



PATIENT PRESENTING CLINICAL SIGNS

HEartie Vergona

History: Patient with history of PDA (repaired in 2018), presents for follow up echo and new progressing leukopenia. Hunting for infectious process sequestering WBCs; asymptomatic ; WBCs 4.28 then at recheck 1 month 2.70.

SPECIES

Abnormal PE/Chem/CBC/UA Results: Reticulocytes 120.5, WBC 2.7, neutrophils 1.67, lymphocytes 0.84, monocytes 0.12, eosinophils 0.05, MPV 13.3.

Canine

BREED

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Miniature Schnauzer

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** and auricle revealed normal size, structure and content. No evidence of masses was noted. Trivial **tricuspid** insufficiency was noted. 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.

SEX

Spayed Female

AGE

4 years

WEIGHT

13 lbs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Kelly Vazquez , CVT

HOSPITAL NAME

Englewood Cliffs VH

REFERRING VET

Dr. Attanasi

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			1.1	1.15	30	60	0.1
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT	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	115	1.14	1.49	13 lbs	2.0 max	2.76	

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ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The pelvic urethra was imaged 2.0 cm beyond the cystourethral junction. 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** were slightly subnormal in size, yet uniform in contour and echotexture. The right kidney measured 2.67 cm. The left kidney measured 3.32 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. The right adrenal gland measured 1.33 x 0.45 cm at the caudal pole and 0.53 cm at the cranial pole. The left adrenal gland measured 1.08 x 0.56 cm at the caudal pole and 0.57 cm at the cranial 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 was noted.

Liver

The **liver** was slightly subnormal in size with uniform parenchyma. The visible portal vein and vena cava were unremarkable. The gallbladder revealed a minor amount of debris.

Gastrointestinal

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. 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 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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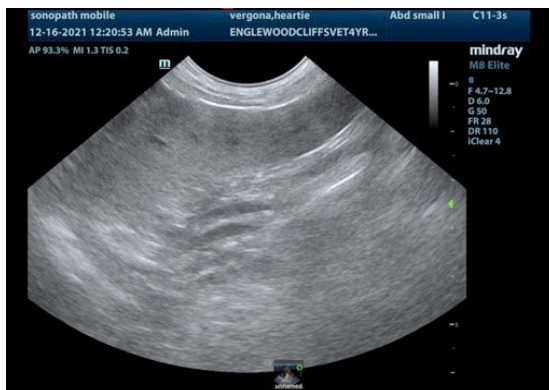
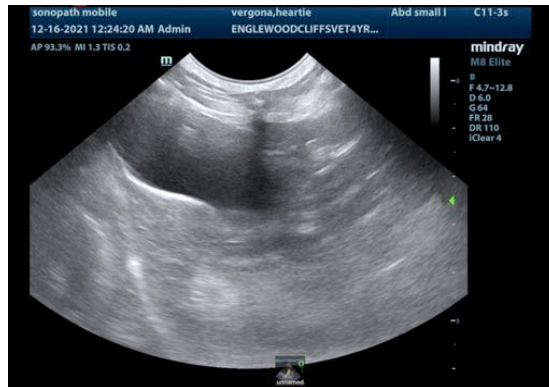
ULTRASONOGRAPHIC FINDINGS

Stable heart no residual effects from PDA correction, normal size contractility and internal diameters. No significant valvular disease.

Subnormal liver size.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Bile acid profile is warranted, portal hypoplasia may be an issue. If bile acids are significantly elevated then sedation and further imaging of the portal vein at its branching would be necessary. This was obscured by artifact at the time of the sonogram. There was no evidence of other visceral disease.





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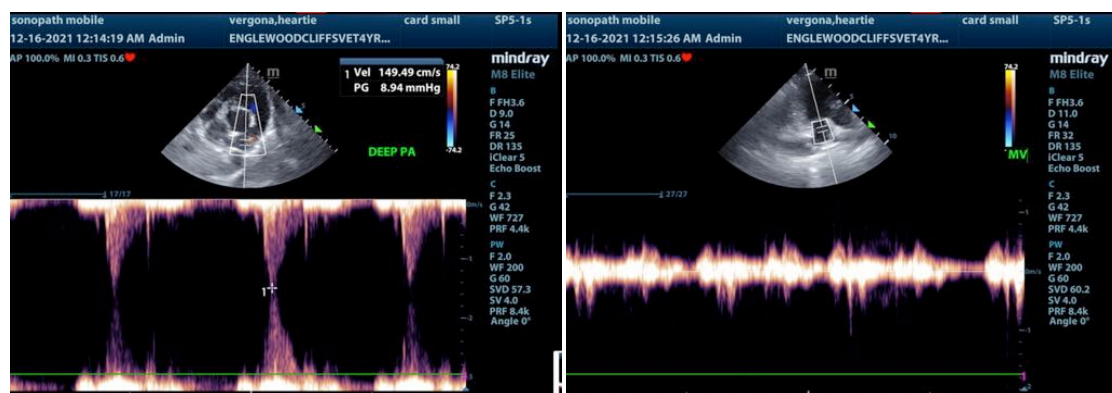
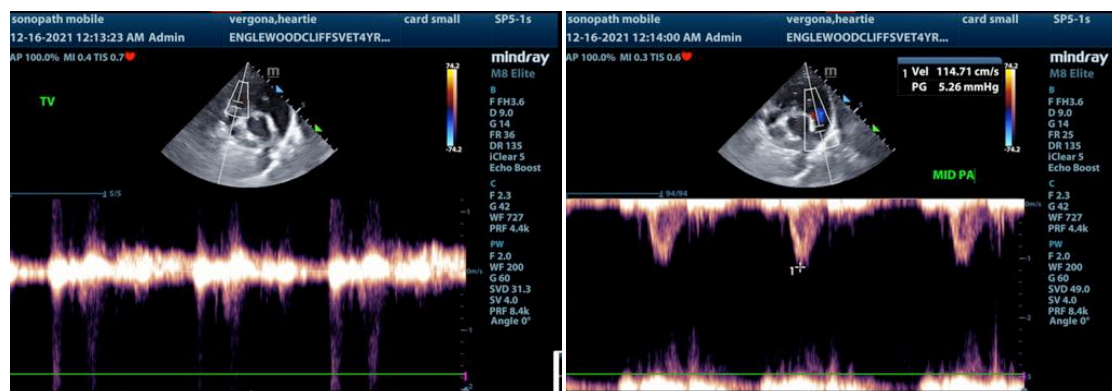
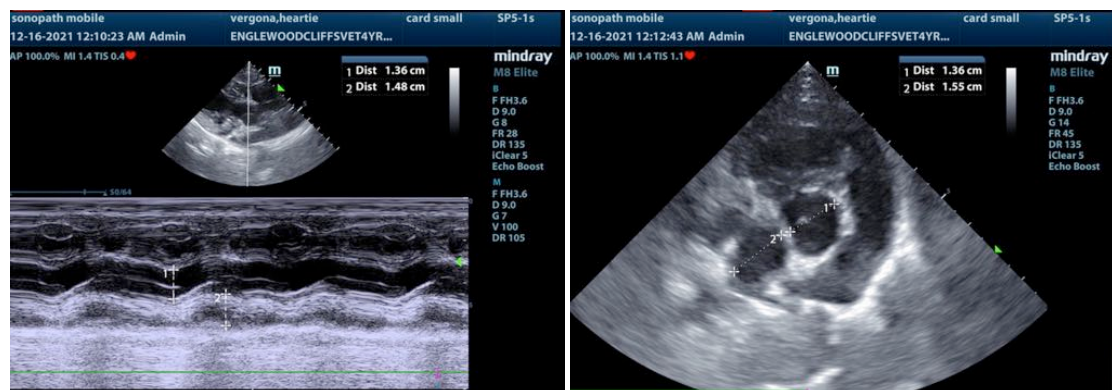
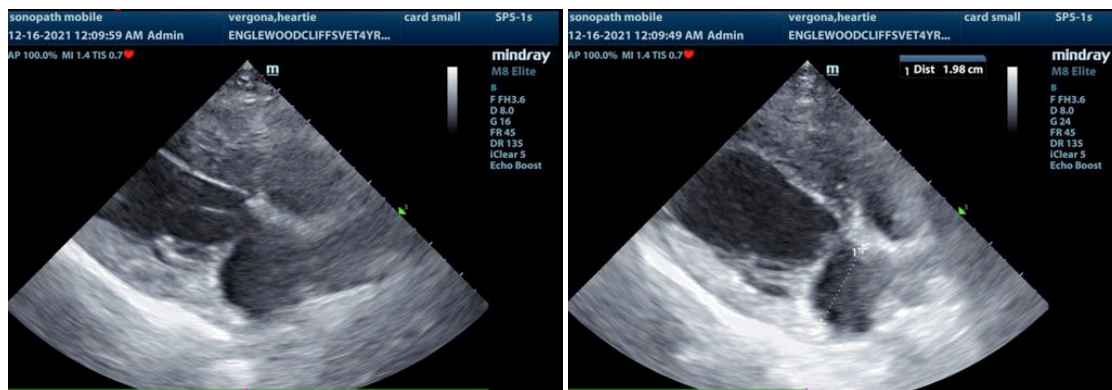
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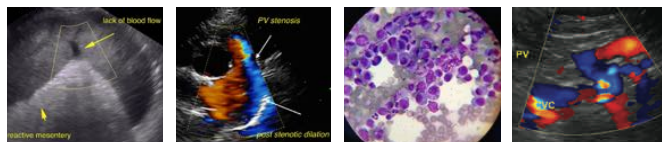
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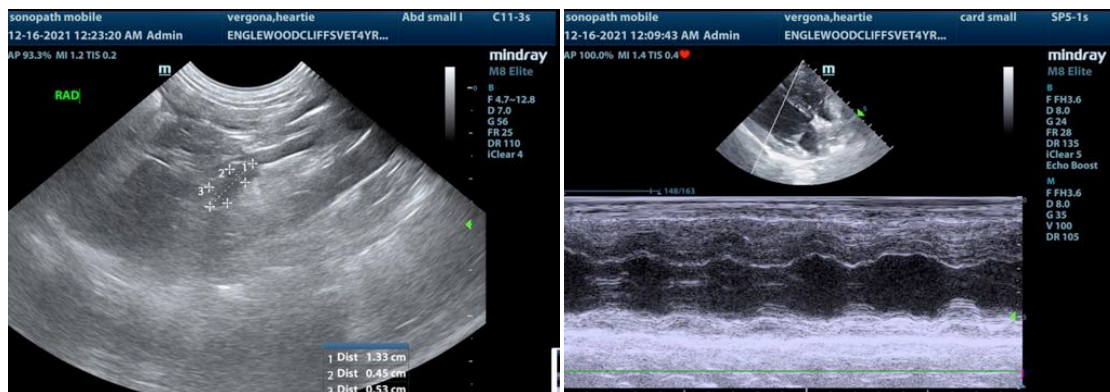
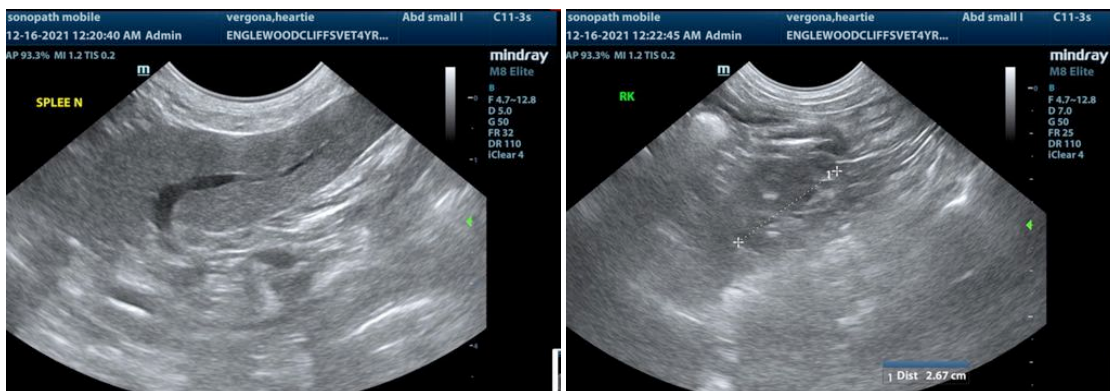
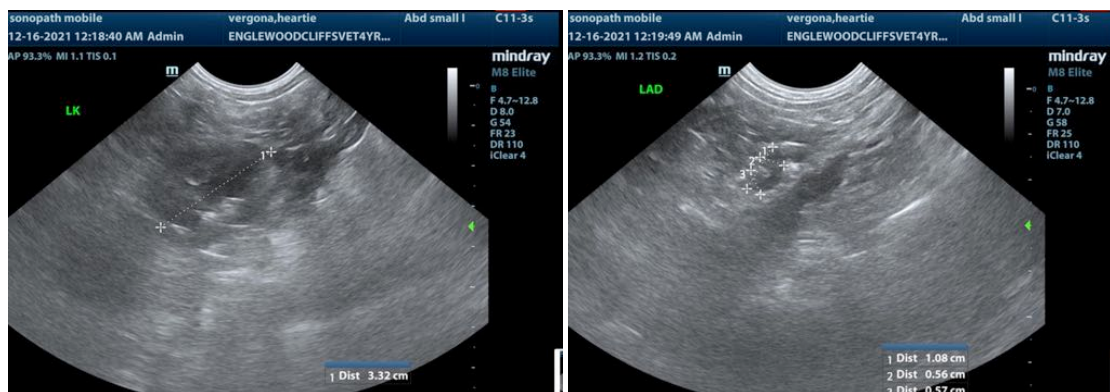
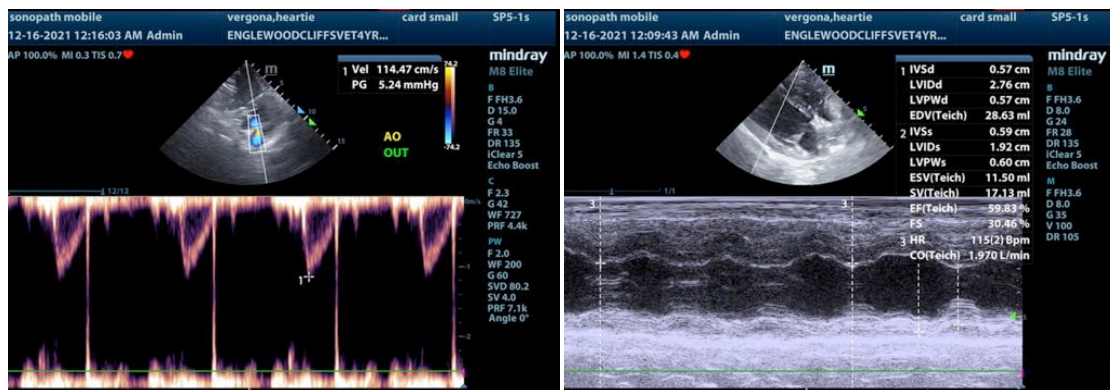
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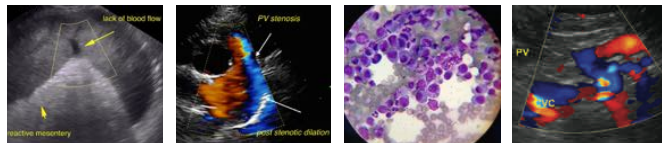
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The information and recommendations provided are based on the images presented by the referring



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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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info@SonoPath.com

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