

**PATIENT PRESENTING CLINICAL SIGNS**

Hemi Curia O presented video of Hemi in a regurgitating episode but not bringing up any food with third eyelids up. Wondering about gastric reflux, hiatus hernia or gastric ulcer.

**SPECIES** Current Medications Omeprazole 20mg SID

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN**

**BREED**

Boxer

**SEX**

MN

**AGE**

13 years

**WEIGHT**

30.1 kg

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP

**IMAGING PERFORMED BY**

Kelly Reschny

**HOSPITAL NAME**

Acton VC

**REFERRING VET**

Dr. Hess

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16718

**DATE**

5/2/23

	<b>CANINE</b>	<b>MR</b>	<b>TR</b>	<b>LA/AO</b>	<b>LA/AO</b>	<b>FS</b>	<b>EF</b>	<b>EPSS</b>
<b>CARDIAC PARAMETERS</b>		<b>VMAX</b> (m/s)	<b>VMAX</b> (m/s)	(Boon method)	(Heart Base; Swe)	(%)	(%)	(cm)
<b>NORMAL PARAMETER</b>		4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
<b>PATIENT</b>					1.0	41	73	0.4
<b>CANINE</b>		<b>HR</b> (BPM)	<b>AV</b>	<b>PV</b>	<b>BODY WEIGHT</b> (kg)	<b>LA</b>	<b>LVIDd</b>	<b>LVIDs</b>
<b>CARDIAC PARAMETERS</b>			<b>VMAX</b> (m/s)	<b>MAX</b> (m/s)		2D short axis Base view (cm)	Avg; 2D and m-mode short axis (cm)	Avg; 2D and m-mode short axis (cm)
<b>NORMAL PARAMETER</b>		50-100	0.7-1.7	0.7-1.6				
<b>PATIENT</b>		135	1.2	1.0		4.1	3.5	

**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 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 evidence of arrhythmia was noted.


**PATIENT** *Urinary System*

**Hemi Curia** 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 was noted.

**SPECIES**

**Canine** The residual prostate was subtly prominent in size with symmetrical contour exhibiting homogeneous parenchyma with no evidence of parenchymal mineralization. The prostate measured 2.0 cm in diameter. This is likely a patient variant and incidental.

**BREED**

**Boxer** The area of the aortic trifurcation was free of pathology.

**SEX**

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. A right kidney, solitary, thinly walled cyst containing anechoic fluid was present measuring 2.5 cm in diameter. The left kidney measured 6.2 cm in length. The right kidney measured 6.7 cm in length.

**MN**
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**Adrenal Glands**
**WEIGHT**

30.1 kg

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 3.1 cm length x 0.91 cm width at the caudal pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 2.2 cm length x 0.87 cm width at the caudal pole.

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**Spleen**

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/ Gallbladder**

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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.

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The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with mild luminal gas and no signs of ileus, obstruction, or foreign material. The ventral gastric body wall width measured 0.38 cm.

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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 mechanical / metabolic ileus, obstruction, or foreign material.



**PATIENT**

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

Hemi Curia

**Pancreas**

**SPECIES**

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.

Canine

**Free Abdomen**

**BREED**

No overt lymphadenopathy or peritoneal effusion was present.

Boxer

**SEX**

- Normal echocardiogram
- Mild chronic renal changes with right kidney cyst
- Sonographically unremarkable stomach / small bowel

MN

**AGE**

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

13 years

No evidence of structural or functional cardiomyopathy with a largely geriatric abdomen. No evidence of cardiac or intraabdominal neoplastic criteria, gastrointestinal ulceration, or hiatal hernia, which may be difficult to visualize sonographically if sliding.

**WEIGHT**

30.1 kg

Full CBC/Chemistry panel/Urinalysis and T4 levels are suggested if not recently done. Continued gastroprotectant medication with smaller more frequent feedings of a canned novel protein or hydrolyzed diet may prove beneficial. Three-view chest radiographs are recommended to assess for esophageal or thoracic pathology.

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Upper gastrointestinal endoscopy may be indicated if evidence of progressive regurgitation episodes with unremarkable lab work and nonresponse to gastroprotectants / dietary therapy.

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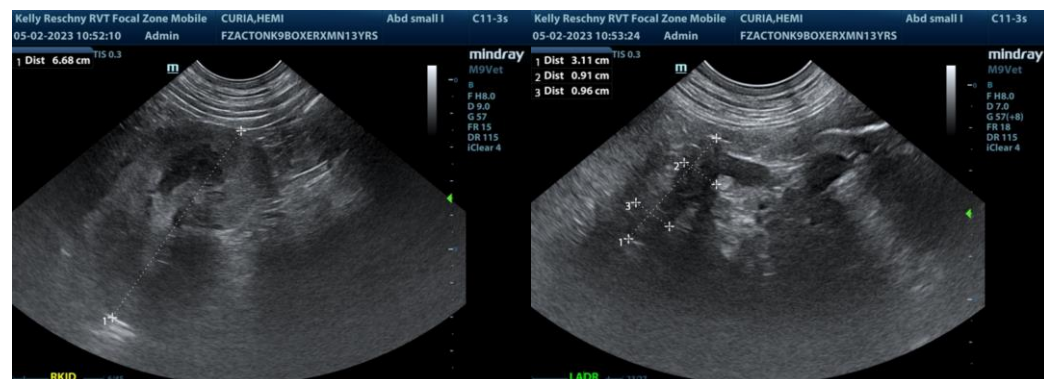
Dr. Hess

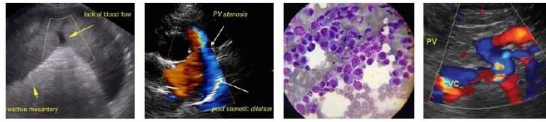
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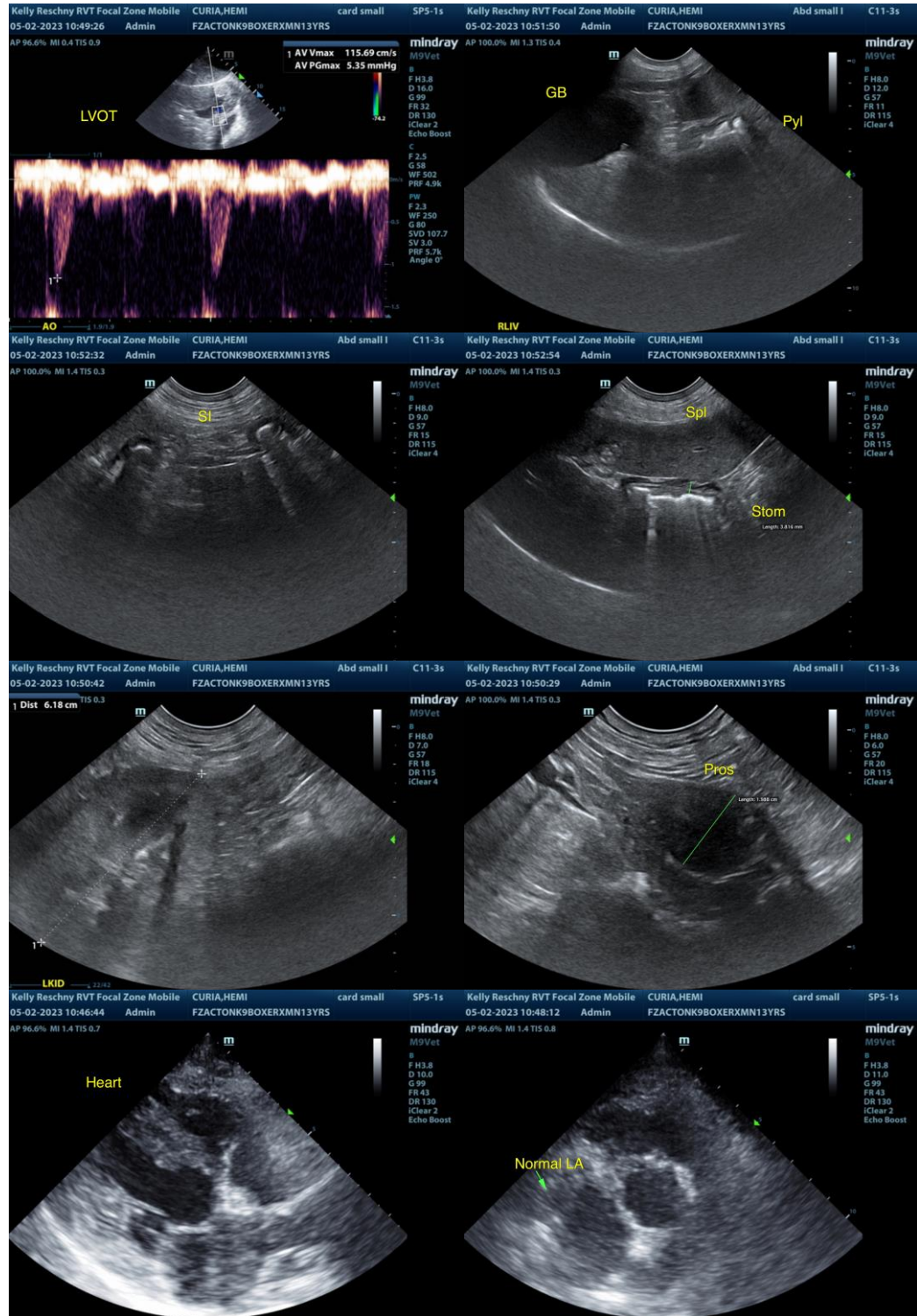
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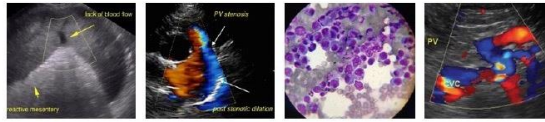
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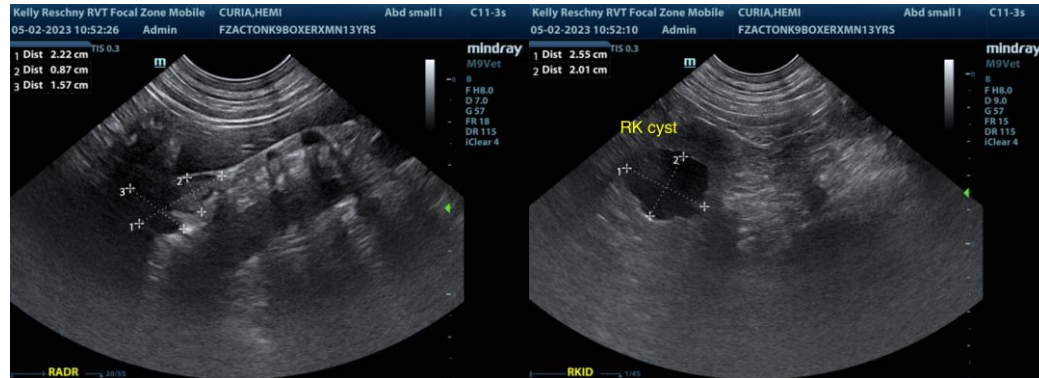
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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