


**PATIENT PRESENTING CLINICAL SIGNS**

Little Guy Apperloo

History: owner lost other dog recently, owner concerned about possible pulmonary mets and wants confirmation that there is nothing obvious. Dog does have panting/anxiety episodes in the car/on walks.

**SPECIES**

Canine

Abnormal PE/Chem/CBC/UA Results: Not done

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART AND ABDOMEN**

BREED	CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
Yorkie								
SEX	NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
MN	PATIENT	5.2			1.26	41.1	75.4	0.22
AGE	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)
7 yr								
WEIGHT	NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6				
4.7 kg	PATIENT	90	1.3	1.3		2.5	2.5	

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Kelly Reschny

**HOSPITAL NAME**

Smithville AH

**REFERRING VET**

Dr. Hulzebosch

**INVOICE**

10773ag

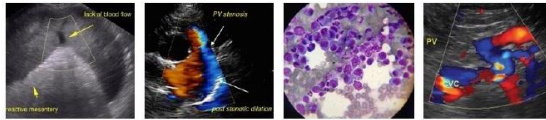
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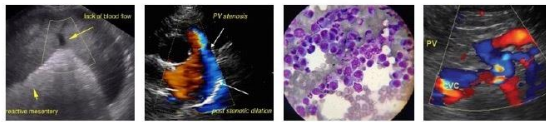
**Cardiac Presentation**

The echocardiogram in this patient demonstrated normal left atrial size based on 2 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal mitral valve leaflets presented subjective mild vegetative thickening consistent with endocardiosis. No evidence of valvular prolapse. Doppler indicated measurable centralized mild insufficiency. 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 or chamber overload. Tricuspid valvular assessment demonstrated adequate linear morphology. 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). 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.

**Urinary System**



<b>PATIENT</b>	The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with multiple small areas of mineral to small calculi, an example measuring 0.48 cm in diameter. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.
Little Guy Apperloo	
<b>SPECIES</b>	
Canine	Normal size and margination were present in the kidneys. Subjective mild increased corticomedullary echogenicity with mild loss of corticomedullary border demarcation was noted. Pinpoint areas of medullary mineral were present. The left kidney measured 4.7 cm in length. The right kidney measured 4.7 cm in length.
<b>BREED</b>	
Yorkie	The area of the aortic trifurcation was free of pathology.  The residual prostate was free of pathology measuring 0.92 cm.
<b>SEX</b>	<b>Adrenal Glands</b>
MN	The bilateral adrenal glands were normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 0.50 cm width in the cranial pole and 0.54 cm width in the caudal pole. The right adrenal gland measured 0.59 cm.
<b>AGE</b>	<b>Spleen</b>
7 yr	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.
<b>WEIGHT</b>	<b>Liver</b>
4.7 kg	The liver presented mildly enlarged in size. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with primarily anechoic luminal content and mild congealed nonorganized debris. The cystic and common bile ducts were normal.
<b>INTERPRETED BY</b>	<b>Gastrointestinal</b>
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	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.
<b>IMAGING PERFORMED BY</b>	<b>Small Intestine</b>
Kelly Reschny	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.
<b>HOSPITAL NAME</b>	<b>Colon</b>
Smithville AH	Normal visible colon wall layers were present with apparent formed feces in lumen.
<b>REFERRING VET</b>	<b>Pancreas</b>
Dr. Hulzebosch	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.
<b>INVOICE</b>	<b>Free Abdomen</b>
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**PATIENT**

No overt lymphadenopathy or peritoneal effusion was present.

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**ULTRASONOGRAPHIC FINDINGS**

**SPECIES**

Canine

- Normal cardiac structure and function
- Mild MR
- Mild dependent urinary bladder mineral/small calculi
- Mild nonspecific chronic renal changes with pinpoint medullary mineral
- Vacuolar hepatopathy pattern
- Mild congealed gallbladder debris

**BREED**

Yorkie

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Overtly normal cardiac structure and function with mild MR present. The hemodynamic effects of the MR appear to be minimal at this time given the lack of LA enlargement. No clinical issues such as LV systolic dysfunction or evidence of clinical pulmonary hypertension were noted. No indication for cardiac medication at this stage. Sonographic monitoring required for further prognosis. Recheck echocardiogram suggested in 6-12 months, sooner if clinical signs consistent with heart disease arise.

**SEX**

MN

**AGE**

7 yr

A urine C/S on sterile urine sample is recommended. A full CBC Chem panel suggested if not recently done. Hepatosupportive medications may prove beneficial if evidence of hepatic enzyme elevation or cholestasis.

**WEIGHT**

4.7 kg

No evidence of abdominal neoplastic criteria.

**INTERPRETED BY**

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(Canine and Feline)

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PERFORMED BY**

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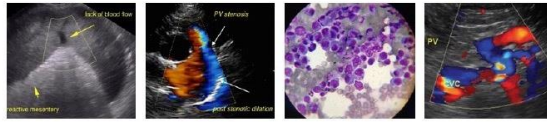
Dr. Hulzebosch

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Canine

**BREED**  
Yorkie

**SEX**  
MN

**AGE**  
7 yr

**WEIGHT**  
4.7 kg

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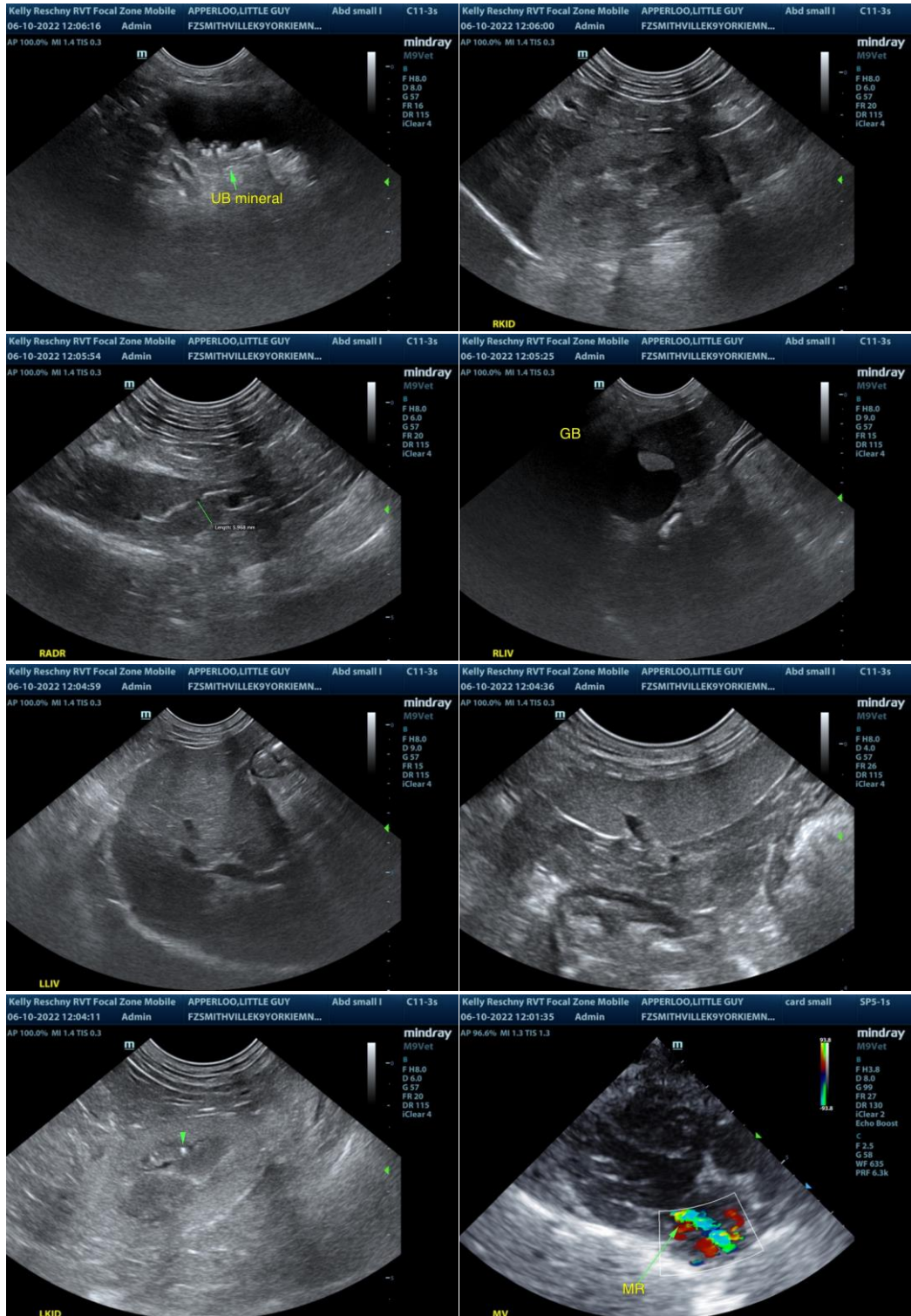
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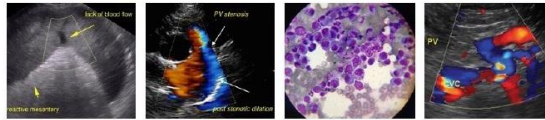
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Canine

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**SEX**

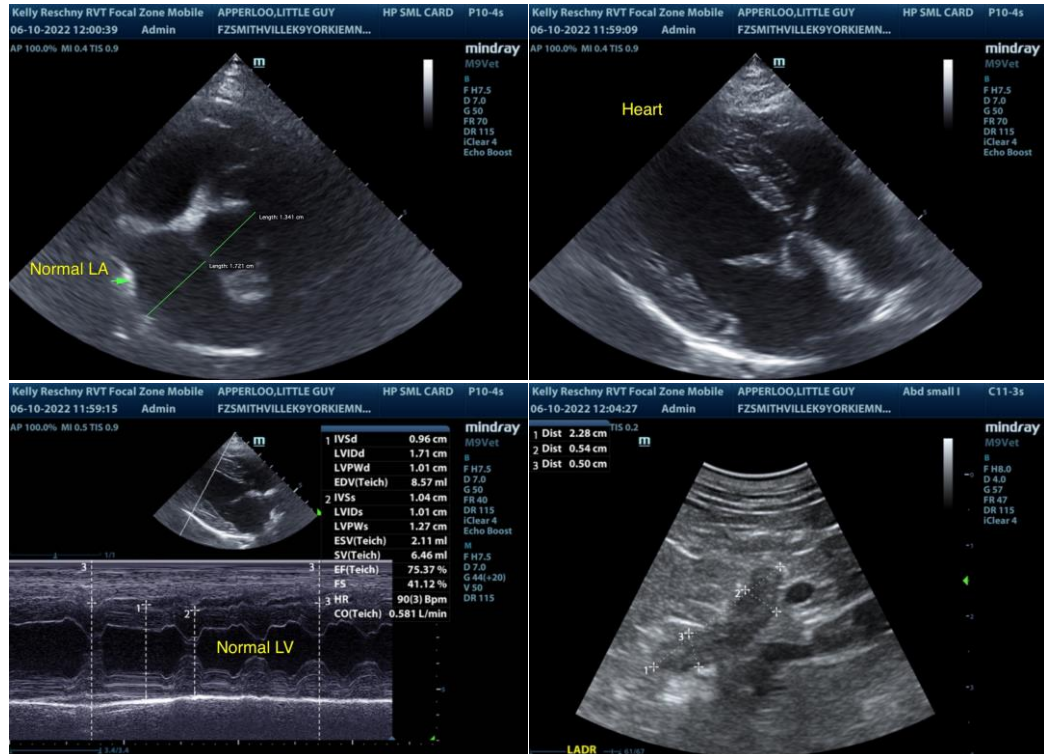
MN

**AGE**

7 yr

**WEIGHT**

4.7 kg



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)

info@SonoPath.com

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