



PATIENT

Jasper Chan

SPECIES

Feline

BREED

Siamese

SEX

Neutered Male

AGE

9 Years

WEIGHT

12.1 Pounds

PRESENTING CLINICAL SIGNS

On and off diarrhea, renal tech prediction pos., proteinuria. R/O heart dz. No current meds. Abnormal PE/Chem/CBC/UA Results: Hct 49, BUN 25, Creat 1.8, Renal tech prediction positive (antech). USG 1.030, Prot 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		191	0.43	1.40	0.43	58.2	90.7
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	1.4	1.4	1.3		1.0	1.0	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							

INTERPRETED BY

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

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

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Dr. Kim

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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). 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.

Both kidneys were normal in size and margination with maintained 1:3 cortex/medulla ratio with minor loss of corticomedullary border demarcation and subjective subtle yet uniform increased cortex echogenicity. The left kidney measured 3.95 cm. The right kidney measured 3.8 cm.



PATIENT

The area of the aortic trifurcation was free of pathology.

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Adrenal Glands

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The adrenal glands were uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.31 cm in width. The right adrenal gland measured 0.32 cm.

Feline

Spleen

BREED

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 0.80 cm in width.

Siamese

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Liver

Neutered Male

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. Mild non-specific echogenic, non-shadowing ingesta along with minor retained anechoic fluid present in the gastric antrum and pylorus. This non-specific ingesta did not overtly appear to be obstructive, yet was not overtly sonographically consistent with food. Potential for mild hair, stuffing or similar possible, yet not definitive. Correlation with abdominal radiographs and/or sonographic monitoring for evidence of normal gastric emptying recommended.

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(Canine and Feline)

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. Mild non-specific duodenal corrugation was present without evidence of duodenal ileus. Duodenum wall measured 0.24 cm. Jejunum wall measured 0.21 cm. Ileocolic wall measured 0.32 cm.

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Normal visible colon wall layers were present with sectorial semiformal to soft feces in the lumen and formed feces subjectively present in the distal descending colon.

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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 was evident.

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Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

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ULTRASONOGRAPHIC FINDINGS

- Normal echocardiogram
- Early/minor age related renal changes
- Non-specific echogenic retained pyloric ingesta and fluid
- Structurally normal small bowel and colon with minor non-specific duodenal corrugation and sectorial semiformal feces

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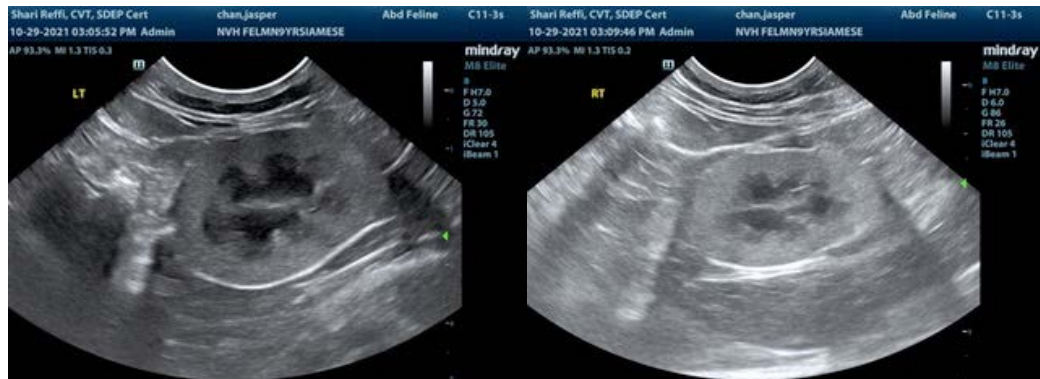
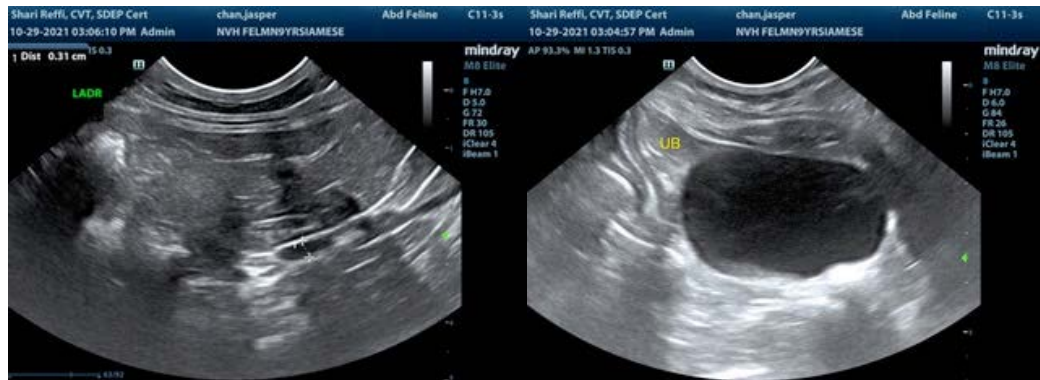
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overtly normal cardiac structure and function without evidence of systolic dysfunction, left or right heart chamber enlargement, or other cardiomyopathy. No indication for cardiac medications. Given the on/off diarrhea in this patient, considerations may include dietary intolerance/food hypersensitivity, occult parasitism if the patient is indoor/outdoor, or potential structurally insignificant inflammatory bowel. Further assessment may include GI panel to include PLI, TLI, cobalamin and folate, fresh fecal analysis to rule out parasites +/- diarrhea PCR panel. Baseline urine protein/creatinine ratio on sterile urine sample recommended.





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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.

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