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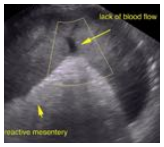

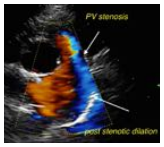

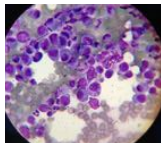
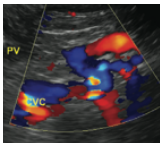

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Schuster Wilson

SPECIES

Feline

BREED

Maine Coon

SEX

Neutered male

AGE

2 ½ years

WEIGHT

11.2 lbs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. McFeely

HOSPITAL NAME

Straley VA

REFERRING VET

Dr. McFeely

INVOICE

44103

DATE

5/1/23

PRESENTING CLINICAL SIGNS

History: Schuster presented within the past 2 weeks after recent diagnosis of FIP based upon visual exam of intra-abdominal fluid from FAST scan at the local ER clinic. Based upon results, owner obtained experimental FIP drug GS-441524 from FIP Facebook support group and had already given 2 daily subcutaneous injections prior to presentation as a new patient. Upon presentation, Schuster's exam revealed a 2/6 cardiac murmur and tachycardia, and abnormal fBNP on lab work as well as mild anemia and hyperbilirubinemia. I recommended imaging and fluid analysis as a precaution, and we switched from oral to transdermal mirtazapine while awaiting imaging. For imaging today, Schuster was given 1mg butorphanol IV, followed by 25mg total alfaxalone IV. His hyperbilirubinemia had resolved today, but his anemia had worsened.
Abnormal PE/Chem/CBC/UA Results: Hyperbilirubinemia resolved today, (0.6), but ongoing hyperproteinemia of 8.9 g/dl (normal albumin, hyperglobulinemia), anemia with PCV of 19% (dropped from 29% over past week). Fluid analysis from abdominocentesis for small sample today revealed dark yellow viscous fluid with specific gravity of 1.045, TP of 6.6 g/dl with fairly low cellularity (0-few rbcs/hpf, few macrophages/hpf, several PMNs/ most hpfs and occasional lymphs/hpf). Recent fBNP was abnormal and FeLV/FIV/HW test was neg for all.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

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.

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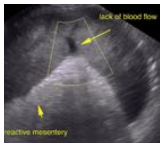
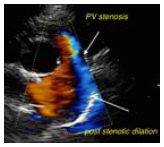
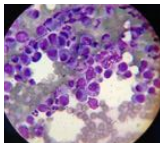
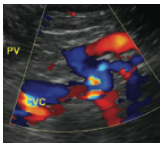

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FELINE CARDIAC PARAMETERS	BODY WEIGHT	HR (BPM)	IVSd (cm)	LVIDd (cm)	LVWd (cm)	FS (%)	EF (%)
NORMAL PARAMETER	------	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT	11.2 lbs	NM		1.72			

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	1.1	1.3	1.3		1.0	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

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The right kidney measured 4.4 cm. The left kidney measured 4.0 cm.

Adrenal Glands

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient.

Spleen

The **spleen** was enlarged and measured 1.4 cm. The spleen was surrounded by mildly echogenic free fluid.

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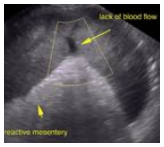
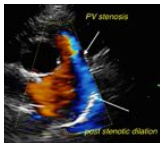
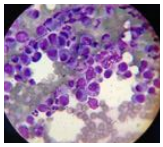
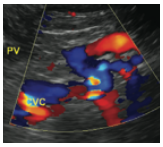

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Liver

The **liver** revealed uniform parenchyma with mild, irregular contour. The gallbladder and common bile duct were unremarkable. There was no evidence of passive congestion present.

Gastrointestinal

The **stomach** and small intestine presented an empty lumen. Enhanced mesentery was noted around the intestine and pancreas.

Pancreas

The **pancreas** was heterogenous, hypoechoic and mildly irregular.

Free Abdomen

A moderate amount of free fluid was noted in this patient.

ULTRASONOGRAPHIC FINDINGS

Normal echocardiogram with no evidence of pathology.

Free fluid and splenic enlargement.

Heterogenous, hypoechoic and irregular pancreas.

Enhanced mesentery.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a strong concern for FIP. Lymphomatosis, mastocytosis or similar is possible. Cytospin of the abdominocentesis is recommended. FNA of the spleen, cytology and culture is recommended. If cytospin was not performed at the time of the original abdominocentesis is recommended to allow for more precise interpretation if necessary. If the presumptive diagnosis is FIP this would be consistent with a wet form. However, lymphomatosis, carcinomatosis and mastocytosis can also present in this fashion.

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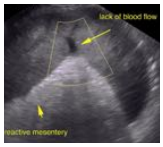
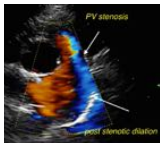
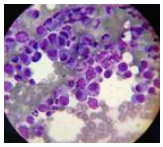
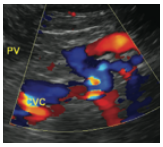

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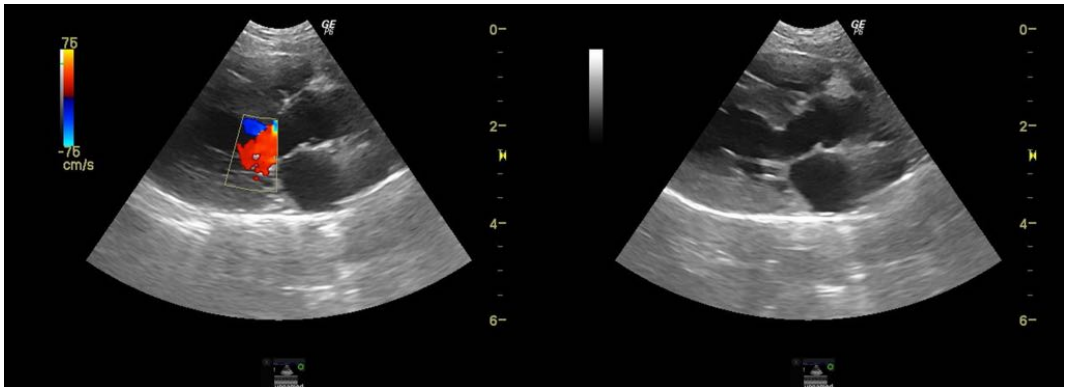

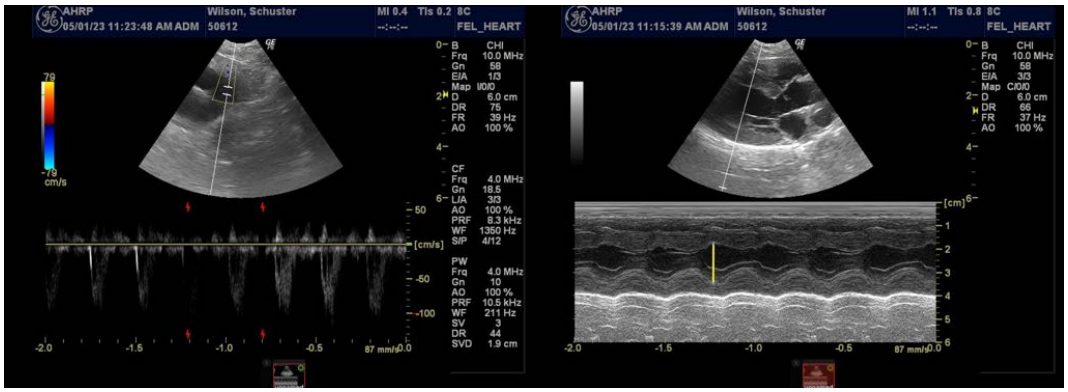

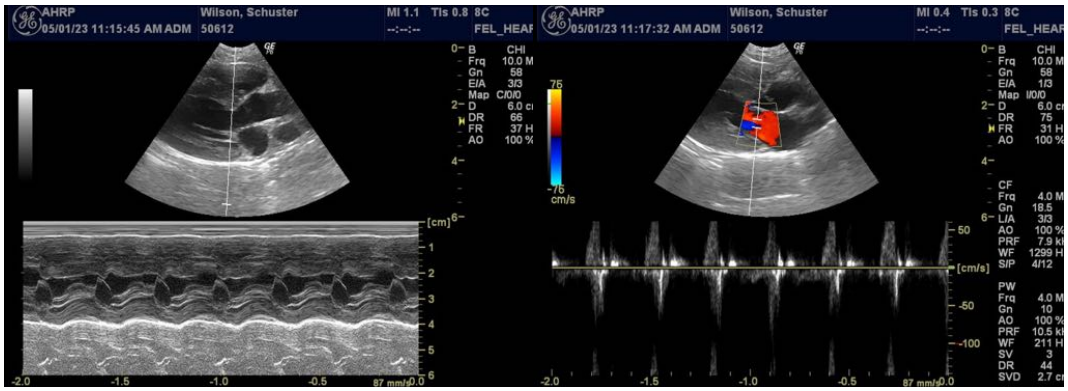

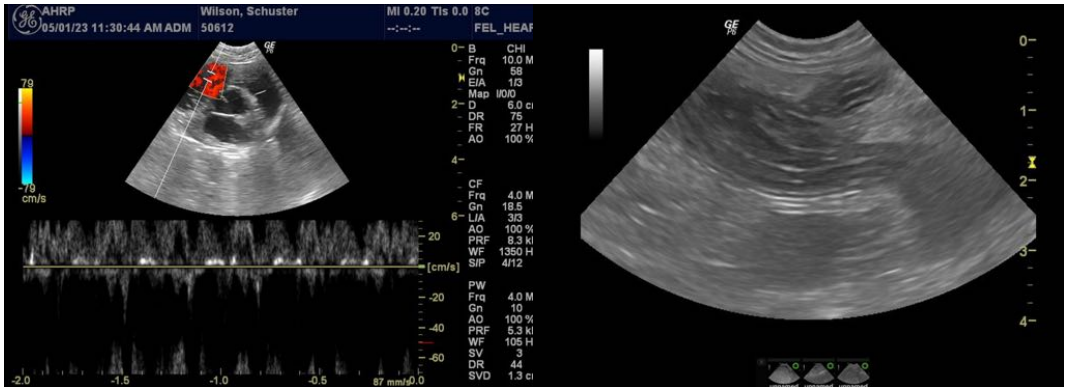

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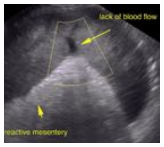
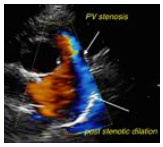
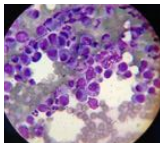
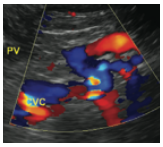

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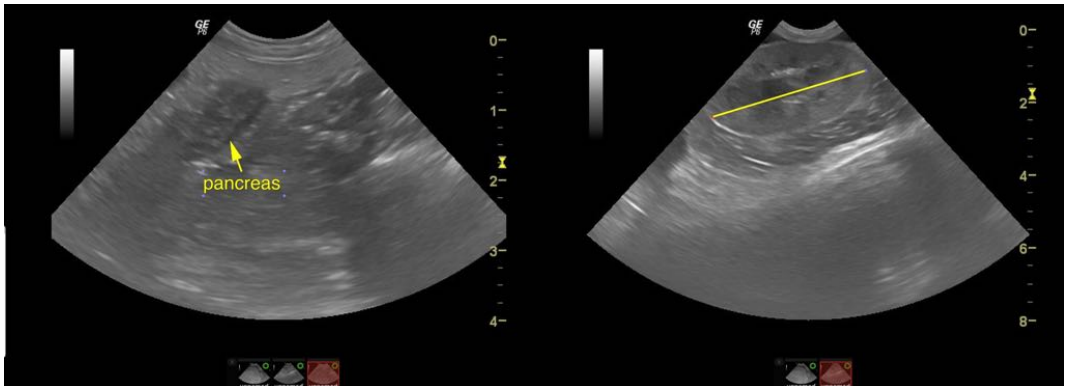

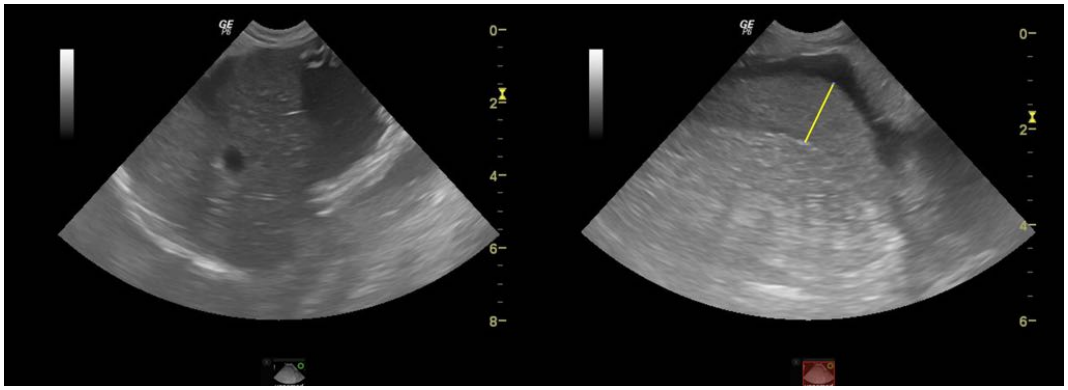

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com
info@SonoPath.com