



PATIENT

Duke Lobue

PRESENTING CLINICAL SIGNS

grinding teeth, abd pain intermittent gas

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

BREED

Mix

SEX

MN

AGE

4

WEIGHT

33.5

INTERPRETED BY

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

IMAGING PERFORMED BY

Jenn

HOSPITAL NAME

Rockaway AH

REFERRING VET

Dr. Maniar

INVOICE

16032

DATE

2/1/23

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				1.1	35	70	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	107	1.7	0.8		2.8	2.9	

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. Trace centralized MR was present on Doppler. 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. **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. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window. No arrhythmia was evident.

Urinary System

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.



PATIENT	The residual prostate was free of pathology.
Duke Lobue	The area of the aortic trifurcation was free of pathology.
SPECIES	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 5.2 cm in length. The right kidney measured 5.0 cm in length.
Canine	
BREED	
Mix	Adrenal Glands
SEX	The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.39 cm width at the caudal pole and 0.44 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 0.47 cm width at the caudal pole.
MN	
AGE	Spleen
4	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.
WEIGHT	
33.5	
INTERPRETED BY	Liver/ Gallbladder
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.
IMAGING PERFORMED BY	Gastrointestinal
Jenn	The stomach presented intact mildly prominent wall layering secondary to mild echogenic mucosa hypertrophy. Intact wall layering was maintained and distinct. The stomach contained a mild amount of retained primarily anechoic fluid and mild nonshadowing chyme. No evidence of mechanical pyloric outflow obstruction was noted. The ventral gastric body wall width measured 0.45 cm.
HOSPITAL NAME	
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REFERRING VET	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. The small intestinal wall width measured 0.33 cm.
Dr. Maniar	
INVOICE	Normal visible colon wall layers were present with apparent formed feces in lumen.
16032	Pancreas
DATE	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.
2/1/23	



PATIENT

Free Abdomen

Duke Lobue

No overt lymphadenopathy or peritoneal effusion was present.

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ULTRASONOGRAPHIC FINDINGS

- Normal echocardiogram
- Trace centralized MR - not clinically significant
- Mild hypomotile gastritis pattern, sonographically unremarkable small bowel

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overall, so sonographic evidence of cardiac or significant abdominal visceral pathology. Potential more generalized inflammatory gastroenteropathy cannot be definitively excluded.

If evidence of gastrointestinal signs i.e., vomiting, inappetence, diarrhea, a GI panel to include PLI/TLI/Cobalamin/Folate could be considered for further assessment. Empirical therapy for gastritis +/- coverage for helicobacter with possible sonographic monitoring of the stomach pending clinical response would be reasonable. A canned novel protein or hydrolyzed diet trial with smaller more frequent feedings and as-needed gastroprotectants with an assessment of clinical response is recommended.

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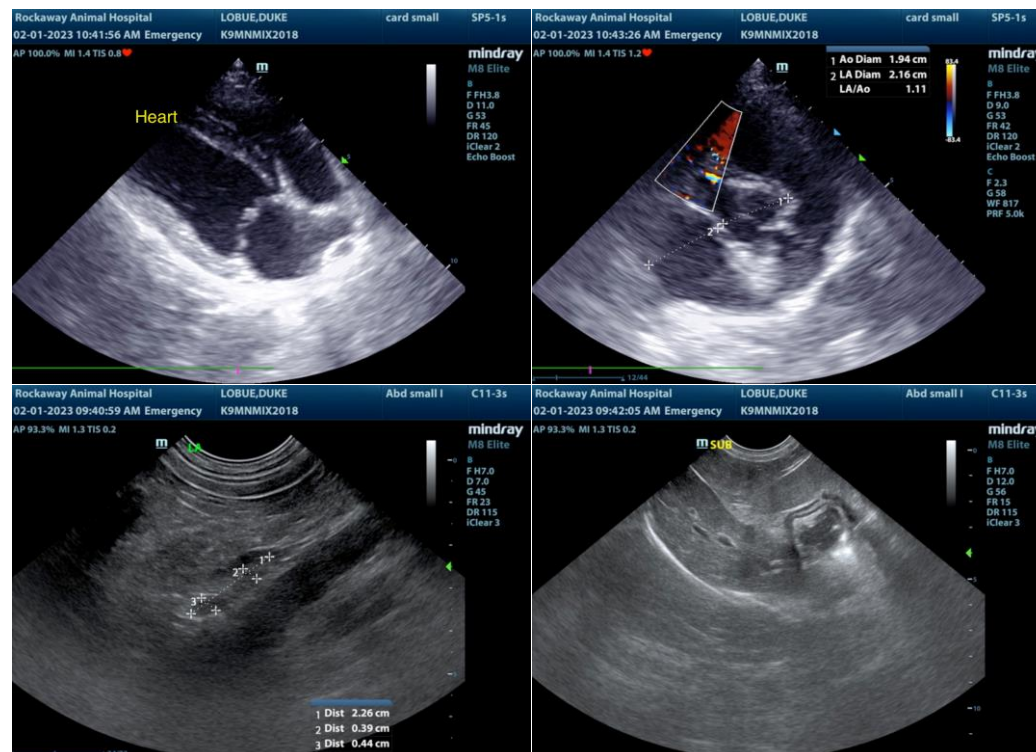
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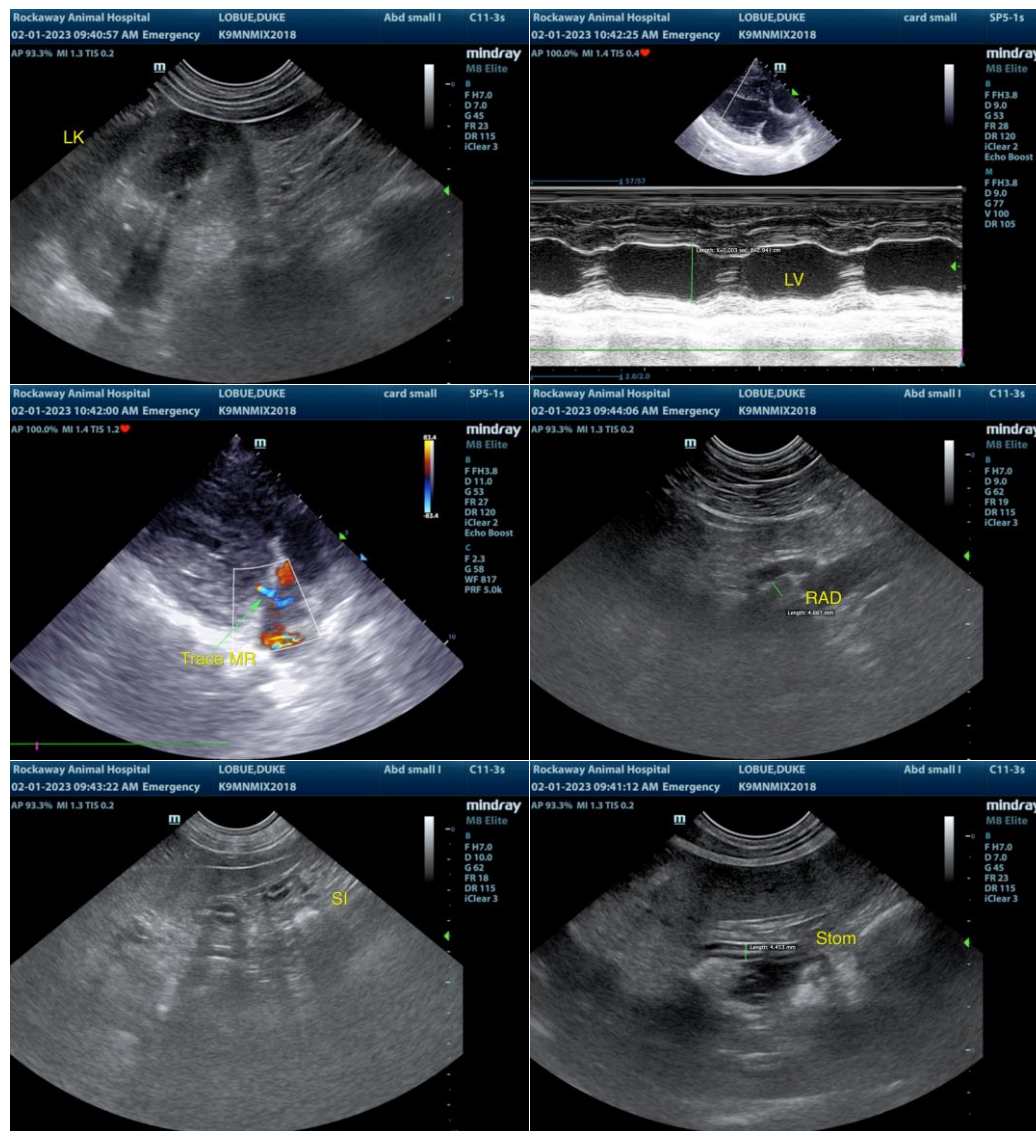
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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