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Clinical Sonography & Telecytology
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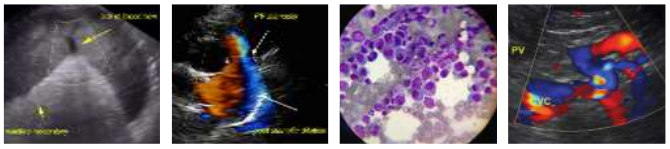


SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Fluffy Sandersen

SPECIES

Feline

BREED

DSH

SEX

Spayed Female

AGE

5 years

WEIGHT

9 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Diane McFadden

HOSPITAL NAME

Animal Care Centeres of Flanders

REFERRING VET

Dr. Hallihan

INVOICE

12232

DATE

9/14/21

PRESENTING CLINICAL SIGNS

new grade 2/6 systolic murmur, tachycardia, wt loss. Iris stage 2 renal on BW with isosthenuria
Abnormal PE/Chem/CBC/UA Results: crea 2.1, BUN 33, BP elevated 220/163, USPG 1.021

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

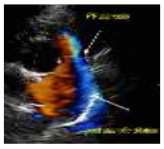
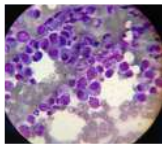
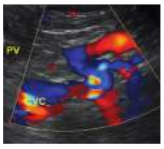
FELINE CARDIAC PARAMETERS	**BODY WEIGHT** (kg)	**HR** (BPM)	**IVSd** (cm)	**LVIDd** (cm)	**LVWd** (cm)	**FS** (%)	**EF** (%)
NORMAL PARAMETER	------	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT		196	0.39	1.25	0.40	53.6	88.5
FELINE CARDIAC PARAMETERS	**LA/AO** (Boon)	**LA/AO HEART BASE** (Sisson)	**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	1.37	1.3	1.46		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 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, and cystourethral junction 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.

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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 was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition primarily in the right kidney. No evidence of pelvic dilation was present. The left kidney measured 3.3 cm in length. The right kidney measured 3.5 cm in length.

Adrenal Glands

No overt pathology was noted in the area of the left adrenal gland.

The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.43 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 0.57 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 ileus, obstruction, or foreign material. The gastric body wall width measured 0.24 cm.

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. The duodenum wall width measured 0.22 cm. The jejunum wall width measured 0.20 cm.

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

Pancreas

The left pancreas exhibited normal size and contour with mildly hypoechoic parenchyma compared to subjective mild reactive peripancreatic omentum.

Free Abdomen

No intraabdominal masses, lymphadenopathy or peritoneal effusion was present.

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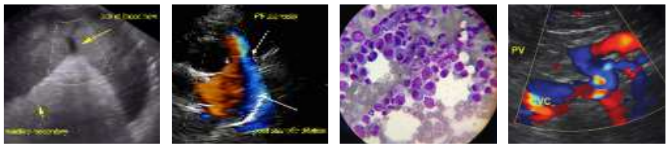

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ULTRASONOGRAPHIC FINDINGS

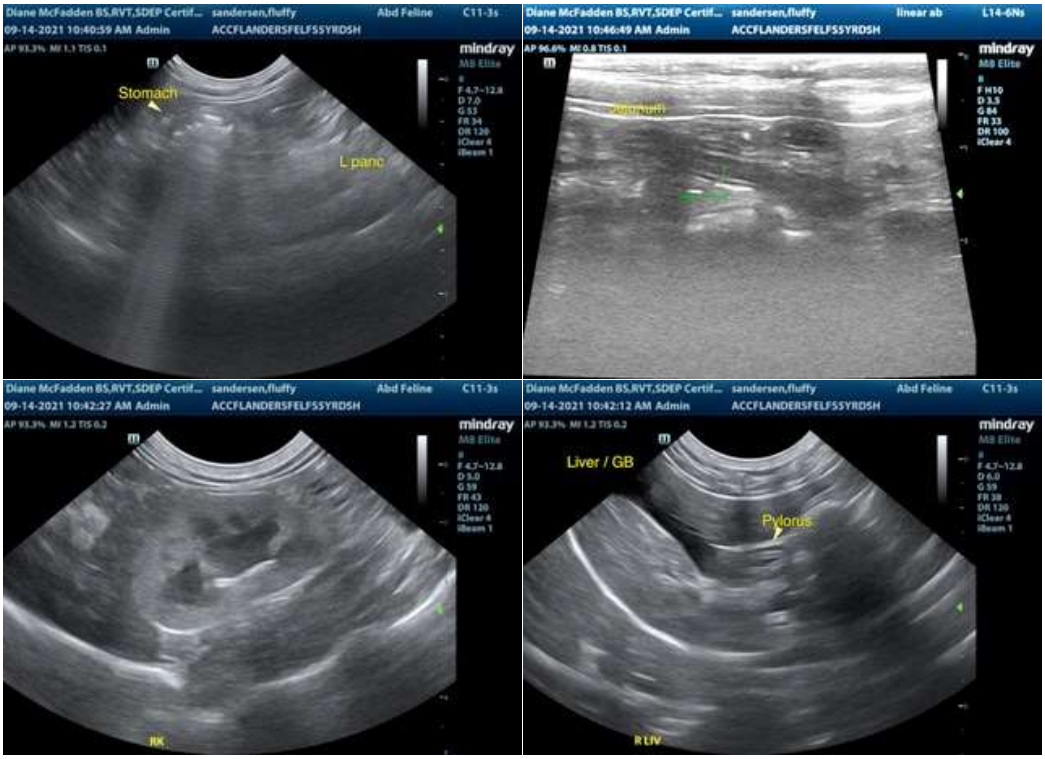
Primary Findings

- Overtly normal cardiac structure - probable physiologic / benign flow murmur
- Mild chronic renal changes / nephropathy
- Mildly hypoechoic left pancreas - possible low-grade inflammation
- Sonographically unremarkable gastrointestinal tract

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No overt evidence of significant renal pathology was present, yet given the degree of azotemia, the kidneys were sonographically suggestive of chronic nephropathy as opposed to acute kidney injury or insult. However, the degree of renal disease is suspected to be an unlikely cause of the patient's weight loss.

Assessment for evidence of cranial abdominal or subxiphoid discomfort in the area of the pancreas is recommended. If present, the potential for low-grade inflammation would be suspected. A GI panel to include PLI/TLI/Cobalamin/Folate is recommended. Further renal staging with baseline urine protein: creatinine ratio is recommended. T4 levels are suggested if not recently done. No indication for cardiac medications. Three view chest radiographs may be considered to rule out occult thoracic pathology.



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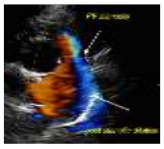
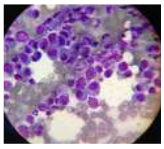
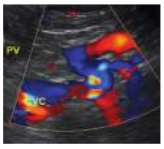

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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