



PATIENT

Mars Heydt

SPECIES

Feline

BREED

DSH

SEX

MN

AGE

11 years

WEIGHT

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INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Westwood Regional
VH

REFERRING VET

Dr. Murphy

INVOICE

12786

DATE

12/10/21

PRESENTING CLINICAL SIGNS

-Patient presented for dyspnea and unregulated diabetes.

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		NM	0.37	1.8	0.35	58.3	92.6
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	1.5	--	1.4	NM	NM	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 normal **left atrial** size based on 3 separate LA measurements. The cranial and caudal **mitral** valve leaflets presented normal linear structure and kinetics. The **left ventricle** presented normal 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 and angles 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 and kinetics. 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). Multiple, variably sized, nonhomogeneous to mixed echogenic thoracic to cranial mediastinal masses were present. An example measured 5.0 cm x 4.5 cm and 3.0 cm x 2.0 cm. Concurrent scant pleural free fluid was noted. No evidence of pericardial free fluid 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 was noted.
Mars Heydt	
SPECIES	The area of the aortic trifurcation was free of pathology.
Feline	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. The left kidney measured 4.3 cm in length. The right kidney measured 4.6 cm in length.
BREED	
DSH	
SEX	Adrenal Glands
MN	No overt pathology was noted in the area of the left or right adrenal glands.
AGE	Spleen
11 years	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. The spleen measured 0.50 cm width.
WEIGHT	
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INTERPRETED BY	Liver/ Gallbladder
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	The liver exhibited generalized enlargement with nonuniform to coarse hepatic parenchyma exhibiting multifocal generally small to coalescing mildly hyperechoic parenchymal nodules. Subtle evidence of congestive hepatic vasculature was noted. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.
IMAGING PERFORMED BY	Gastrointestinal
Kelly Vazquez	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.
HOSPITAL NAME	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.
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REFERRING VET	Normal visible colon wall layers were present with apparent formed feces in lumen.
Dr. Murphy	Pancreas
INVOICE	The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.
12786	Free Abdomen
DATE	Very scant concurrent peritoneal free fluid was noted around the liver. No overt lymphadenopathy was noted.
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ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Overtly normal cardiac structure and function
- Multiple, variably sized to nonhomogeneous thoracic / cranial mediastinal masses
- Hepatomegaly exhibiting coarse parenchyma with multifocal small mildly hyperechoic nodules

Secondary Findings

- Mild chronic renal changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The primary finding in this case is multiple, variably sized, nonhomogeneous thoracic to cranial mediastinal masses. Thoracic to cranial mediastinal neoplasia is likely with non-neoplastic etiologies such as granulomas, infection, fungal disease, consolidated abscess to abscesses, or other thoracic or cranial mediastinal pathology less likely. Further assessment may include, assuming normal clotting status, ultrasound-guided FNA of thoracic to cranial mediastinal mass for screening cytology.

Benign hepatic parenchymal changes including parenchymal remodeling, multiple areas of nodular to regenerative hyperplasia, lipogranulomas, emerging hepatic congestion, are possible while potential concurrent hepatic neoplasia cannot be definitively excluded. However, an obvious source of intraabdominal neoplasia as a potential cause of thoracic or cranial mediastinal metastasis was not definitively evident.

Unfortunately, a probable unfavorable prognosis is indicated.





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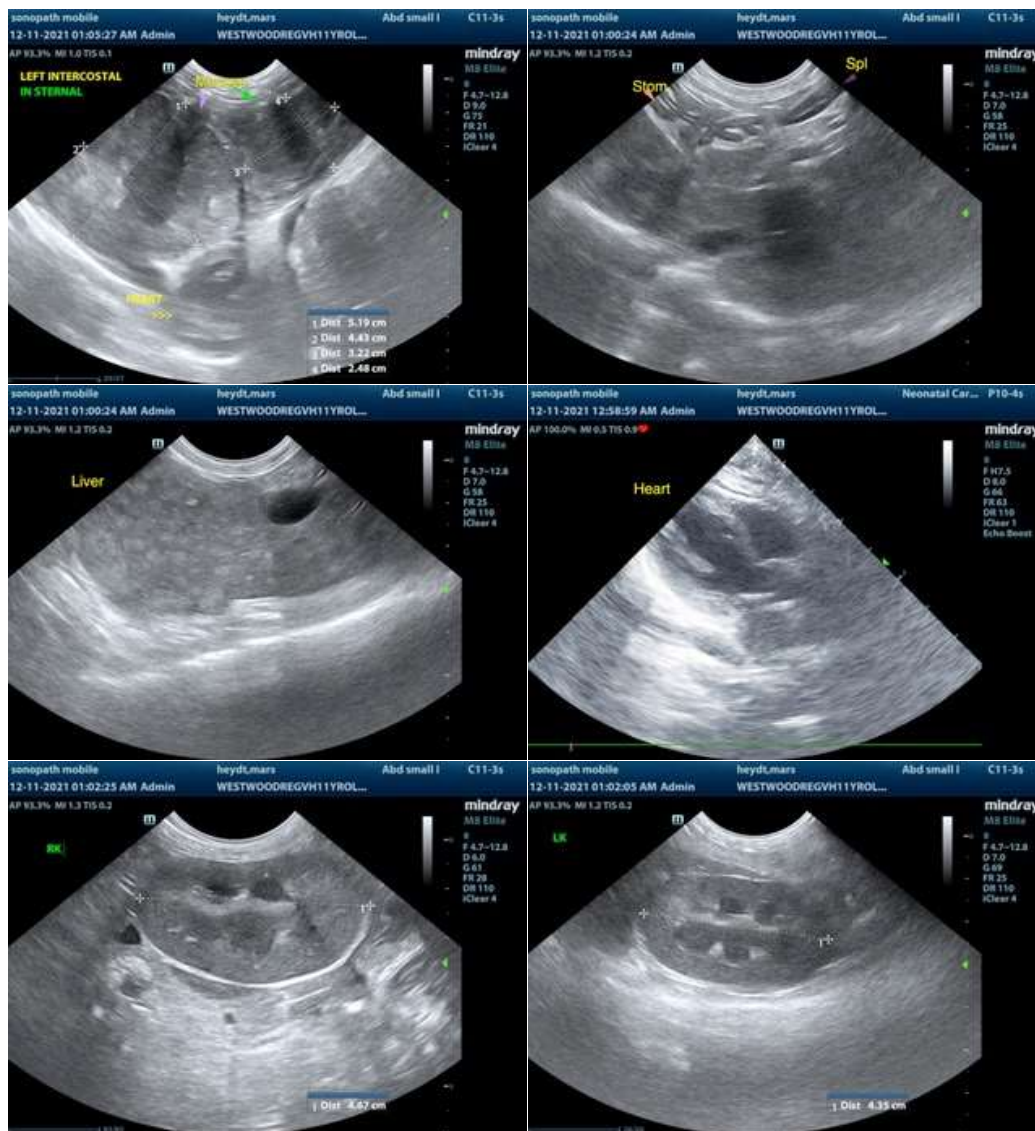
Dr. Murphy

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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