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The degree of right heart enlargement in conjunction with bicavitary effusion and congestive hepatopathy pattern is consistent with right heart failure. Correlation with thoracoabdominal effusion analysis cytology +/- C/S if clinically indicated is recommended.

WEIGHT

32.4lb

Pimobendan 0.3 mg/kg PO BID and Lasix/spironolactone combination 1-2 mg/kg PO BID is recommended with as needed respiratory support/O2 therapy. As needed therapeutic abdominocentesis may be indicated.

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(Canine and Feline)

As needed GI support and a spec cPL to assess for the potential for concurrent low-grade pancreatitis is recommended. Long term prognosis is very guarded to unfavorable pending response to therapy. A recheck echocardiogram is recommended in 3-4 months, sooner if progressive evidence of RHF or clinical pulmonary hypertension is noted.

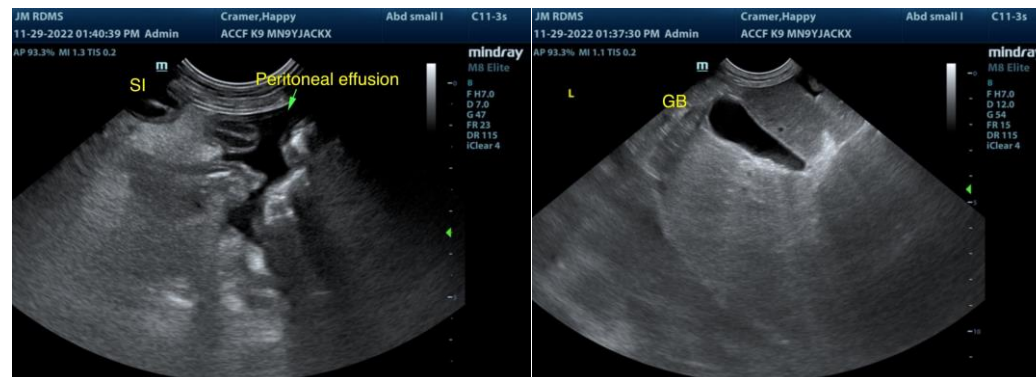
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Exercise restriction is advised.

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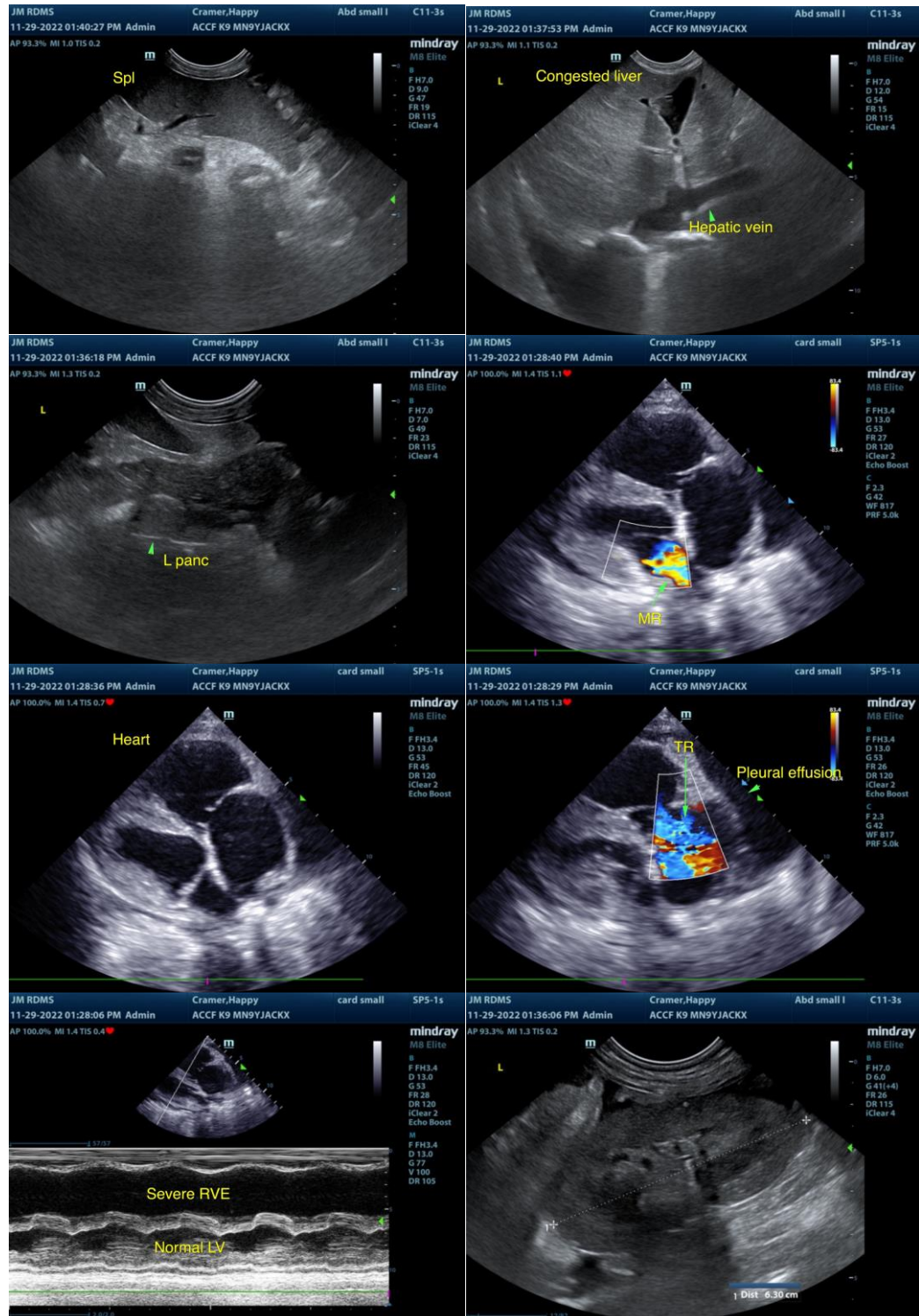
Dr. Hallihan

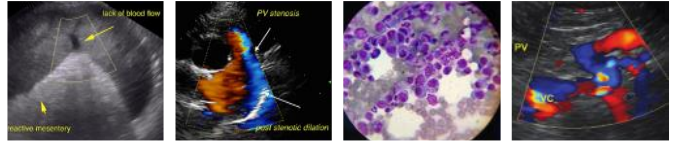
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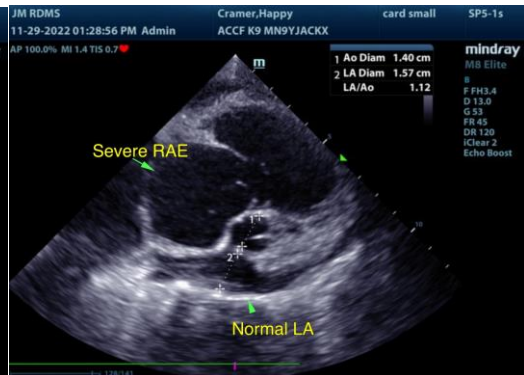
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WEIGHT

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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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(Canine and Feline)

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)
mac.daniel@sonopath.com

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