

PATIENT

Beaver Lemming

SPECIES

Feline

BREED

DSH

SEX

Male Neutered

AGE

13y

WEIGHT

3.67 kgs

INTERPRETED BY

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

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

Faithful Friends AC

REFERRING VET

Dr. Hiett

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13235

DATE

2/25/26

PRESENTING CLINICAL SIGNS

History:

- Slow ongoing process of weight loss. Last week the cat had a neurologic episode. Ataxia, blindness, depression. Since that time has improved and is now normal. Suspect stroke or blood clot??
- ABNORMAL Lab work Values
- Mildly regenerative anemia: RBC 5.23, HCT 29%, HGB 8.8 Snap proBNP POSITIVE, BUN 44, GGT 8, T4 Normal
- For ECHO Only: Blood Pressure 112/56, 111/63, 102/60, HR/RR/BP: HR 132
- Is there a Heart Murmur? If so, please grade - No
- Notes to Specialist (if any) - Looking for cause of mild anemia and echo to determine if DCM potential for blood clots, et al

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	0.48	1.4	0.42	40	74
FELINE CARDIAC PARAMETERS	LA/AO (M-mode)	LA/AO HEART BASE (Sisson)	LAD LA MAX 4 Chamber		LVOT VEL. (m/s)	RVOT VEL. (m/s)	IVRT (m/)
NORMAL PARAMETER	<1.5	1.6	0.7-1.7		<1.6	<1.3	40-60
PATIENT	--	1.3	1.3		1.0	0.7	--
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 2 separate LA measurements. The cranial and caudal **mitral** valve leaflets presented minor irregular thickening with normal kinetics. No overt MR noted on doppler. The **left ventricular** septum and free wall revealed adequate contractility and normal left ventricular volume, yet some echogenic remodeling of the septum and free wall were noted. This does not appear to be a functional issue at this point. This is most consistent with some level of **myocardial fibrosis** or age-related change and remodeling. 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



PATIENT	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). 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.
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Feline	Urinary System
BREED	The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra exhibited normal thickness and tone. Primarily anechoic urine was present in the lumen. Mild to moderate, echogenic to particulate non-dependent sediment was present without evidence of calculus formation. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic mural changes were noted.
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Male Neutered	Normal renal size with asymmetrical margination was present in the left kidney. The right kidney exhibited subnormal size compared to the left. Mildly thickened and hyperechoic cortex noted. The renal cortex appeared to be hypertrophied resulting in an altered cortex: medulla ratio. Mild loss of corticomedullary distinction was also present. The left kidney measured 3.6 cm in length. The right kidney measured 3.1 cm in length.
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WEIGHT	Adrenal Glands
3.67 kgs	The bilateral adrenal glands were normal in size and contour. Pinpoint areas of mineralization were present without capsular distortion or overt tumors. This is an age-related finding and not pathological. The left adrenal gland measured 0.51 width, and the right adrenal gland measured 0.36 width.
INTERPRETED BY	
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	Spleen
IMAGING PERFORMED BY	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 0.86 cm width level of the mid spleen.
Sara Hansen	Liver
HOSPITAL NAME	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 indistinctly visualized owing to subnormal size given presence of gastric ingesta. The common bile duct was not visualized.
Faithful Friends AC	Gastrointestinal
REFERRING VET	The visible gastric walls exhibited overtly normal intact visible wall layering without mural pathology or hypertrophy. The stomach contained moderate, progressively acoustic shadowing ingesta exhibiting near-field hyperechogenicity and without overt evidence of obstruction to pyloric outflow.
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2/25/26	Normal visible colon wall layers were present with apparent formed feces in lumen.



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Pancreas

Regional, mildly swollen to hypoechoic pancreas base and proximal right pancreatic limb with peripancreatic hypoechoic omentum.

Free Abdomen

Potential for cranial mesenteric lymphadenopathy not excluded. No obvious peritoneal effusion present.

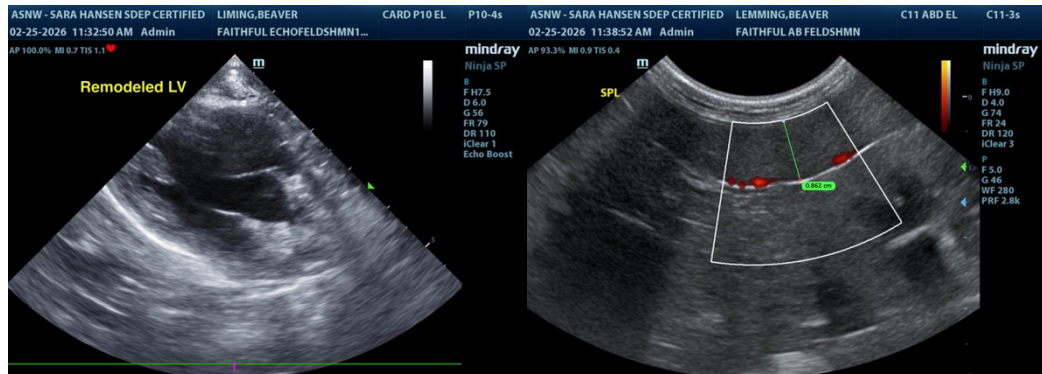
ULTRASONOGRAPHIC FINDINGS

- Normal cardiac structure/function with LV myocardial remodeling/fibrosis
- Moderate urine sediment
- Bilateral chronic renal changes
- Mild to variably thickened small intestinal wall with generalized gastrointestinal ingesta
- Possible mildly swollen, hypoechoic pancreas base/right pancreas with peripancreatic hypoechoic omentum, potential for cranial mesenteric lymphadenopathy

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The lack of LA enlargement indicates that a potential thrombotic event, although not definitively excluded, is low. No indication for cardiac medications. Echocardiographic monitoring is recommended for further prognosis. Recheck echo suggested in 6 months, sooner if clinically indicated.

Correlation with most recent meal ingestion is recommended. The small intestinal mural changes are nonspecific yet may suggest underlying, potentially chronic enteropathy. Considerations may include IBD or other inflammatory disease, although potential for emerging to low-grade intestinal neoplasia such as lymphoma not excluded. Assessment for cranial abdomen/subxiphoid discomfort on palpation which may correlate with pancreatitis is recommended. A GI panel to include PLI/TLI/Cobalamin/Folate, 3-view chest radiographs and correlation with neurological exam to assess for occult disease as a contributing factor to the weight loss is recommended. Ideally, sonographic reassessment of the gastrointestinal tract following gastrointestinal evacuation and documented fast is recommended. The urinary bladder sediment may suggest cellular / crystalline debris or mucus. Cystocentesis for UA +/- C/S if evidence of inflammatory cells is recommended.





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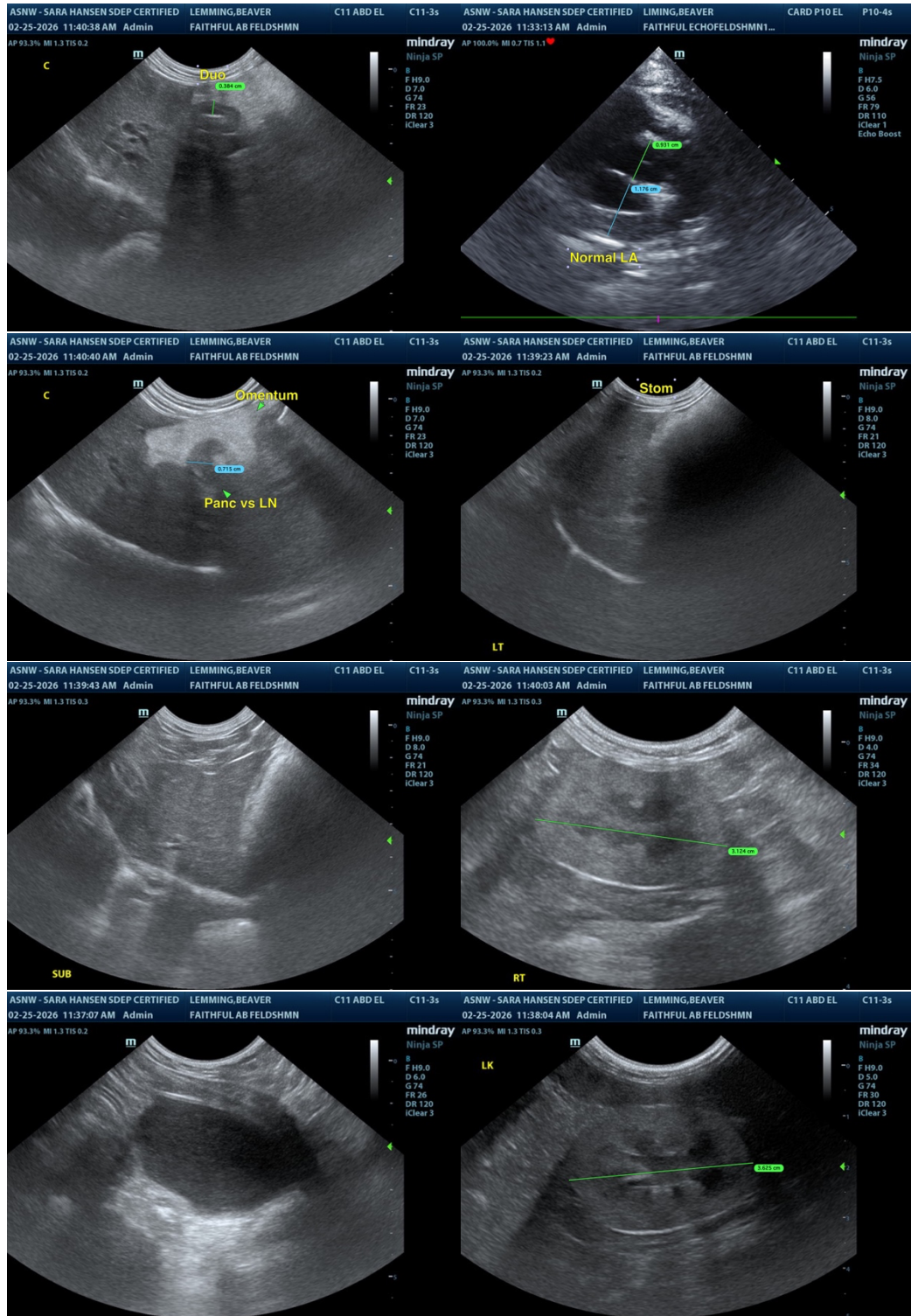
Dr. Hiett

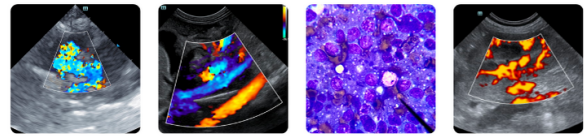
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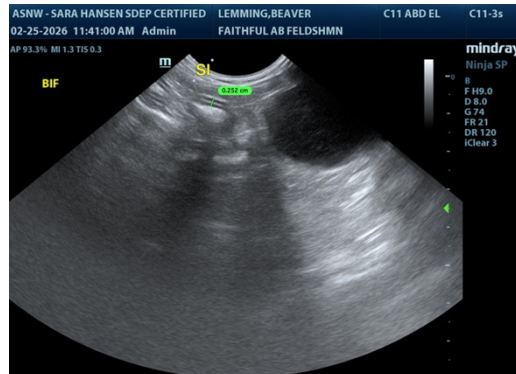
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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