



PATIENT PRESENTING CLINICAL SIGNS

Juno Davis History: Acute onset collapse vs seizure 4/6 HM Hx of diabetes BG is high

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

Canine

BREED

Pom

SEX

Neutered Male

AGE

11

WEIGHT

12.9

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	5.5	--	NM	1.4	48	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	1.2	1.0	--	2.8	3.0	--

Cardiac Presentation

INTERPRETED BY

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

IMAGING PERFORMED BY

Jenn

HOSPITAL NAME

Rockaway AH

REFERRING VET

Dr. Maniar

INVOICE

21898

DATE

4/6/23

The echocardiogram for this patient presented minor excessive **left atrial size** based on two different LA measurement methods. The cranial and caudal **mitral** valve leaflets presented moderate thickening (anterior > posterior) consistent with endocardiosis. Minor prolapse of the septal leaflet was present without evidence of chordae tendineae rupture. Doppler indicated measurable moderate eccentric insufficiency. The **left ventricle** presented normal thickness with linear contour and was not dilated nor restricted. The **myocardium** presented subtle nonuniform echogenicity, suggested of age-related myocardial changes without 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. Normal measured LVOT velocity. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. **Tricuspid** valvular assessment demonstrated mild thickening with mild TR on doppler. 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). Normal measured RVOT velocity. 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. No overt arrhythmia was noted.

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or



PATIENT	sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.
Juno Davis	The area of the residual prostate appeared normal and free of pathology.
SPECIES	The area of the aortic trifurcation was free of pathology.
Canine	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 pyelectasia was present. The left kidney measured 4.2 cm in length. The right kidney measured 4.0 cm in length. Pinpoint to focal hyperechoic cortical foci were noted, suggestive of suspect cortical microinfarcts, potential for cortical fibrosis or emerging mineralization.
BREED	
Pom	
SEX	Adrenal Glands
Neutered Male	The left adrenal gland was normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 1.9 cm length x 0.81 cm width in the cranial pole and 0.5 cm width in the caudal pole.
AGE	
11	The right adrenal gland exhibited mild prominent size with irregular contour and nonhomogenous parenchyma. The right adrenal gland measured 2.3 cm length x 0.94 cm width at the cranial pole and 0.84 cm width at the caudal pole.
WEIGHT	Spleen
12.9	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 revealed generalized enlargement, surrounded by symmetrical hepatic capsule contour. Mild uniform hepatic parenchyma echogenicity was noted. No hepatic masses or nodules were noted.
IMAGING PERFORMED BY	The gallbladder was non-distended in size with anechoic content with mild nonorganized echogenic gallbladder debris. The cystic and common bile ducts were normal.
Jenn	
HOSPITAL NAME	Gastrointestinal
Rockaway AH	The stomach presented intact wall layering with a normal wall layer ratio. Mild nonshadowing ingesta/chyme was present.
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.
Dr. Maniar	Normal visible colon wall layers were present with apparent formed feces in lumen.
INVOICE	Pancreas
21898	The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.
DATE	Free Abdomen
4/6/23	



PATIENT No overt lymphadenopathy or peritoneal effusion was present.

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ULTRASONOGRAPHIC FINDINGS

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- Chronic mitral valve disease with mild septal leaflet prolapse (ACVIM B-1- early B-2)-compensated left heart presentation.
- Mild TR- no overt evidence of clinical pulmonary hypertension
- Chronic renal changes with suspect cortical microinfarcts
- Mildly prominent/irregular right adrenal gland- nonspecific, age variant, adenomatous change, benign hyperplasia, potential for emerging neoplastic criteria cannot be excluded.
- Diabetic hepatopathy pattern
- Mild gallbladder debris (non-mucocele)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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Given that there is no evidence of overt left or right heart chamber enlargement, and without clinical issues, such as LV systolic dysfunction or overt clinical pulmonary hypertension, no obvious evidence of a cardiogenic component to the patients potential syncopal episode or seizure. No overt indication for cardiac medications at this stage, however, prognosis is highly variable, and sonographic monitoring is advised. ECG assessment is suggested to assess for paroxysmal arrhythmia. Screening blood pressure is suggested. If evidence of hypertension is present, potential (although not definitive) concern for possible emerging right adrenal neoplastic criteria, i.e., pheochromocytoma, may be indicated. Urine catecholamine levels may be considered pending assessment of systemic BP, or if evidence of hypertension. Recheck echocardiogram is suggested in 6 months or sooner if clinical signs consistent with cardiac disease arise.

INTERPRETED BY

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

Sonographic monitoring of specifically the right adrenal gland, with recheck in 4-6 weeks is recommended.

IMAGING PERFORMED BY

Jenn

If not done, full CBC/Chemistry panel is recommended.

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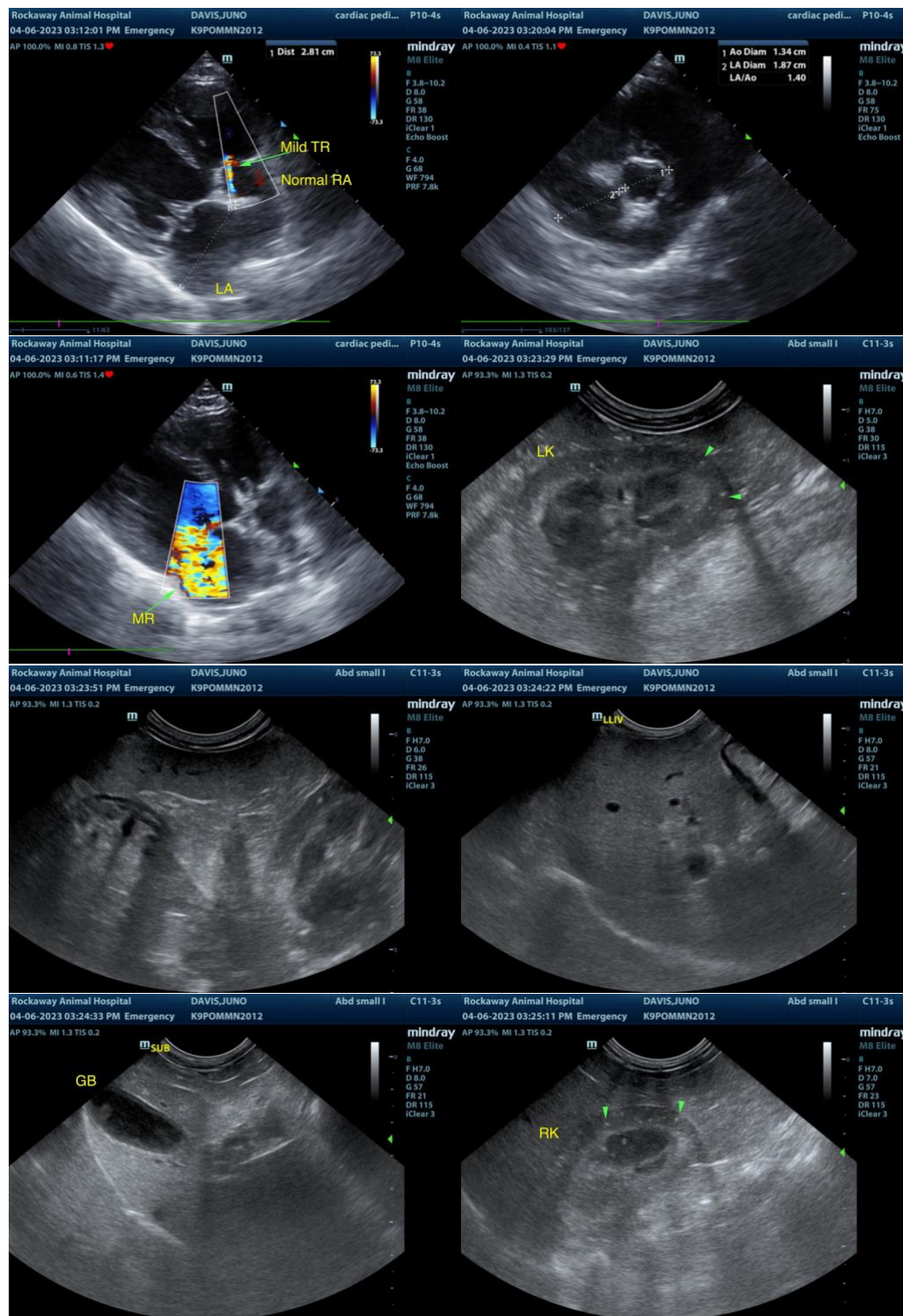
Dr. Maniar

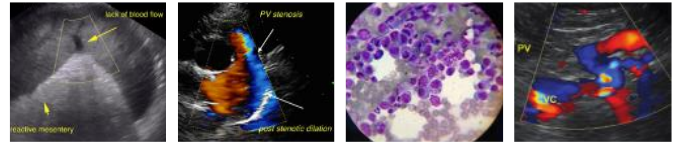
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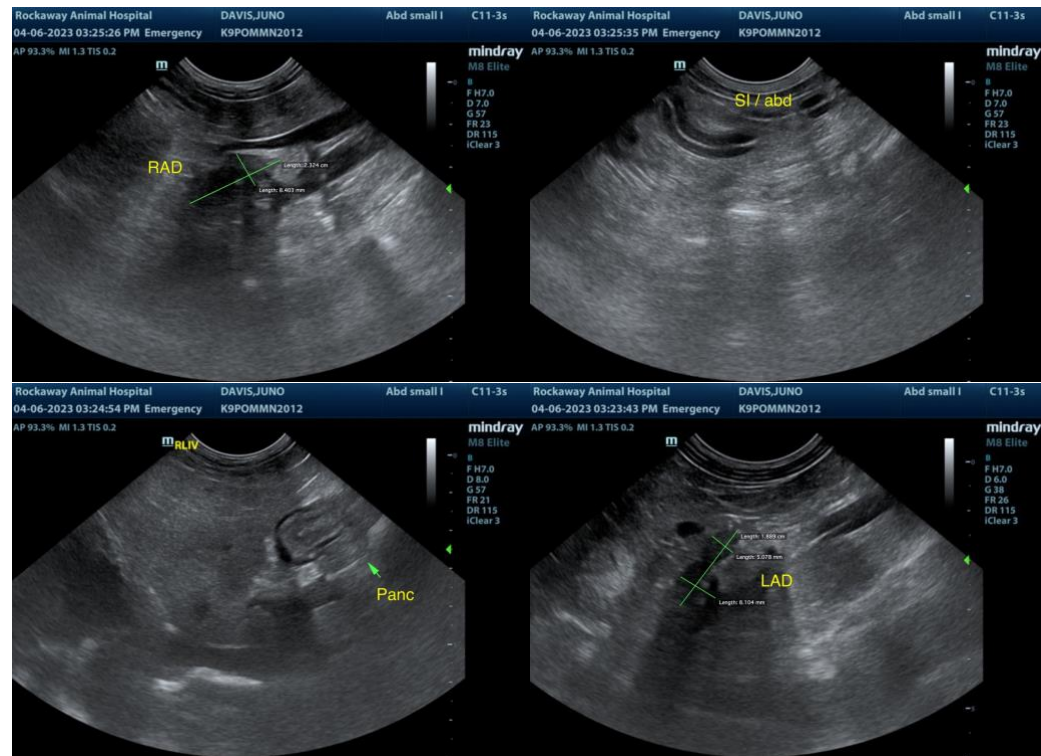
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)
info@SonoPath.com