



PATIENT

Kiki Sands

SPECIES

Feline

BREED

DSH

SEX

FS

AGE

16y, 3m

WEIGHT

10.8 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

Smithfield AH

REFERRING VET

Dr. Boe

INVOICE

10632

DATE

2/12/26

PRESENTING CLINICAL SIGNS

History:

- evaluate heart and
- elevations in lipase, SDMA
- Coughing more
- HM grade 2
- hyperthyroid
- sedated with Torb/midazolam

Abnormal PE/Chem/CBC/UA Results: Lipase 3110, SDMA 19 ProBNP abnormal

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

FELINE CARDIAC PARAMETERS	BODY WEIGHT	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	10.8 lbs	NM	0.48	1.3	0.49	45	78
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	-	1.15	1.2		1.0	0.6	-

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 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.



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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. 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.

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The area of the iliac trifurcation was free of pathology.

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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 3.2 cm in length. The right kidney measured 3.3 cm in length.

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Adrenal Glands

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The left and right adrenal glands were uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.45 cm width and the right adrenal gland measured 0.32 cm width.

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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.

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Liver/ Gallbladder

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The liver was subjectively normal in size, structure, and contour. Normal hepatic vascular volume was present. 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 without evidence of retained ingesta, fluid, or foreign material.

The intestinal walls demonstrated intact wall layers with diffusely thickened walls and altered 1:3 muscularis / mucosa ratio primarily consisting of muscularis hypertrophy. The duodenum wall measured 0.28 cm width. The jejunum wall measured up to 0.34 cm width. The ileocolic wall measured 0.47 cm width.

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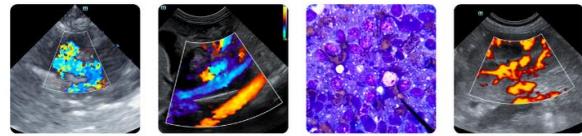
Normal visible colon wall layers were present with formed feces in lumen.

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Pancreas

The pancreas was prominent in size, exhibiting capsule asymmetry and heterogeneous, hypoechoic parenchyma with intermittent, small pancreatic cysts. Mild peripancreatic hyperechoic omentum was noted.



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Free Abdomen

Peri intestinal to generalized mild increased omental echogenicity were noted. No significant or swollen mesenteric lymphadenopathy was visualized.

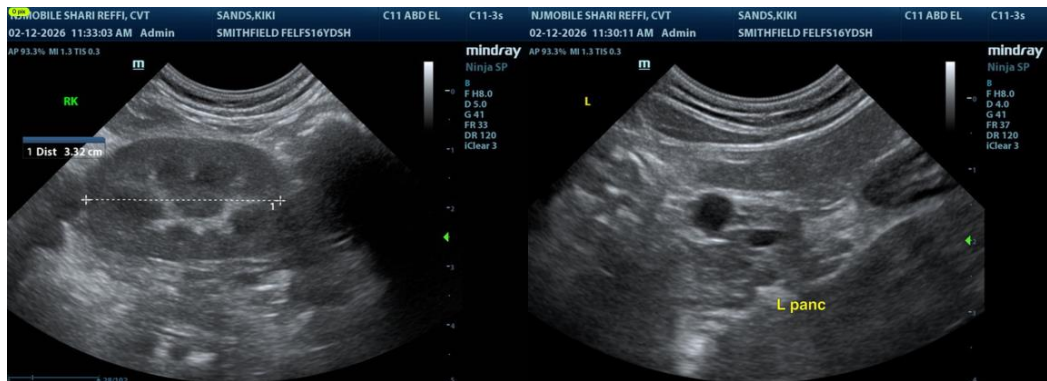
ULTRASONOGRAPHIC FINDINGS

- Normal cardiac structure / function
- Intact thickened small intestine
- Chronic active pancreatitis pattern with prostatic cysts and regional peri pancreatic to peri intestinal reactive to mild inflamed omentum
- Bilateral mild chronic renal changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

A definitive cause of the murmur was not identified. Assuming no volume changes such as dehydration or anemia, a benign flow murmur is probable. A small, non-visualized flow abnormality is not excluded. Regardless of classification, the hemodynamic effects of the murmur are low. Monitoring of the heart murmur is recommended without indication for cardiac medications. Recheck echocardiogram is recommended in 6-12 months, sooner if murmur intensity increases or clinical signs arise.

IBD or other inflammatory enteropathy in conjunction with chronic active pancreatitis favored. Given no reported hepatic enzyme elevations, Triaditis is thought less likely. Potential for intestinal round cell neoplasia, i.e., lymphoma, may present in a similar sonographic manner. A GI panel to include PLI/TLI/Cobalamin/Folate is recommended. Intestinal biopsies are required for a definitive diagnosis. Correlation with urinalysis +/- renal staging to include screening C/S and UPC level is suggested.





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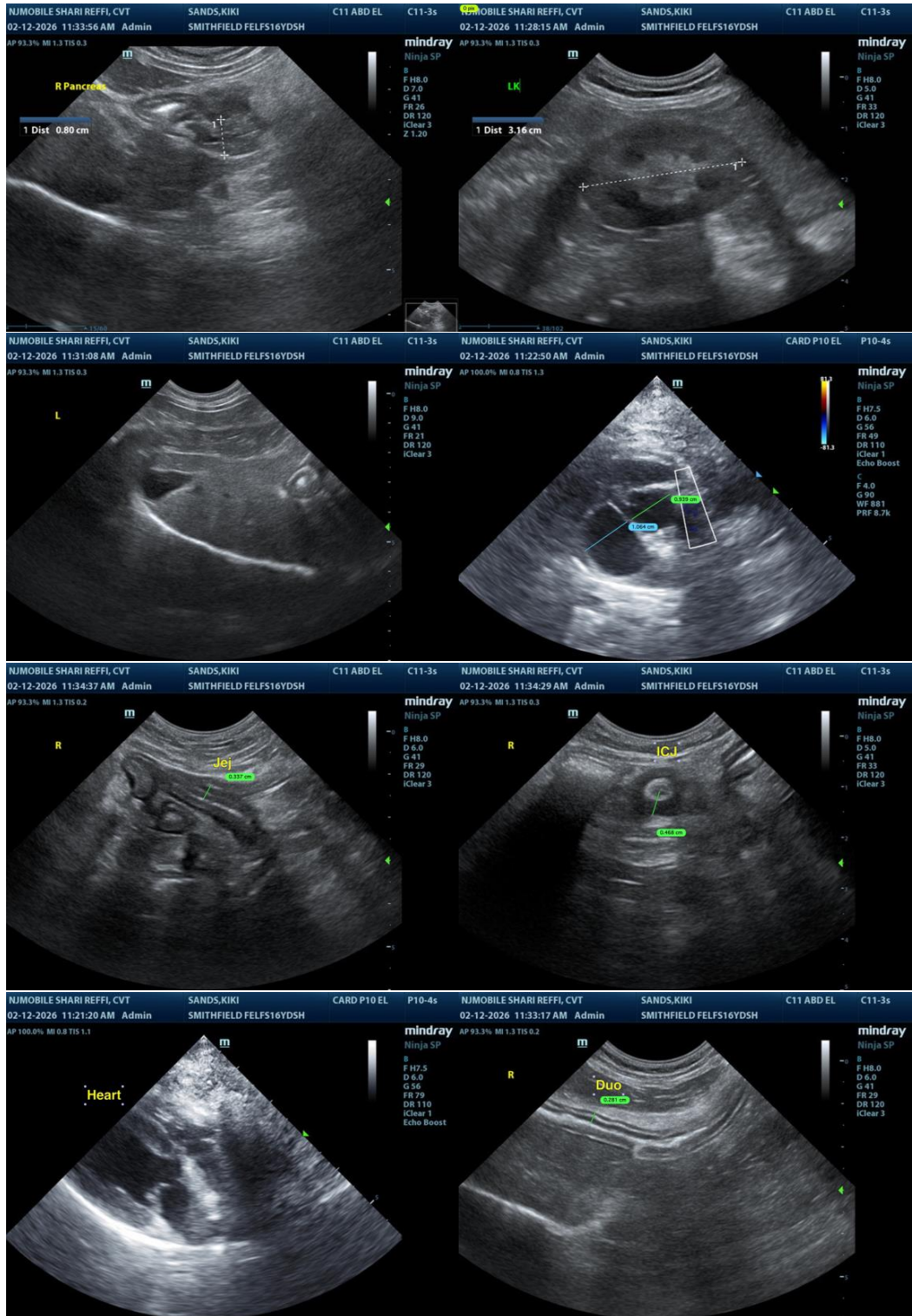
Dr. Boe

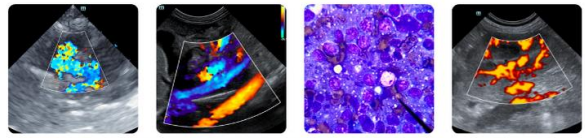
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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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info@sonopath.com

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