



PATIENT

Buttons Leer

SPECIES

Feline

BREED

DSH

SEX

Spayed Female

AGE

13 years

WEIGHT

10.4 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Ho-Ho-Kus VH

REFERRING VET

Dr. Wagner

INVOICE

12134

DATE

8/17/21

PRESENTING CLINICAL SIGNS

Grade 3/6 parasternal heart murmur, progressive weight loss, decreased appetite, and lethargy.
Abnormal PE/Chem/CBC/UA Results: SDMA 17, T4 3.1.

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		139	0.39	1.38	0.44	43.5	78.1
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	--	1.34	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 and structure. Chamber volume and blood echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented minor irregular age-related changes that are not clinically significant at this time with adequate extension in systole and union in diastole. The **left ventricle** presented normal free wall and septal thicknesses with linear contour. The **myocardium** presented some echogenic remodeling consistent with expected age-related change. **Contractility** of the ventricular walls was adequate and in normal range for this breed and patient size. The **left ventricular outflow** tract demonstrated normal laminar flow with subjectively unremarkable structure. Subjective assessment of the **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated expected findings for this age patient. The **right ventricle** was of normal size (1/3 diameter of LV), echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). Moderate subjectively mildly cellular peritoneal effusion was present. A nonhomogeneous mass lesion measuring approximately 3.4 cm in diameter was noted directly adjacent to the heart and surrounding thoracic cavity. Concurrent atypical to nonhomogeneous lung tissue noted likely cranial to the heart was present as well.



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Urinary System

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The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 cm exhibited normal thickness and tone. Very minor particulate sediment, which may indicate minor cellular or crystalline debris or potential minor mucus, was present. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

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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 3.4 cm in length. The right kidney measured 4.1 cm in length.

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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 0.4 cm width. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.29 cm width.

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Spleen

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The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. 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. The parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age-related remodeling with minor potential for inflammatory or neoplastic disease. The spleen was normal in size measuring 0.68 cm width.

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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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Gastrointestinal

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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.

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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.

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 were evident.



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Free Abdomen

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An ill-defined mass lesion noted in the area of the gastroesophageal junction appearing to potentially cross the associated diaphragm was present. The mass lesion adjacent to the gastroesophageal junction measured approximately 2.5 cm in diameter. No evidence of concurrent peritoneal effusion, overt intraabdominal lymphadenopathy, or Intraabdominal masses was present.

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ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Thoracic / pericardial mass lesion with associated atypical lung - neoplasia likely / favored, non-neoplastic etiology i.e., consolidation, granuloma, or other less likely
- Noncardiogenic pleural effusion
- Ill-defined mass lesion at the level of the gastroesophageal junction and adjacent diaphragm - esophageal, periesophageal, or metastatic neoplasia with potential for diaphragmatic or hepatic Invasion suspected

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Thoracocentesis with effusion analysis cytology +/- culture and sensitivity if evidence of inflammatory cells is recommended. Concurrently, assuming normal clotting status, ultrasound-guided FNA of the thoracic / pericardial mass lesion could be considered for screening cytology.

Further assessment may include thoracoabdominal CT. However, given the sonographic thoracic abnormalities, a very guarded to likely unfavorable prognosis is indicated.

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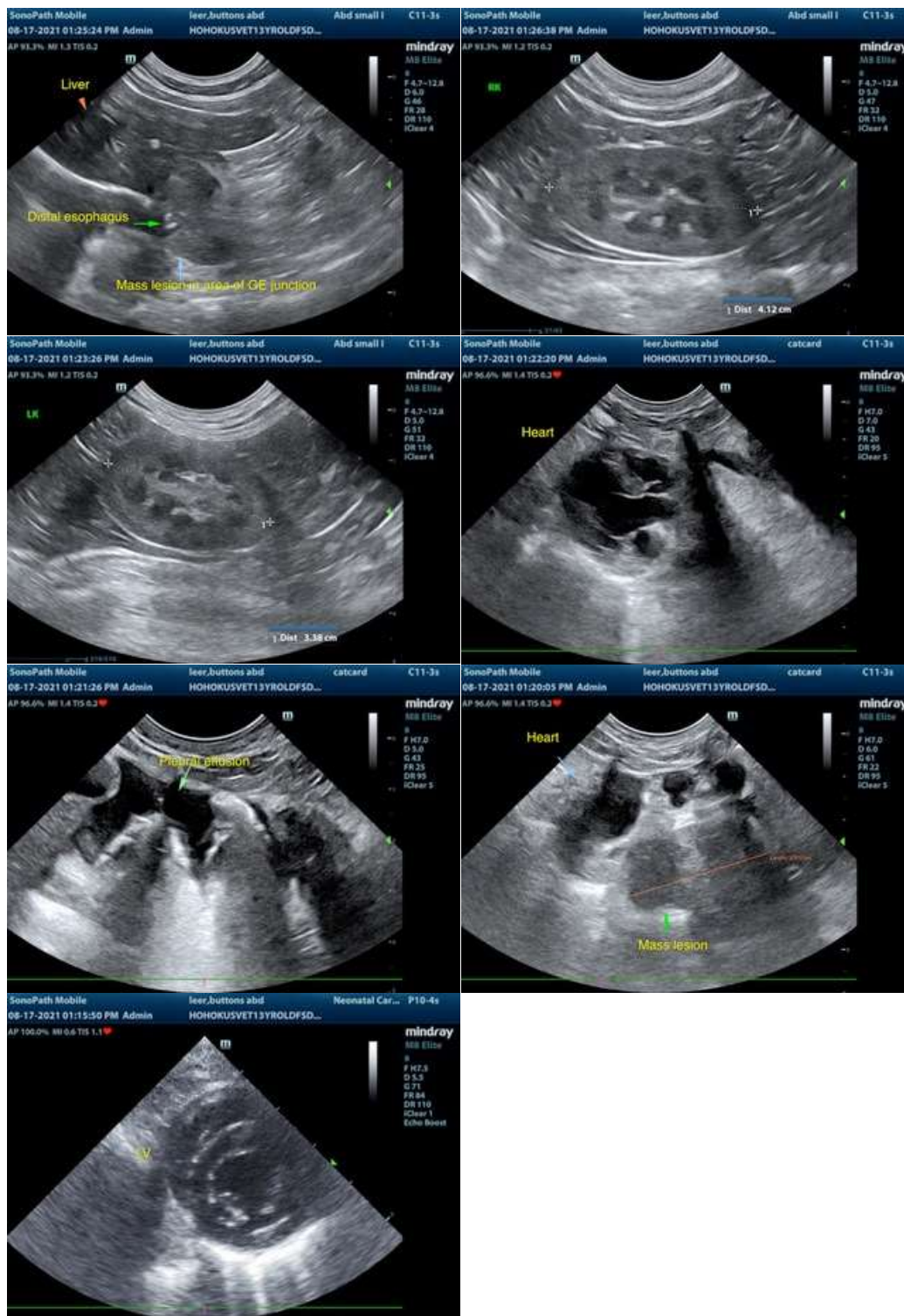
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.



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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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