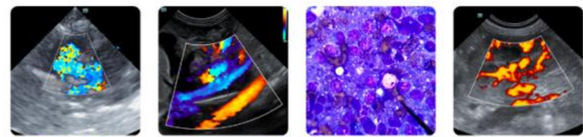


PATIENT

Agnes Percy

SPECIES

Canine

BREED

Lab Retriever

SEX

Spayed Female

AGE

11 Years

WEIGHT

61.4

INTERPRETED BY

Eric Lindquist, DMV, DABVP(CFM), Cert. IVUSS

IMAGING PERFORMED BY

Kathleen Byrnes

HOSPITAL NAME

Scotts Creek Animal Hospital

REFERRING VET

Dr. Rendazzo

INVOICE

13209

DATE

01/16/26

PRESENTING CLINICAL SIGNS

P presented 1/12/26 for lethargy, not wanting to come out of kennel and not eating (usually very food motivated), tender in abdomen. Rads showed gas dilated loops of bowel- transferred to ER for suspected foreign body. ER clinic non regenerative anemia HCT 31% Rad report- gastroenteritis foreign body less likely, single pulmonary nodule R side of patient severe bruising and edema- PCV dropped to 19%, Pt/PTT 10, 135, PCV down to 16% Blood transfusion- PCV post transfusion 20% Recheck rDVM 1/15/26 HCT 12.7, Retics 151, WBC 47, Neu 38.5, Monos 5, Basos 0.24, PLT 141, Chem ALT 7373, ALKP 277, Tbili 1.2, Amylase >2500, Lip 5663 1/16/26- P more alert, eating and taking meds, PCV 18, Blood smear Marked spherocytes, 3+ howell bodis 1+ echinocytes Saline dispersion test- marked rouleaux concern for IMHA, snake bite?(no wound found), IMTP Currently on Yunan Baio, Pred, Azathioprine, Benadryl, Famotidine, Sucralfate

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (M-Mode)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
PATIENT	6.65	3.56	1.4	1.8	43	74	0.4
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT** (kg)	**LAD** LA MAX 4 Chamber	**LVIDd** Avg; 2D and m-mode short axis (cm)	**LVIDs** Avg; 2D and m-mode short axis (cm)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6				
PATIENT	--	1.26	1.27	61.4	4.44	5.22	--

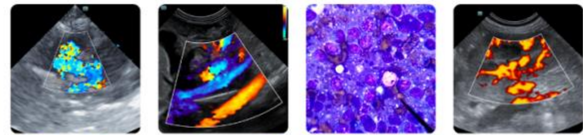
E-Wave Velocity: 1.3

Cardiac Presentation

The patient presented with mild volume overload of the left atrial and left ventricle with mitral and tricuspid insufficiency. Complete filling of the left atrium was noted on color flow assessment. Tricuspid insufficiency velocities are consistent with pulmonary hypertension. No pericardial effusion was noted. E-Wave velocity was excessive. The right atrium was also enlarged.

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 were noted. Ureteral papillae were normal.



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The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The left kidney measured 7.12 cm in length. The right kidney measured 6.3 cm in length.

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. The left adrenal gland measured 2.7 cm x 0.70 cm width at the caudal pole and 0.65 cm width at the cranial pole. The right adrenal gland measured 2.39 cm x 1.0 cm width at the cranial pole and 0.68 cm width at the caudal pole.

Spleen

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes were noted. Occasional lipid plaques were noted. Splenic width measured 1.9 cm.

Liver

The **liver** was swollen with dilated hepatic veins and vena cava with slight free fluid noted between the liver lobes. No evidence of masses. Minor parenchymal remodeling was noted. The gallbladder and common bile duct were unremarkable.

Gastrointestinal

There was some residual chyme and gas noted in the **stomach**, yet not pathological. This is consistent with end post prandial presentation. Transit of chyme into the small intestine was normal. Curvilinear patterns were maintained throughout the GI tract. No evidence of pathology. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

Pancreas

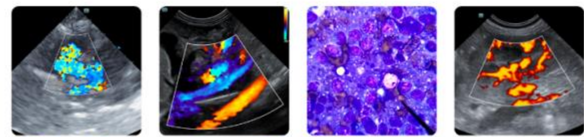
The left limb of the **pancreas** presented with mixed echogenic changes and remodeling consistent with pancreatitis or history of pancreatitis.

Free Abdomen

Slight free fluid was noted in the cranial abdomen likely owing to passive congestion. There is no evidence of hemorrhage, however, the free fluid cannot be ruled out as potential hemorrhage, yet the dilated hepatic veins and vena cava would suggest passive congestion.

ULTRASONOGRAPHIC FINDINGS

- Mitral valve disease with left/right atrium enlargement (Stage B2 valvular disease) with concurrent pulmonary hypertension- emerging right sided heart failure.



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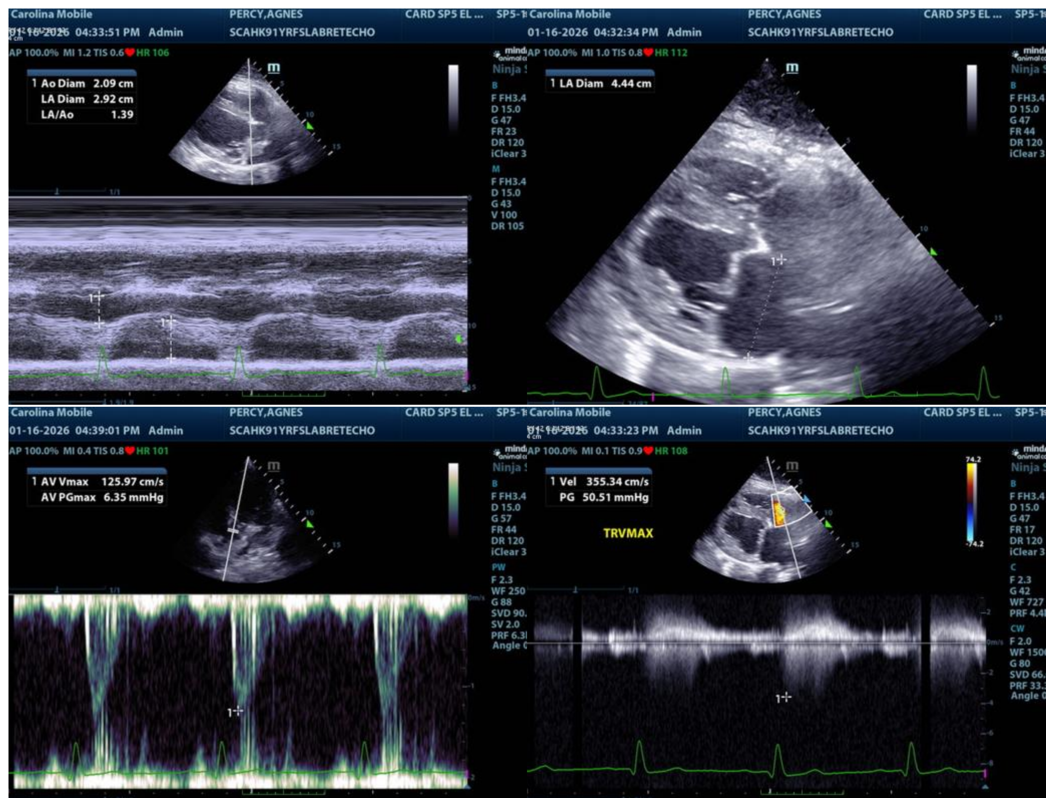
- Concurrent pancreatitis.
- Age-related renal changes.
- Splenic lipid plaque.
- Swollen liver.
- Slight free fluid in the cranial abdomen.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of anemia in this patient is not overtly clear. GI blood loss is a potential, however, structurally, the GI tract appears unremarkable from a sonographic perspective. Recommend treating the heart with Pimobendan 0.30 mg/kg BID, ACE inhibitor 0.5 mg/kg SID progressing to BID and low dose Spironolactone 1.0 to 2.0 mg/kg BID. Management for pancreatitis is indicated as well as a CBC path review. Given the anemia, GI protective protocol is warranted. Infectious or immune mediated issues may be playing a role. The Prednisone may be suppressing a more significant presentation. Recheck sonogram in 72 hours (both cavities) for further evaluation. I believe there are multiple comorbidities playing a role in this patient. The cardiac presentation may be affected by systemic inflammation or myocarditis.



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1 MR Vmax 665.16 cm/s
MR PGmax 176.98 mmHg

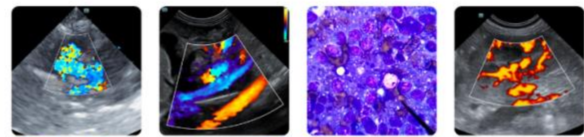
1 MV EPSS 0.51 cm

1 MV E Vel 130.63 cm/s
MV E PG 6.83 mmHg
2 MV A Vel 70.14 cm/s
MV A PG 1.97 mmHg
MV E/A 1.86

1 LA Diam 5.22 cm

1 Vel 324.21 cm/s
PG 42.04 mmHg
TRVMAX

mild lae



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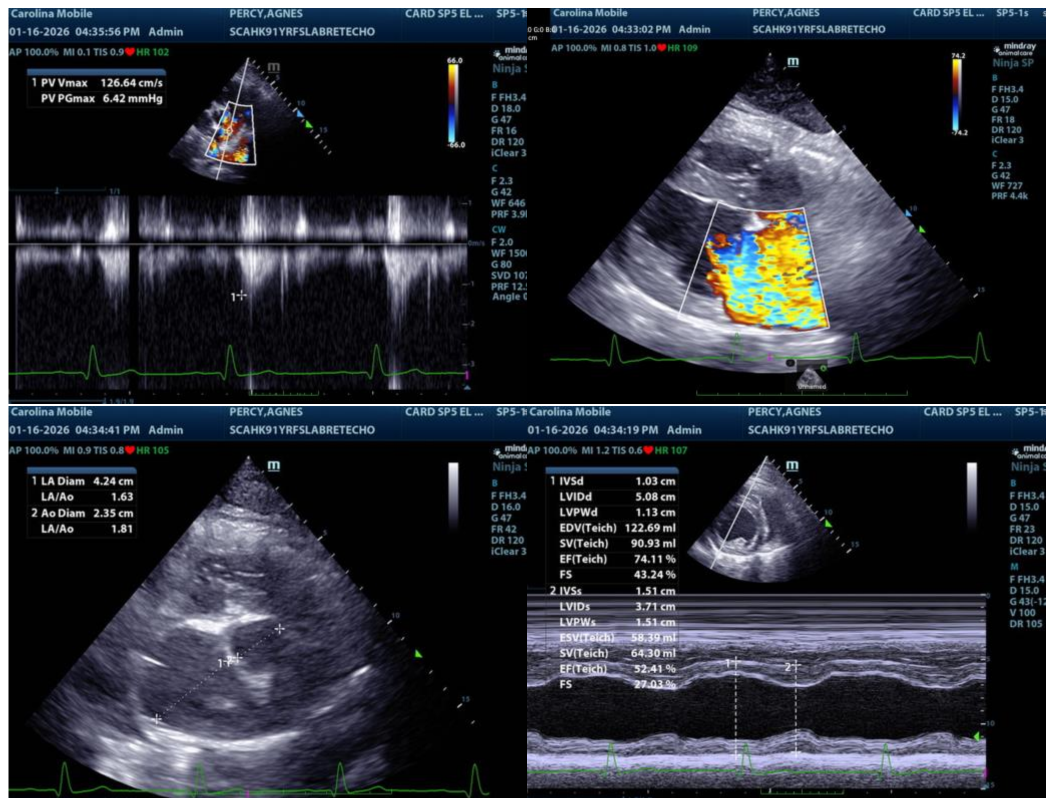

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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(CFM), Cert. IVUSS,

CEO, Owner, Founder -- SonoPath.com

info@SonoPath.com