



## PATIENT

Georgie Eaton

## SPECIES

Canine

## BREED

Akita Mix

## SEX

FS

## AGE

8yr

## WEIGHT

70.8lb

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Amanda Lacey Crook

## HOSPITAL NAME

Rivers Edge Pet  
Medical Center

## REFERRING VET

Dr. Julie Bernier

## INVOICE

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## DATE

08/01/2022

## PRESENTING CLINICAL SIGNS

History: Episode of paralysis of the left side yesterday. P recovered after few hours by herself. No other concern at home. P had mammary tumor diagnosed in 2020 BP today: 160 (mean) Doppler

Abnormal PE/Chem/CBC/UA Results: Labwork today: ALT = 198 (H), ALKP = 1165 (H) GGT=13 (H), rest of CBC/Chem into normal range ECG = Sinus arrhythmia, bradycardia See attached ECG report - no radiographs performed at this time

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN AND HEART

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				1.2	34.3	64.5	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	1.5	1.1		3.4	3.3	

## 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. Mild centralized eccentric MR 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. Minor TR present on Doppler. 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.

## Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or



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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 was 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 7.0 cm in length. The right kidney measured 6.4 cm in length.

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The area of the aortic trifurcation was free of pathology.

No overt pathology in the area of the uterine remnant.

**Adrenal Glands**

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The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.67 cm width at the caudal pole and 3.0 cm length.

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The right adrenal gland exhibited subjective mild cranial enlargement without evidence of nodular changes of parenchymal mineralization. The right adrenal gland measured 0.73 cm width at the caudal pole and 3.1 cm length.

**Spleen**

**WEIGHT**

70.8lb

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.

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**Liver**

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. The hepatic and portal vasculature were normal in appearance without signs of congestion.

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The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content with nondependent yet nonorganized hyperechoic debris. No sign of peripheral gallbladder inflammation. The cystic and common bile ducts were normal.

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**Gastrointestinal**

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained mild nonshadowing ingesta/chyme 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.

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

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**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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No overt lymphadenopathy or peritoneal effusion was present.

**SPECIES**

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- Overtly normal cardiac structure and function
- Mild MR/TR
- Hepatopathy exhibiting mild nonuniform parenchyma
- Mild gallbladder debris (non-mucocele)
- Subjective nonspecific mildly enlarged cranial right adrenal gland

**BREED**

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**SEX**

FS

The hemodynamic effects of the mild MR/TR appear to be minimal given the lack of LA enlargement. No other additional issues were noted. No indication for cardiac medications. A recheck echocardiogram is suggested in 6-12 months, sooner if clinical signs arise.

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Overall, the liver was nonspecific with considerations including vacuolar hepatopathy and nonobstructive cholestasis given the elevated ALP/GGT combinations, inflammatory/immune mediated disease, areas of nodular hyperplasia, hematopoiesis, early fibrosis or other hepatopathy with neoplastic criteria considered less likely.

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The mildly enlarged cranial right adrenal gland may indicate patient or age-related variant, adenomatous change, mild benign hyperplasia with neoplastic criteria thought less likely. An adrenal workup could be considered if clinical signs consistent with Cushing's syndrome are present. Continued monitoring of systemic BP is suggested along with sonographic monitoring for evidence of progressive enlargement.

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No overt evidence of intra-abdominal metastasis from previous mammary tumor.

Hepatosupportive medications may prove beneficial.

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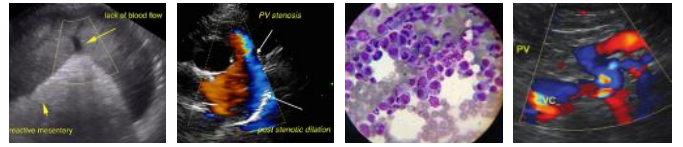
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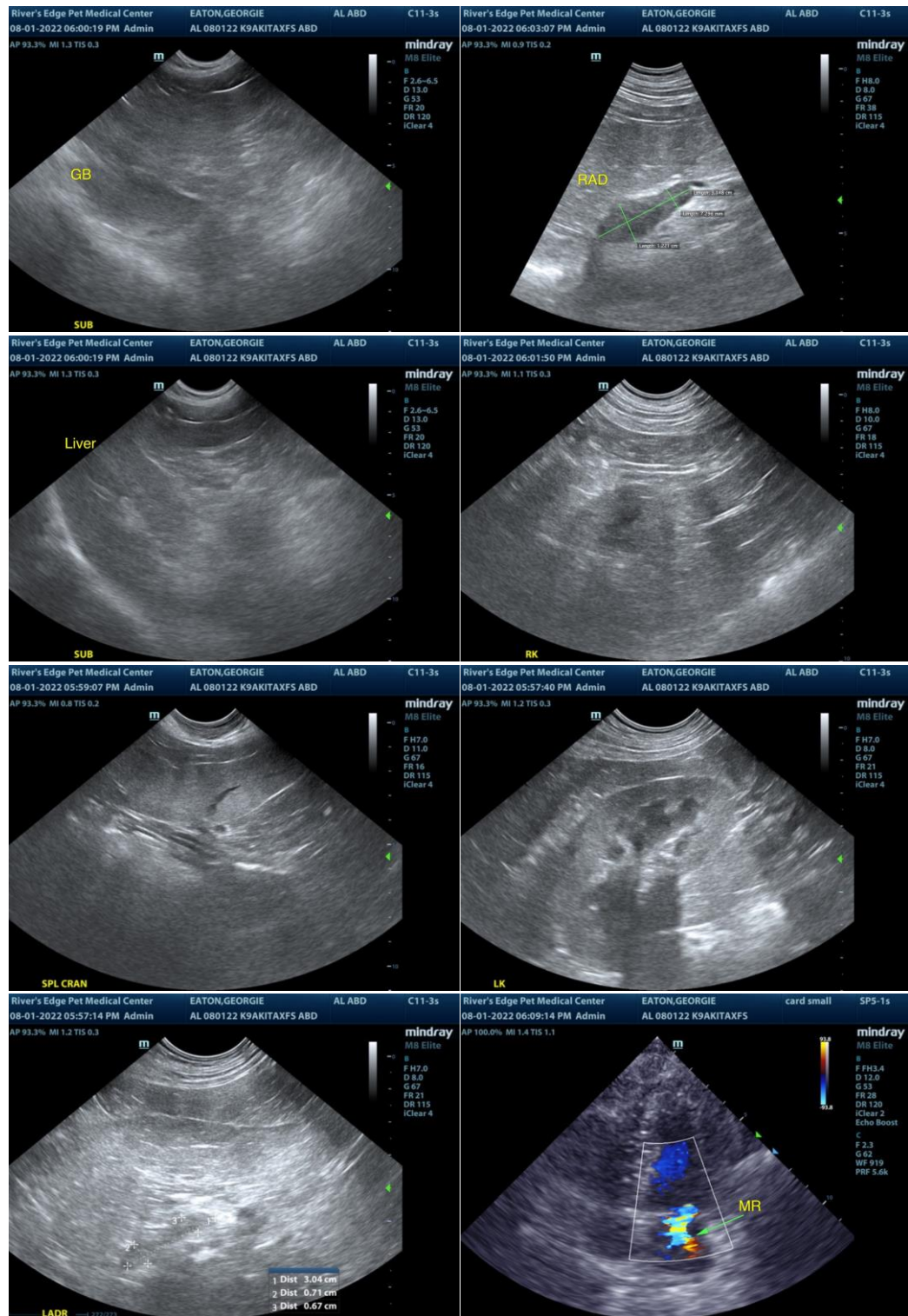
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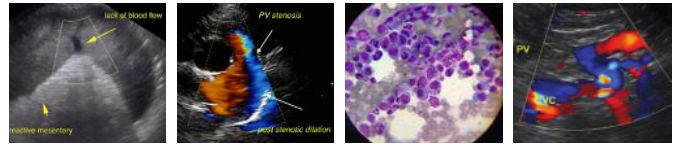
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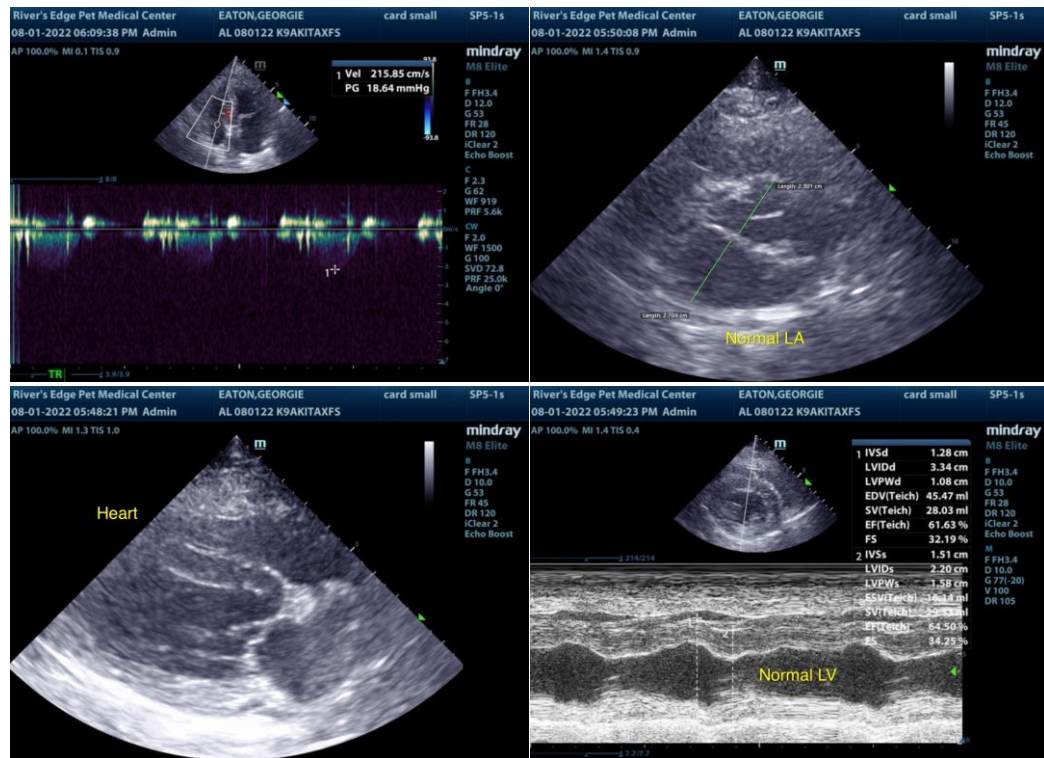
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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