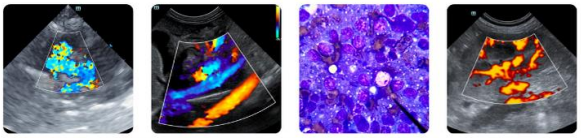


SonoPath www.SonoPath.com info@sonopath.com 800.838.4268

PATIENT
Daisy Coates

SPECIES
Feline

BREED
Domestic Medium Hair

SEX
Female (Spayed)

AGE
6 years

WEIGHT
10.4 lbs.

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

IMAGING PERFORMED BY
Meghan Morse, LVT, CVT

HOSPITAL NAME
Hamburg VC

REFERRING VET
Hamburg VC

INVOICE
10637

DATE
2/17/26

PRESENTING CLINICAL SIGNS

History:

- Grade III/VI murmur, Hx of asthma- on pred, assess abdomen as well
- Current meds: Pred/ Terbutaline

Abnormal PE/Chem/CBC/UA Results: SAP 65, amylase 2387, t4 <0.4

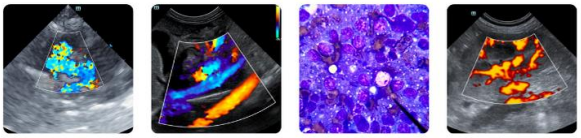
ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

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	10.4 lbs.	NM	0.50	1.48	0.53	50	82
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	-	1.4	1.4		1.0	0.7	-

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. No overt significant MR on Doppler. 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. Mild to moderate TR was noted on Doppler (measured TR velocity 2.5 m/s). 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

The urinary bladder, trigone, and cystourethral junction exhibited normal thickness and tone. Primarily anechoic urine was present in the lumen. Nondependent, particulate, mild sediment was present without evidence of calculus formation. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic mural changes were noted.

The area of the iliac trifurcation was free of pathology.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 3.8 cm in length. The right kidney measured 4.1 cm in length.

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.36 cm width. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.34 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.

Liver/ Gallbladder

The liver presented mild generalized hepatomegaly. Multiple, expansive to hypoechoic hepatic nodules to small masses were present with an example measuring 2.5 cm in diameter. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

Gastrointestinal

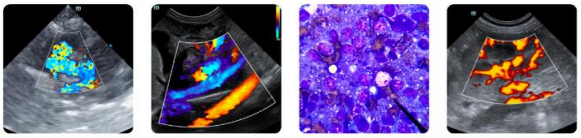
The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty without evidence of retained ingesta, fluid, or foreign material.

The duodenum and jejunum to the level of the ileum exhibited intact wall layering, non-thickened wall, and maintained wall layer ratio. The small Intestinal wall width measured 0.22 cm. Thickened ileocolic wall exhibiting indistinct mural detail was noted, measuring 0.67 cm ileocolic wall width.

The colon exhibited variable thickening with segmental intact to indistinct wall layer detail with concurrent segmental loss of proximal colon wall layer detail and hypoechoic mural echogenicity. The proximal colon wall width measured 0.58 cm.

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 were evident.



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Free Abdomen

Multiple, mildly enlarged to swollen, hypoechoic, mesenteric lymph nodes were present. The lymph nodes exhibited symmetrical to rounded margination with abnormal width: length ratio (>0.5). The enlarged lymph nodes were bordered by echogenic to reactive mesentery. The mesenteric lymph nodes measured 1.6 cm x 1.2 cm. Scant pockets of peritoneal effusion were present.

ULTRASONOGRAPHIC FINDINGS

- Normal cardiac structure / function
- Tricuspid regurgitation – estimated pulmonary pressure gradient suggestive of mildly increased pulmonary pressure, no evidence of clinical pulmonary hypertension
- Multiple expansive hypoechoic hepatic nodules / small masses
- Thickened ileocolic wall exhibiting segmental loss of colon mural detail
- Multifocal mild to variably swollen mesenteric lymphadenopathy, scant peritoneal effusion

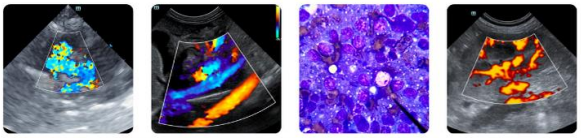
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The only source of the murmur is the tricuspid regurgitation without additional evidence of structural or functional cardiomyopathy. Aside from the tricuspid regurgitation, a benign flow murmur may be possible, although a small additional non-visualized flow abnormality cannot be excluded. Regardless, the lack of left or right heart or pulmonary artery enlargement indicates that current and future risk of complications is low. There is no indication for cardiac medications. Conservative monitoring of the murmur going forward is advised with a recheck echocardiogram suggested in 6 months, sooner if clinical signs arise or if murmur intensity increases.

Although sampling is required for further clarification, multicentric ileocolic, hepatic, and lymphatic neoplastic criteria is met, i.e., lymphoma vs. other round cell neoplasia is probable. Assuming normal clotting status and using a 25-gauge needle, hepatic nodule and accessible lymph node FNA cytology is warranted for further clarification with potential for oncology consultation.

Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists.

New Jersey Mobile
FUELED BY SONOPATH VETERINARY ULTRASOUND



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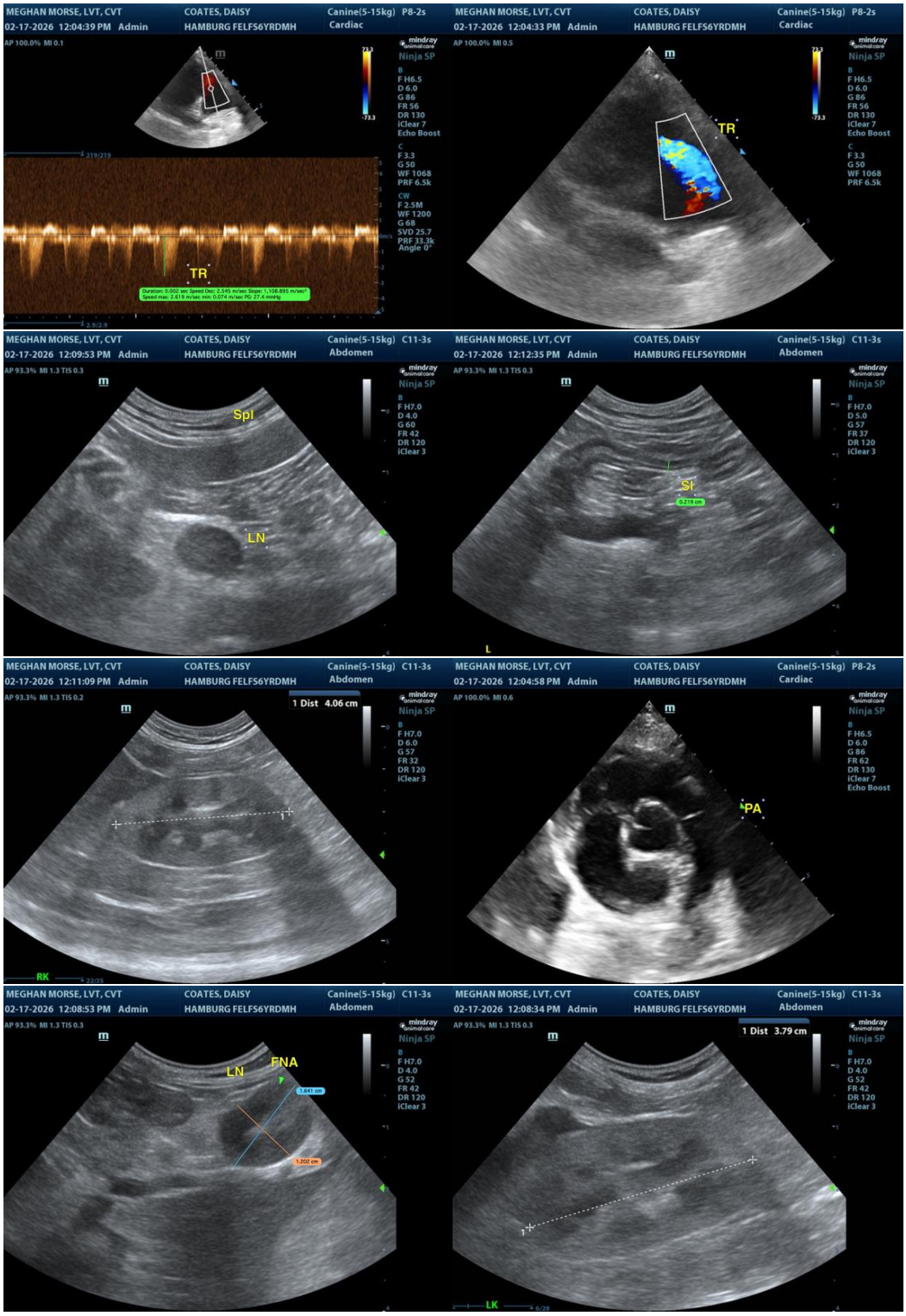

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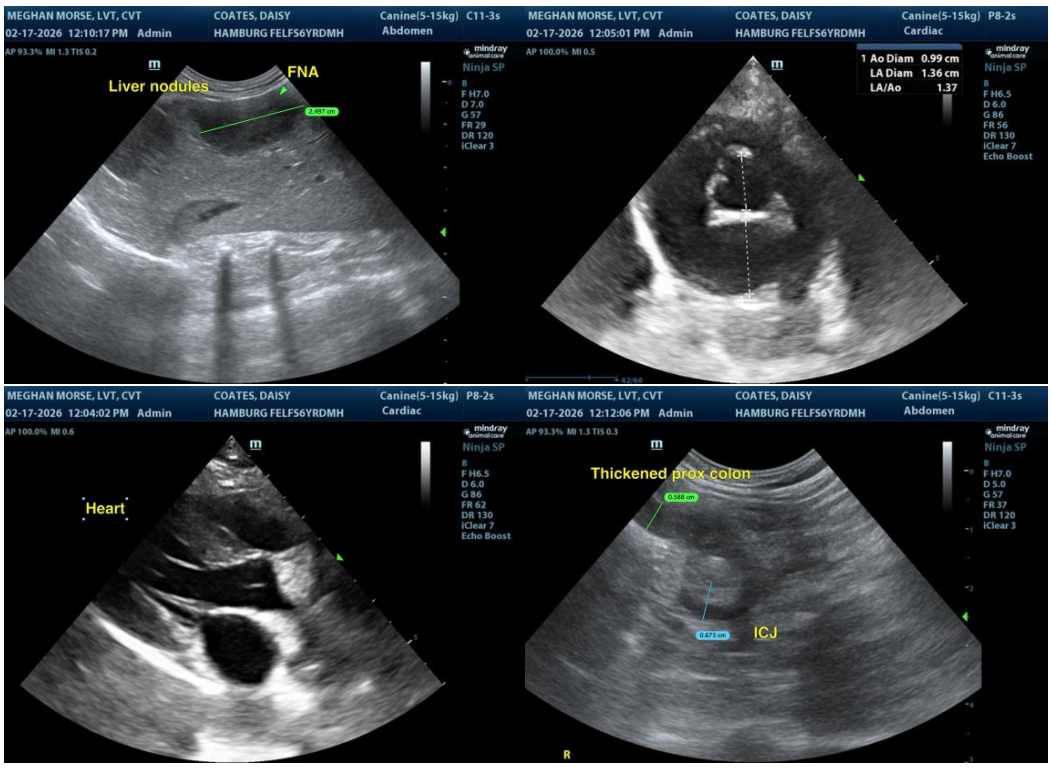

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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