



PATIENT

Baby Harutunian

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

16.5 Years

WEIGHT

4.88 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Westwood Regional

REFERRING VET

Dr. Hartwick

INVOICE

34371

DATE

1/19/22

PRESENTING CLINICAL SIGNS

Geriatric patient. Dramatic weight loss, newly diagnosed hyperthyroid, renal disease (suspect masked failure), heart murmur grade 2/6 heart murmur, new elevated WBC, severe periodontal disease. R/O pyelonephritis, neoplasia, all causes of renal failure. BP today: 212/145, 188/155, 196/117. No current meds.

Abnormal PE/Chem/CBC/UA Results: 1/6/22: CBC: WBC 29.6, neutrophilia. Superchem: ALT: 130, BUN 99, creat. 2.0, phos. 13.1, K+ 3.3.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm)	LVIDd (cm)	LVWd (cm)	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT		151	0.44	1.6	0.48	50	95
FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART BASE (Sisson)	LA 2D 4-chamber long axis AS to FW (Sisson) (cm)	LVOT VEL. (m/s)	RVOT VEL. (m/s)	IVRT (m/)	
NORMAL PARAMETER	<1.5	0.88-1.79	0.7-1.7	<1.6	<1.3	40-60	
PATIENT	.138	1.38	1.2	1.5	1.1	NM	
Adapted from June Boon, Veterinary Echocardiography, 1998							
Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705							

Cardiac Presentation

The echocardiogram in this patient demonstrated enlarged **left atrial** size based on 3 separate LA measurements. The cranial and caudal **mitral** valve leaflets presented normal linear structure and kinetics. Mild MR present on color doppler. The **left ventricular** septum and free wall revealed normal thicknesses, reduced contractility and mildly reduced left ventricular volume with subjective reduced diastolic filling. Some echogenic remodeling of the septum and free wall was present. This is most consistent with some level of **myocardial fibrosis**. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed increased size and normal content. No evidence of masses was noted or chamber overload. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinetics. Mild TR present on color 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). No visible **pericardial** or free pleura fluid was noted or extra cardiac pathology in the visible planes. The cranial **mediastinum and pericardial 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 2.0 cm 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 were noted.



PATIENT

The area of the aortic trifurcation was free of pathology.

Baby Harutunian

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 loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 3.1 cm. The right kidney measured 3.5 cm.

SPECIES

Feline

Adrenal Glands

BREED

DSH

No overt pathology in the area of the left and right adrenal glands.

Spleen

SEX

Neutered Male

The spleen measured 0.61 cm in width and 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.

AGE

16.5 Years

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. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

WEIGHT

4.88 Pounds

Gastrointestinal

INTERPRETED BY

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 contained moderate ingesta exhibiting subtle progressive distal acoustic shadowing.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. Segmental similar appearing digesta/chyme present.

IMAGING PERFORMED BY

Kelly Vazquez

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

Pancreas

HOSPITAL NAME

Westwood Regional

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia. Minor evidence of pancreatic duct dilation present. Pancreatic duct measured 0.25 cm.

REFERRING VET

Dr. Hartwick

Free Abdomen

No overt lymphadenopathy, omental masses or peritoneal effusion.

ULTRASONOGRAPHIC FINDINGS

INVOICE

34371

- Overtly normal cardiac structure and function with mild myocardial remodeling
- Minor MR/TR
- Mild to moderate chronic renal changes
- Overtly normal gastrointestinal tract with gastric and segmental small intestinal ingesta
- Heterogeneous pancreas with mild pancreatic duct dilation
- Low-grade hepatopathy

DATE

1/19/22



PATIENT

Baby Harutunian

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No evidence of significant structural or functional cardiomyopathy with a definitive source of the murmur not overtly evident. Minor MR and TR were present, yet not likely audible. In the absence of volume changes or anemia, suspect physiologic or flow murmur, which may present at elevated heartrate with potential for small flow abnormality not visualized. No evidence of hypertrophic LV changes at this time. The lack of left and right heart chamber enlargement indicates that the risk of future complications secondary to murmur is relatively low. No indication for cardiac medications.

Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered. The presence of gastric and segmental small intestinal digesta may correlate with post-prandial presentation. However, if documented NPO, some degree of gastrointestinal decreased motility or inefficient peristalsis may be possible. GI panel to include PLI, TLI, cobalamin folate, and if not done, 3-view chest radiographs suggested to rule out occult disease, which may account for the patient's weight loss aside from hyperthyroidism. CKD therapy and monitoring of blood pressure is recommended.

AGE

16.5 Years

WEIGHT

4.88 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Westwood Regional

REFERRING VET

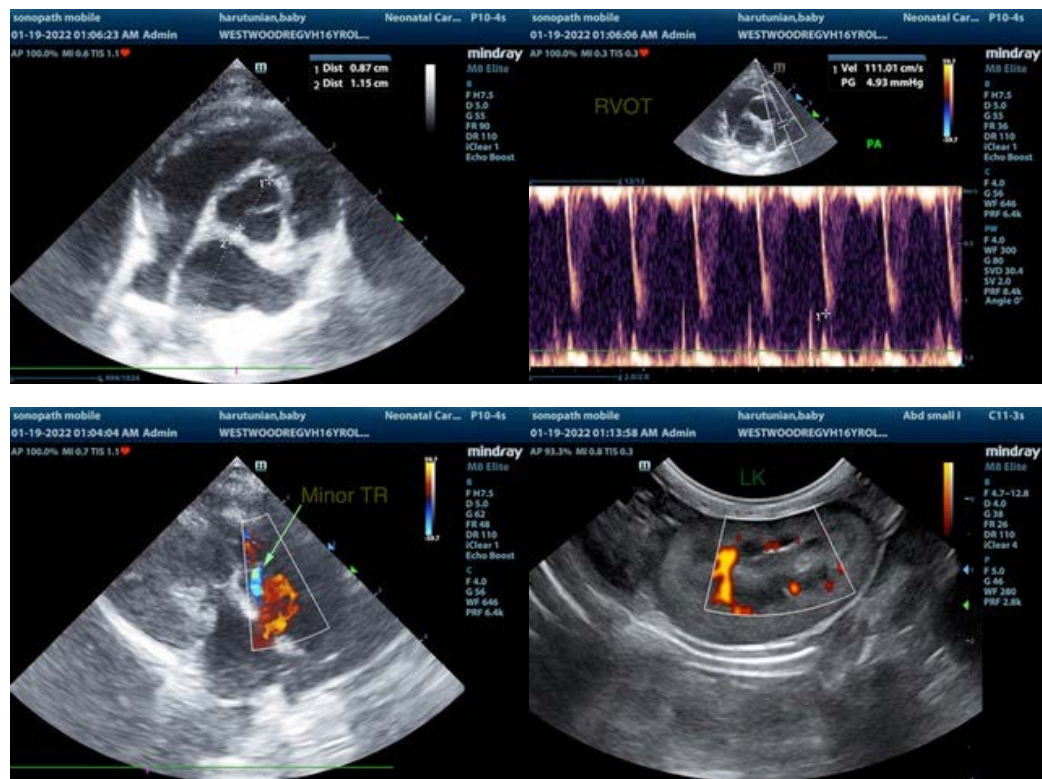
Dr. Hartwick

INVOICE

34371

DATE

1/19/22





PATIENT

Baby Harutunian

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

16.5 Years

WEIGHT

4.88 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Westwood Regional

REFERRING VET

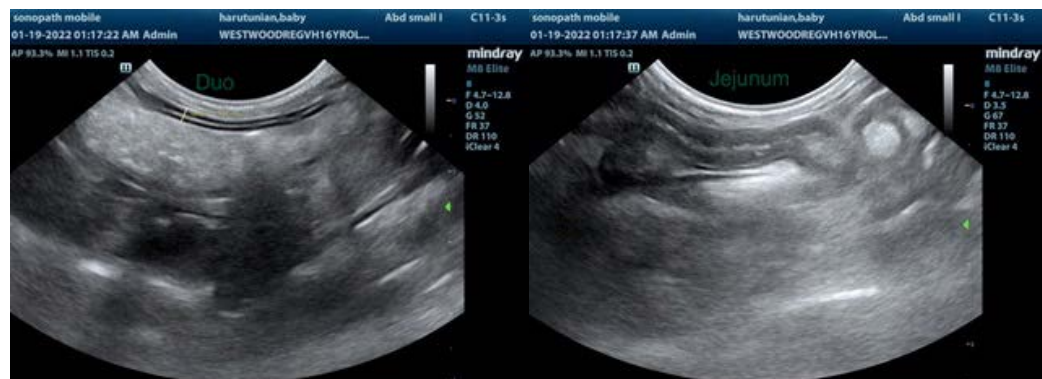
Dr. Hartwick

INVOICE

34371

DATE

1/19/22





PATIENT

Baby Harutunian

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.

SPECIES

Feline

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.

BREED

DSH

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com

SEX

Neutered Male

AGE

16.5 Years

WEIGHT

4.88 Pounds

INTERPRETED BY

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

**IMAGING
PERFORMED BY**

Kelly Vazquez

HOSPITAL NAME

Westwood Regional

REFERRING VET

Dr. Hartwick

INVOICE

34371

DATE

1/19/22