

Portable Animal Veterinary Sonography, Inc.

PATIENT

Missy Cross

PRESENTING CLINICAL SIGNS
SPECIES

Feline

SEDATED- Thyroid hormones - T4 2.3; Chemistry profile - PSL 48 else unremarkable; Urinalysis - USG 1.049 protein 1+ else unremarkable; CBC - Unremarkable ASSESSMENTS Elevated PSL, Heart murmur, grade 3 of 6, Chronic vomiting Mild elevation in PSL r/o chronic active pancreatitis vs. other. No clear etiology vomiting/weight loss/heart murmur

BREED

DSH

SEX

Spayed Female

AGE

15 Years

WEIGHT

5.96 Pounds

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	2.71		0.51	1.34	0.46	78.7	
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	NM	1.38	1.57		0.80	0.53	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

 Lisa Carioto, DVM,
 DVSc, Diplomate
 ACVIM

Cardiac Presentation

- **Mitral valve:** no abnormalities with valve leaflets
- Trivial mitral regurgitation
- No left atrial enlargement (2D long axis view = 9.5 mm)
- No left auricular enlargement.
- LA: Ao ratio – within normal limits to high end of normal reference range
- No evidence of “smoke”
- Presence of systolic anterior motion of the mitral valve
- Fusion of E and A waves due to tachycardia
- **Tricuspid valve:** mild myxomatous degeneration of both leaflets
- Mild prolapse of the septal leaflet
- Mild tricuspid regurgitation.
- No right ventricular or atrial enlargement.
- **Aorta:** mild thickening of the valve leaflets, without signs of vegetative lesions
- Trivial aortic insufficiency
- Trivial turbulent blood flow in the left ventricular outflow tract
- **Pulmonic valve:** no abnormalities.
- Pulmonary artery: no abnormalities.

IMAGING BY

 Loetitia Saint-Jacques,
 LVT

HOSPITAL NAME

VCA Feline Med Center

REFERRING VET

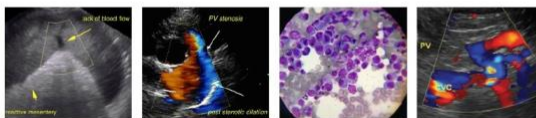
Dr. Vincent Fleming

INVOICE

37726

DATE

5/17/22



Portable Animal Vascular Sonography, Inc.

PATIENT

Missy Cross

- Bifurcation of pulmonary artery: no abnormalities.
- Pulmonary artery: aortic ratio within normal limits.

SPECIES

Feline

- No evidence of pulmonary edema
- No signs of pericardial, pleural effusion
- No obvious signs of an intracardiac mass
- Mild hypertrophy of the apical papillary muscle
- Papillary muscles: hyperechoic and prominent
- Endocardium: Areas of hyperechogenicity

BREED

DSH

Urinary System

The urinary bladder is well distended with anechoic contents. The wall is smooth and regular. There is no evidence of sediment, cystoliths, polyps or a mass within the urinary bladder.

SEX

Spayed Female

Although no abnormalities are noted with the trigone per se, a hyperechoic structure, measuring 1.81 mm, is observed at the junction of the trigone and proximal urethra. The structure creates a "dirty shadow", rather than a clean acoustic shadow, therefore, a mineralization in the urethra, rather than a completely calcified calculus, is suspected. There are no obvious signs of urethritis or an obstruction.

AGE

15 Years

Kidneys

The **left** kidney measures 3.34 cm (3.80-4.40 cm), mildly decreased in size. The antimesenteric border is mildly irregular, which is caused by a "divit", most likely due to a previous infarct and fibrosis. The cortex is mildly hyperechoic. Despite the decrease in size, the normal definition of the cortico-medullary junction is relatively well preserved for a cat of Missy's age.

WEIGHT

5.96 Pounds

Mineralizations of the diverticulae are present, without evidence of nephroliths or pyelectasia. The surrounding mesentery is not hyperechoic.

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

The **right** kidney measures 3.51 cm (3.80-4.40 cm), very mildly decreased. The capsule is relatively smooth. Findings are similar to the left kidney. The surrounding mesentery is not hyperechoic.

Aortic bifurcation/trifurcation

No abnormalities observed.

IMAGING BY

Loetitia Saint-Jacques,
LVT

Adrenal Glands

The **left** adrenal gland measures 0.44 cm in diameter. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

HOSPITAL NAME

VCA Feline Med Center

The **right** adrenal gland measures 0.37 cm in diameter. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

REFERRING VET

Dr. Vincent Fleming

Spleen

The spleen is within normal limits in size 7.7 mm (normal = 10 mm), echotexture, and echogenicity. The capsule is smooth. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.

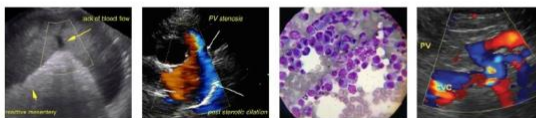
INVOICE

37726

Liver

DATE

5/17/22



PATIENT

Missy Cross There are no obvious signs of hepatomegaly and its borders are smooth and sharp. The liver's echotexture is homogeneous and it is within normal limits in echogenicity. No abnormalities are observed with the hepatic vessels visualized. Pinpoint hyperechoic foci are dispersed haphazardly throughout the parenchyma. The latter are attributed to mineralizations. There are no signs of neoplasia.

SPECIES

Feline

BREED

DSH

The gallbladder wall is within normal limits in thickness and echogenicity. A small amount of echogenic material is adhered circumferentially to the GB. No abnormalities are observed with the common bile duct or the duodenal papilla; 0.43 cm in diameter x 0.49 cm in length.

Gastrointestinal

The gastric wall is within normal limits in thickness and the wall layers are well defined. No obvious abnormalities are observed with its peristalsis.

SEX

Spayed Female

The small intestinal wall thickness, is at the high end of the reference range (0.26 cm). The definition of the wall layers is preserved, however, fogging of the mucosa is present, and subjectively, the muscularis is prominent. Abnormally dilated loops of bowel are not observed. The colonic wall is not thickened and mural detail is considered normal.

AGE

15 Years

Pancreas

The left and right limbs of the pancreas are mildly enlarged and hypoechoic. The surrounding mesenteric fat is mildly hyperechoic, suggestive of saponification. These findings are suggestive of active pancreatitis. Pinpoint hyperechoic foci are dispersed haphazardly throughout the parenchyma. Differential diagnoses include fibrosis due to age-related changes, previous episodes of pancreatitis, ischemia and/or amyloid deposition. Overt signs of neoplasia are not noted.

WEIGHT

5.96 Pounds

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

Other

Lymph nodes

splenic LN: enlarged, hypoechoic, 4.12 mm in diameter x 7.0 mm in length

gastric LNs: two are enlarged and hypoechoic. One of them is 0.66 cm in diameter x 1.23 cm in length

pancreaticoduodenal LN is also enlarged

mesenteric LN: enlarged and hypoechoic at 0.89 cm in diameter

IMAGING BY

Loetitia Saint-Jacques,
LVT

Abdominal effusion

A trivial amount of anechoic effusion is visualized ventral to the spleen.

HOSPITAL NAME

VCA Feline Med Center

ULTRASONOGRAPHIC FINDINGS

REFERRING VET

Dr. Vincent Fleming

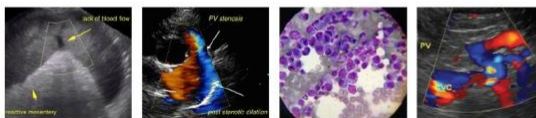
- No obvious signs of a cardiomyopathy, however, a few changes are present that require further monitoring. For example, the hyperechoic and prominent papillary muscles, including the apical papillary muscle, as well as the resulting systolic anterior motion of the mitral valve.
- Exuberant contractility is attributed to hyperthyroidism.
- An arterial blood pressure is suggested.

INVOICE

37726

DATE

5/17/22



Portable Animal Vascular Sonography, Inc.

IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

PATIENT

Missy Cross

SPECIES

Feline

BREED

DSH

SEX

Spayed Female

AGE

15 Years

WEIGHT

5.96 Pounds

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

IMAGING BY

Loetitia Saint-Jacques,
LVT

HOSPITAL NAME

VCA Feline Med Center

REFERRING VET

Dr. Vincent Fleming

INVOICE

37726

DATE

5/17/22

- Medication is not necessary at this time, unless the arterial blood pressure is elevated. However, Missy has other reasons for hypertension, including hyperthyroidism and pain associated with pancreatitis.
- Pancreatitis is highly suspected.
- The intestinal abnormalities are suggestive of inflammation. Causes may include inflammatory bowel disease, and infiltrative disease, such as lymphoma or other round cell tumour. Although the lymphadenomegaly is mild, multiple lymph nodes are affected, therefore, neoplasia cannot be excluded. Reactive hyperplasia is still possible.
- A scant amount of effusion is noted ventral to the spleen; vasculitis and neoplasia are possible.
- Gallbladder sludge; most likely clinically insignificant, however, gastroesophageal reflux disease (GERD), may occur in some patients. Obtaining a history regarding signs of GERD from the client is suggested.
- Renal changes are subtle and suggestive of age related degeneration, and a possible previous infarct and fibrosis affecting the left renal capsule.
- A mineralization within the urethra is suspected, rather than a completely calcified calculus. There are no obvious signs of urethritis or an obstruction.
- Hepatic mineralizations are not considered clinically significant.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

An arterial blood pressure is suggested.

Medication is not necessary at this time, unless hypertension is present. However, Missy has other reasons for hypertension, including hyperthyroidism and pain associated with pancreatitis.

Recommendations include the following

Arterial blood pressure

Treatment of hyperthyroidism 1.25 mg PO once a day for 3 days, then every 12 hours thereafter

Analgesia for visceral pain; buprenorphine and gabapentin

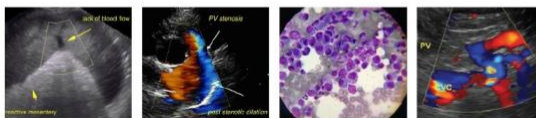
Supportive care: +/- subcutaneous fluids

If signs of GERD, 10-14 day trial with famotidine or omeprazole (0.7-1 mg/kg PO q12h)

Serum cobalamin, folate, and TLI to exclude dysbiosis and EPI as the cause of weight loss (malabsorption)

Supplementation with cobalamin is suggested

Consider deworming, depending on possible exposure or if Missy lives with other pets who go outdoors.



PATIENT

Missy Cross

A fine needle aspirate of the lymph nodes may provide a diagnosis and is less invasive than performing endoscopy of the upper and lower GI tract diet and biopsies, which would be the ideal work up

SPECIES

Feline

BREED

DSH

SEX

Spayed Female

AGE

15 Years

WEIGHT

5.96 Pounds

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

IMAGING BY

Loetitia Saint-Jacques,
LVT

HOSPITAL NAME

VCA Feline Med Center

REFERRING VET

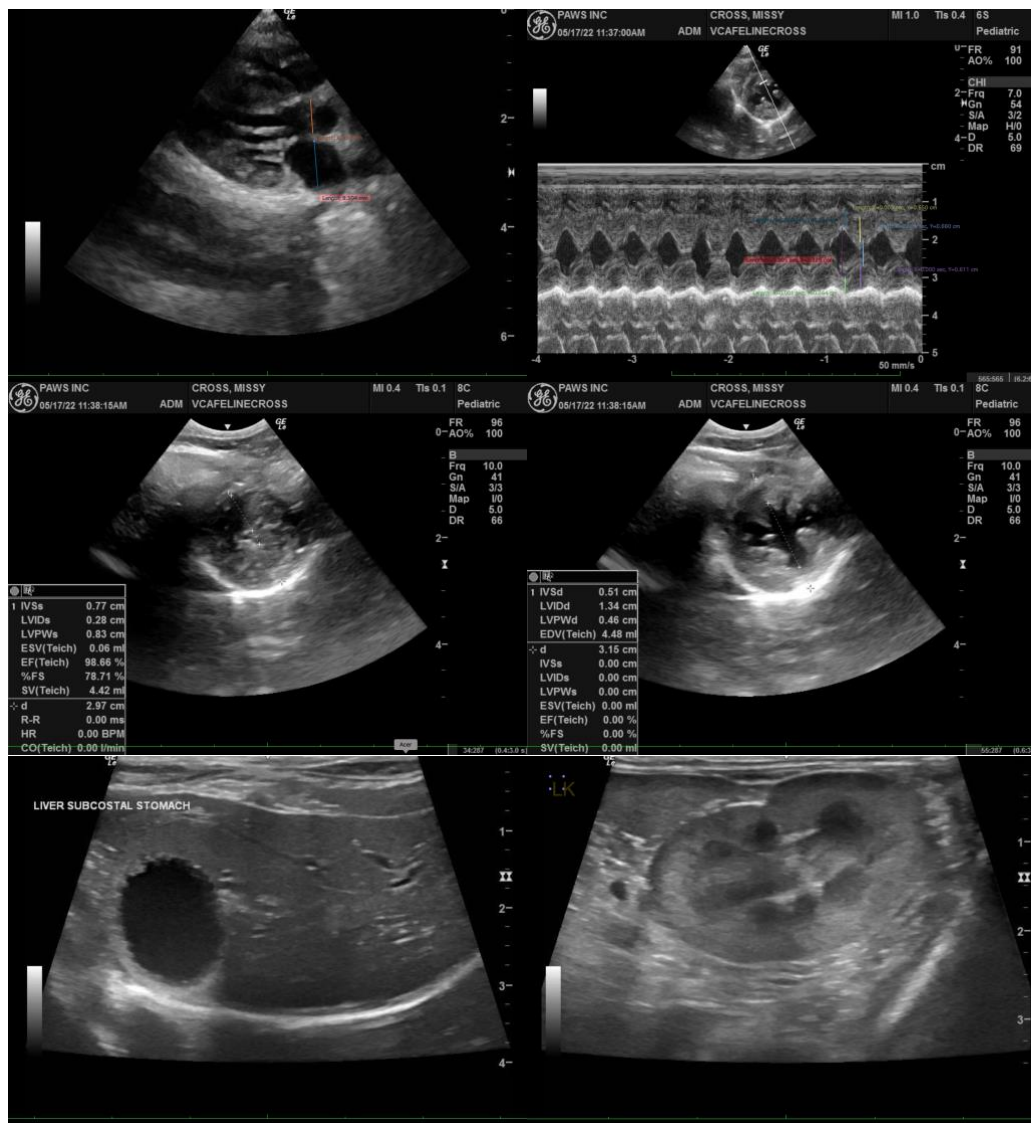
Dr. Vincent Fleming

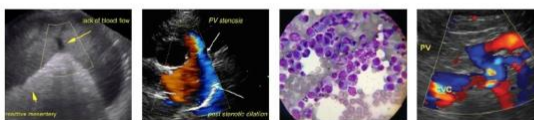
INVOICE

37726

DATE

5/17/22





PATIENT

Missy Cross

SPECIES

Feline

BREED

DSH

SEX

Spayed Female

AGE

15 Years

WEIGHT

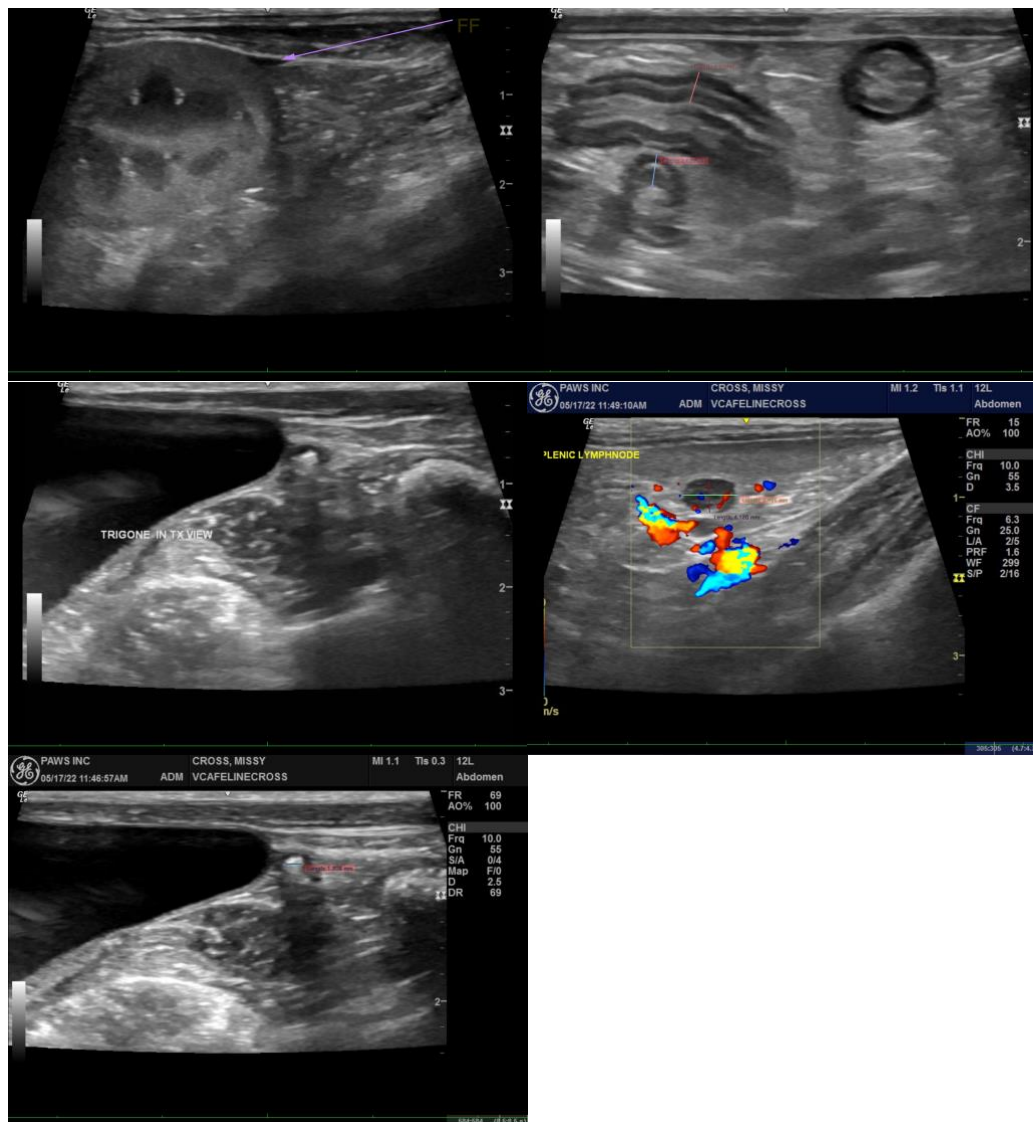
5.96 Pounds

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

IMAGING BY

Loetitia Saint-Jacques,
LVT



HOSPITAL NAME

VCA Feline Med Center

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.

REFERRING VET

Dr. Vincent Fleming

Lisa Carioto, DVM, DVSc, Diplomate AVIM

Lisa.Carioto@sonopath.com

INVOICE

37726

DATE

5/17/22