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Clinical Sonography & Telecytology
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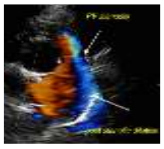
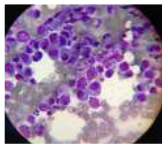
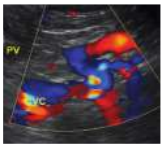

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Dazee Lebrun

SPECIES

Feline

BREED

DSh

SEX

FS

AGE

11 years

WEIGHT

6.7 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Ebersole

HOSPITAL NAME

Scanvet

REFERRING VET

Dr. Kaltsas

INVOICE

12803

DATE

12/14/21

PRESENTING CLINICAL SIGNS

Presented today for a dental. History of vomiting on and off, but now is vomiting EOD despite being on Cerenia. Weight loss. New heart murmur auscultated as well. *Sedated with Midazolam and Torbugesic*
Abnormal PE/Chem/CBC/UA Results: PE: weight loss, muscle wasting. Heart murmur Grade 2-3/6 systolic, PMI R apex. Thickened intestines palpated on exam. BW and UA drawn today, pending results tomorrow.

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		104	0.52	1.43	0.5	46.0	80.2
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	1.27	1.15	1.3		1.0	0.9	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 without evidence of spontaneous contrast. 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 overall normal free wall and septal thicknesses with mild alinear contour. Minor basilar IVS hypertrophy was present. The **myocardium** presented some 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 systolic flow, and normal diameter (approx.1:1 pa/ao ratio). Trace pulmonic valve insufficiency was present on color doppler. No visible **pericardial** or free pleural fluid was noted. The **mediastinum** and pericardial regions were free of masses in the visible window. Subjective bradycardia was present, likely owing to sedation.

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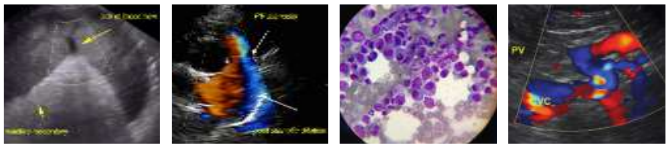

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Urinary System

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 was noted.

The area of the aortic trifurcation was free of pathology.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 3.1 cm in length. The right kidney measured 3.3 cm in length.

Adrenal Glands

The left adrenal gland was free of overt pathology. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.3 cm width.

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. The spleen measured 0.93 cm width.

Liver/ Gallbladder

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.

Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of Ingesta, fluid, or foreign material. The gastric body wall width measured 0.26 cm.

The small intestine exhibited intact wall layering a primarily maintained a 1:3 muscularis/mucosa ratio with segmental propensity for mild mural hypertrophy and mildly prominent muscularis layer. The jejunum wall width measured 0.27-0.31 cm. No evidence of gastrointestinal masses was noted.

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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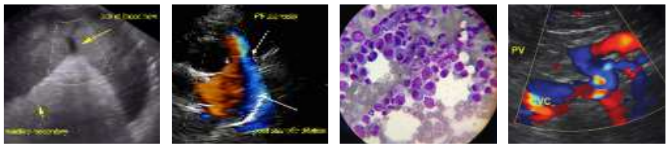

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Free Abdomen

Intermittent, mildly prominent jejunal lymph nodes were present. The lymph nodes were essentially isoechoic to adjacent omentum without evidence of peripheral inflammation and maintaining a normal width: length ratio (<0.5). An example lymph node measured 0.27 cm width. No omental masses or effusion were present.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Mild IVS and LV free wall myocardial remodeling with mild IVS basilar hypertrophy
- Normal left atrium
- Subjective bradycardia - suspect owing to sedation
- Probable segmental to generalized inflammatory enteropathy
- Intermittent benign / reactive jejunal lymph nodes
- Sonographically unremarkable stomach

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overtly normal cardiac structure and function for age with no definitive cause of the murmur evident. Trivial pulmonic valve insufficiency was present yet not likely audible. In the absence of dehydration or anemia, suspected physiologic flow murmur or small flow abnormality not seen here is possible. Correlation with pending lab work Is recommended. Regardless, the lack of left atrium size as well as lack of other clinical Issues such as systolic dysfunction, indicate that the risk of complication is low at this time. No Indication for cardiac medications. If persistent bradycardia, ECG assessment could be considered. Conservative monitoring of the murmur at this time is recommended.

The small intestine exhibited subtle mural changes which, in light of the patient's clinical signs, are suggestive of inflammatory enteropathy. A minor potential for emerging neoplastic infiltrative enteropathy with round cells cannot be definitively excluded, yet is considered less likely. A GI panel to include PLI/TLI/Cobalamin/Folate is recommended. Full-thickness Intestinal biopsies are likely required for a definitive diagnosis. Some degree of dietary intolerance / food hypersensitivity or occult parasitism, if the patient is indoor/outdoor, may also be playing a role.

Hydrolyzed diet trial, gastroprotectants, broad-spectrum deworming, Cobalamin supplementation +/- Prednisolone at the lowest effective dose to control clinical signs with an assessment of clinical response could be considered empirically. Thoracic radiographs are suggested to rule out occult thoracic pathology.

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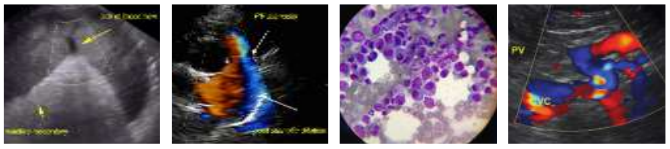

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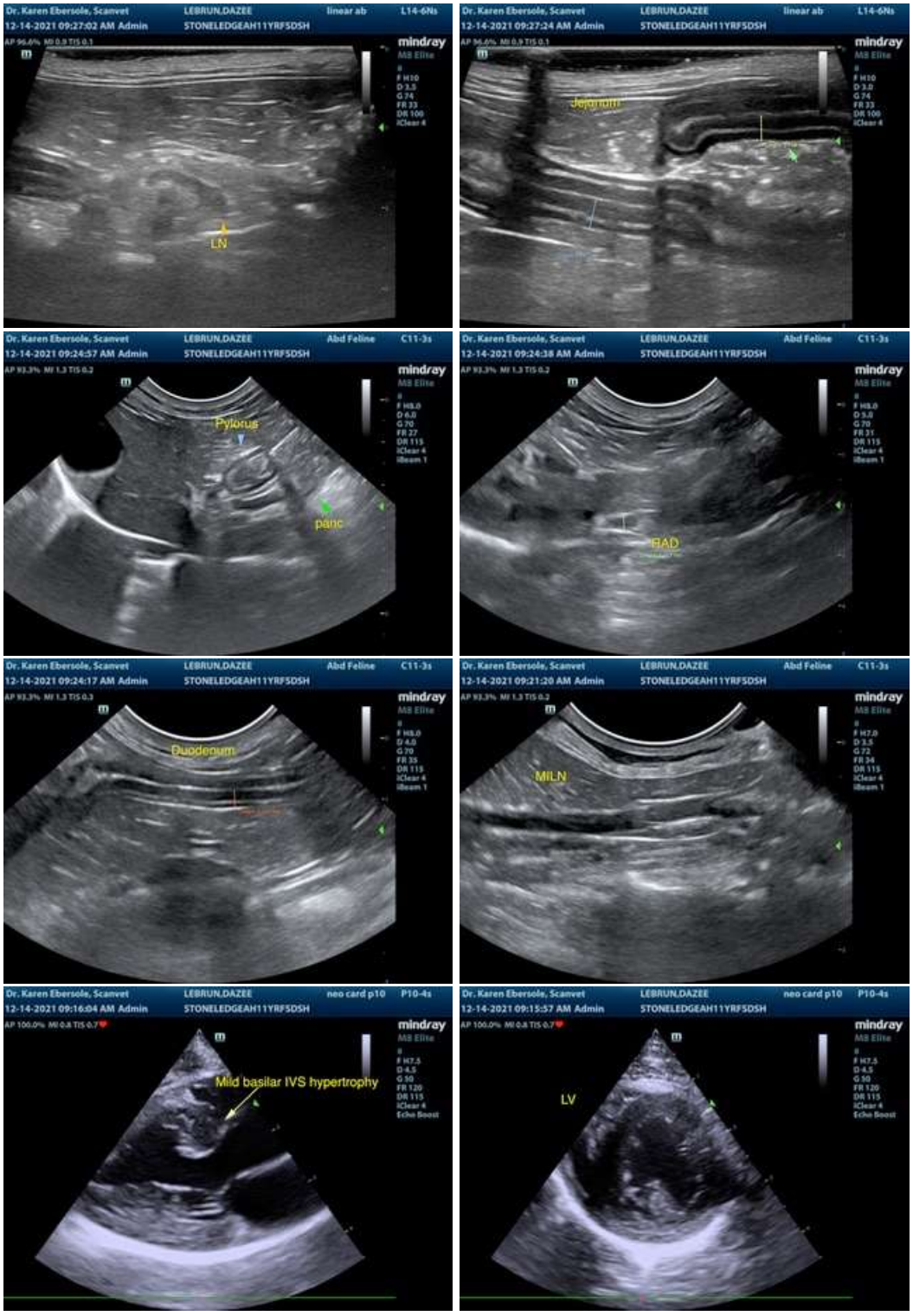

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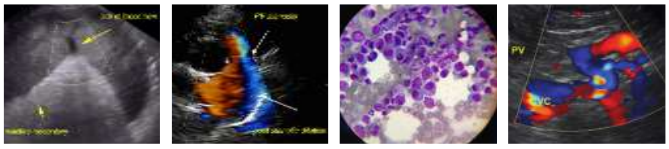

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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