


PATIENT PRESENTING CLINICAL SIGNS

Vixen Southard
 anemic, collapsing episodes. On doxy and pred from rDVM.
 Abnormal PE/Chem/CBC/UA Results: rDVM: HCT 17%, ALT 168, glob 2.2, 4dx neg; Newton
 PCV/TS: 26/8

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN
BREED

German Shepherd

SEX

Neutered Male

AGE

5 Years

WEIGHT

104 Pounds

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT			1.2	1.4			0.3
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LA 2D short axis Base view (cm)	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		2.10	2.10		2.19		

INTERPRETED BY

 Eric Lindquist, DMV
 DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Diane McFadden

HOSPITAL NAME

Newton Vet Hospital

REFERRING VET

Dr. Kim

INVOICE

34074

DATE

1/7/22

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. The cranial and caudal **mitral** valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. The **left ventricle** presented 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 of the myocardium. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. The **right atrium** was slightly enlarged. No evidence of masses. There appears to potentially be an atrial septal defect in this patient. Further imaging necessary with doppler. This may be angular fallout. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonary outflow** 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. The cranial **mediastinum** and **pericardial and extra-cardiac regions** were free of masses in the visible window. Both aortic and pulmonic velocities were slightly elevated, likely owing to anemia, not hemodynamically significant. Hepatic veins were not dilated.

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. The pelvic urethra was imaged 3.0 cm beyond the cystourethral junction.



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Vixen Southard

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 left kidney measured 6.8 cm.

SPECIES

Canine

Adrenal Glands

BREED

German Shepherd

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 2.84 cm x 0.36 cm at the caudal pole and 0.27 cm at the cranial pole. The right adrenal gland measured 3.13 cm x 1.98 cm at the cranial pole and 0.78 cm at the caudal pole.

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Spleen

AGE

5 Years

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.

Liver

WEIGHT

104 Pounds

The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

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Gastrointestinal

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The **stomach** revealed some retention of ingesta, consistent with post-prandial presentation. However, the material presented progressive shadowing such as grass or similar. Findings should be paired with prandial timing. The small intestine and colon were unremarkable.

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Pancreas

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

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ULTRASONOGRAPHIC FINDINGS

- Normal echocardiogram with possible incidental atrial septal defect, further confirmation needed
- Normal abdomen

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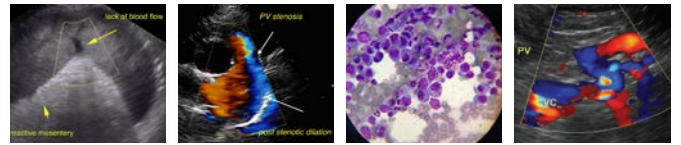
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No evidence of cause of anemia. The heart is not the cause of anemia. The right atrial enlargement is an incidental finding. No evidence of right-sided failure.

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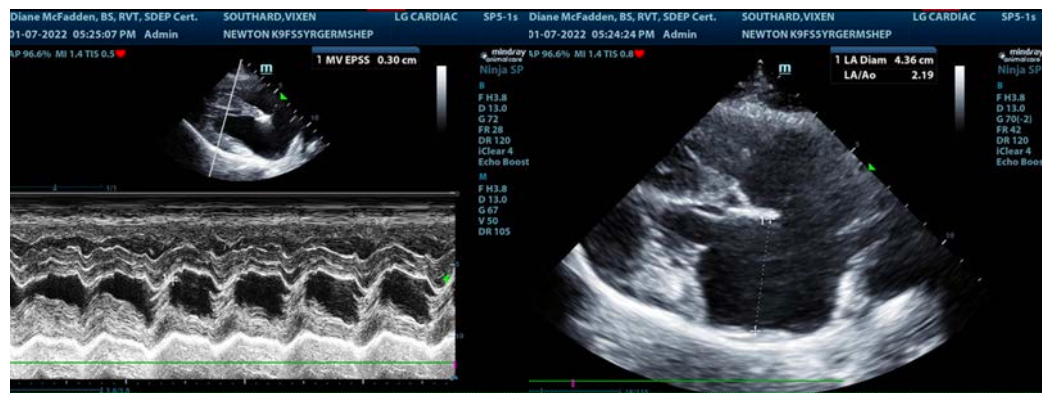
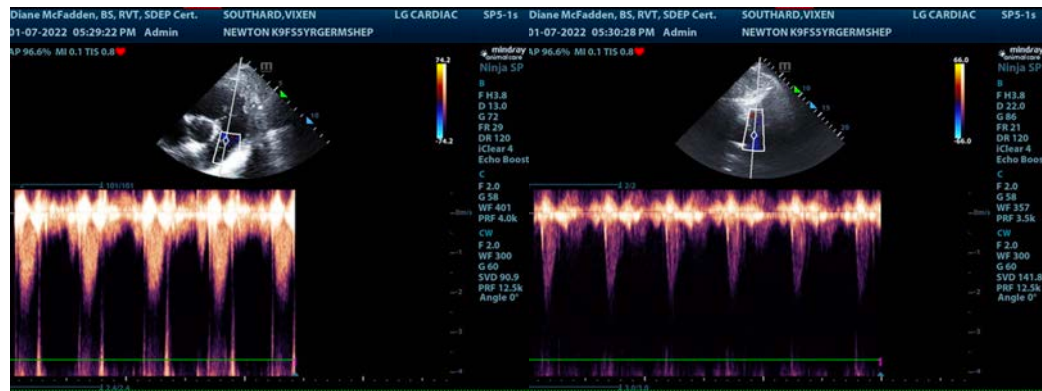
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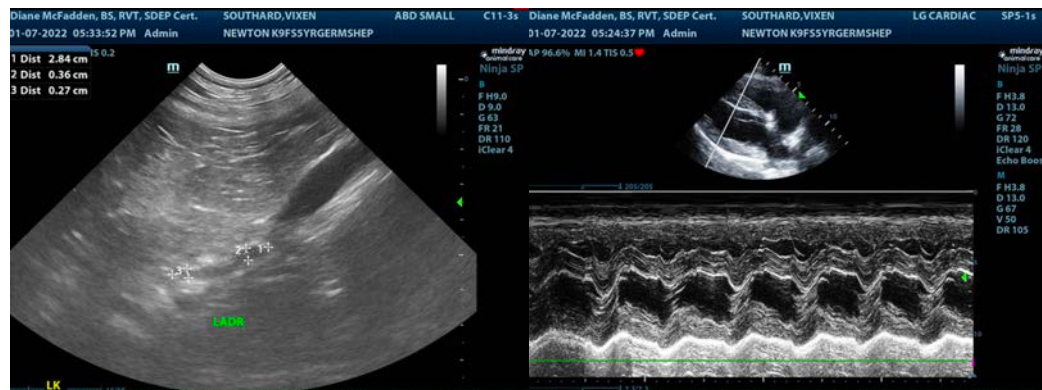
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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