



PATIENT

Isabelle Zanetti

SPECIES

Feline

BREED

DSH

SEX

FS

AGE

19 years

WEIGHT

Not provided

INTERPRETED BY

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

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

Tranquility VC

REFERRING VET

Dr. Christensen

INVOICE

12508

DATE

11/2/21

PRESENTING CLINICAL SIGNS

Ileus x 1 week, abdominal distention, painful upon palpation, wt loss, pulmonary nodule noted on rads + mild hepatomegaly

Abnormal PE/Chem/CBC/UA Results: AST 110, ALT 120, BUN 44, Na 160, lymphocytes 790

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		198	0.46	1.37	0.53	43.8	78.4
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		1.38	1.35	1.1	0.82	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. 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 normal free wall and septal thicknesses with linear contour. The **myocardium** presented some echogenic 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 flow, and diameter (approx. 1:1 pa/ao ratio). No dilation due to heartworm disease, cuor pulmonale, stenosis, or pulmonic hypertension was noted. No visible **pericardial** or free pleural fluid was noted. The **mediastinum** was 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



PATIENT	sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.
Isabelle Zanetti	
SPECIES	The area of the aortic trifurcation was free of pathology.
Feline	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 3.3 cm in length. The right kidney measured 3.2 cm in length.
BREED	
DSH	
SEX	Adrenal Glands
FS	The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.40 cm width. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.40 cm width.
AGE	Spleen
19 years	The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. 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. The parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age-related remodeling with minor potential for inflammatory or neoplastic disease. The spleen was normal in size, measuring 0.66 cm in width at the level of the hilus.
WEIGHT	Liver/ Gallbladder
Not provided	The liver exhibited potential for mild generalized enlargement yet symmetrical contour with subjective mild uniform echogenic hepatic parenchyma with mild coarse echotexture. No hepatic masses or nodules were noted. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.
INTERPRETED BY	Gastrointestinal
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	The presence of gastric gas prohibited the full evaluation of the gastric walls and gastric interior. The visualized gastric walls exhibited intact wall layering without evidence of mural hypertrophy. The stomach appeared to exhibit mild generalized gas distention. No overt evidence of retained fluid, ingesta, or overt gastric foreign material was noted. The gastric body wall width measured 0.24 cm.
IMAGING PERFORMED BY	
Jessica Miller	
HOSPITAL NAME	
Tranquility VC	
REFERRING VET	
Dr. Christensen	
INVOICE	
12508	The visualized small Intestine exhibited generalized distention with suspect mild to moderate upper duodenal ileus, as well as intact yet mildly prominent ileum walls extending into the ileocolic junction. The generalized small intestinal gas distention prohibited full evaluation of the small intestinal walls and lumen. The ileocolic junction wall width measured 0.35 cm. The jejunum wall width measured 0.2 cm.
DATE	
11/2/21	The visualized colon walls exhibited intact wall layering without evidence of colonic mural hypertrophy and subjective generalized colonic distention with semi-formed to soft feces present. The proximal colon wall width measured 0.12 cm.



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Pancreas

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The pancreas was normal in size and contour with heterogeneous parenchyma compared to adjacent omentum, along with mild generalized pancreatic duct dilation.

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Free Abdomen

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A small pocket of scant caudal perihepatic free fluid was noted adjacent to the gallbladder. Focal, mildly prominent pancreaticoduodenal lymph node was noted.

DSH

ULTRASONOGRAPHIC FINDINGS

SEX

Primary Findings

FS

- Hepatopathy with sonographically unremarkable gallbladder - reactive hepatopathy, primary vs. secondary inflammatory parenchymal or hepatobiliary process possible, given the mildly elevated ALT/AST combination, no overt hepatobiliary neoplastic criteria

AGE

19 years

- Diffuse gas distended small bowel with suspect upper duodenal stasis and ileitis

WEIGHT

Not provided

- Mild chronic pancreatitis pattern
- Bilateral mild chronic renal changes
- Overtly normal cardiac structure and function for age

INTERPRETED BY

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

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the degree of generalized gastrointestinal sonographic and radiographic gas distention, an underlying metabolic gastrointestinal disease is considered probable. Structurally Insignificant gastroenteritis, inflammatory bowel disease is possible while the potential for neoplastic infiltrative diseases such as lymphoma or other cannot be definitively excluded. Dysautonomia may be considered a highly unlikely differential diagnosis. The potential for Triad Disease may be considered in this patient.

IMAGING PERFORMED BY

Jessica Miller

Further assessment may include a GI panel to include PLI/TLI/Cobalamin/Folate. No overt evidence of mechanical gastrointestinal obstruction, which is considered unlikely. Hospitalization with IV fluid and gastrointestinal support with radiographic monitoring of gastrointestinal gas pattern may prove beneficial. Ultimately, gastrointestinal biopsies may be required for a definitive diagnosis.

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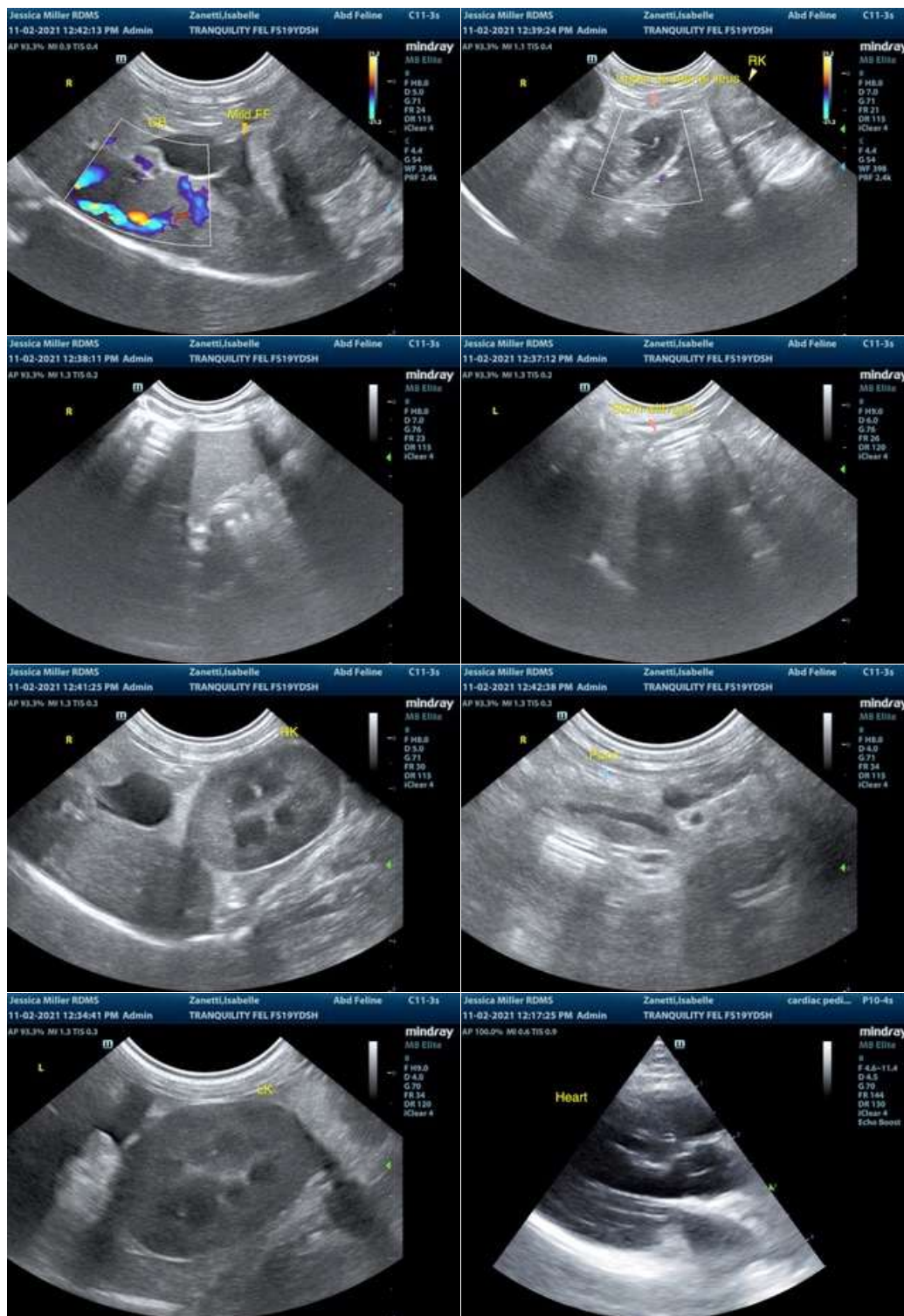
Dr. Christensen

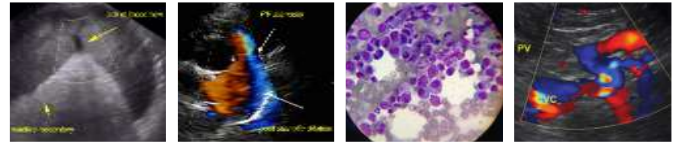
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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