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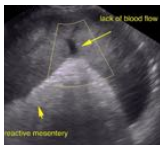

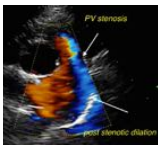

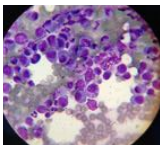
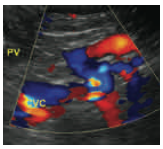

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Fiona Ryan

SPECIES

Canine

BREED

Dachshund

SEX

Male

AGE

11 years

WEIGHT

10 lbs

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Jessica Miller, RDMS

HOSPITAL NAME

Summit Dog and Cat Hospital

REFERRING VET

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PRESENTING CLINICAL SIGNS

History: Fever, intermittent cough, submandibular + cervical lymphadenopathy, weight loss, ADR/ decreased appetite. Hx of peri-hilar opacity on chest rads Treated with cerenia, supportive care, entyce Abnormal PE/Chem/CBC/UA Results: Microalbumin 11.8, ALKP 472, AMYL 2299, LIPA 2174, GLOB 5.2, LYMPHS 0.46, EOS 0.01, MCV 55.6, MCH 20.5, MPV 16.4 UA: 1+ blood, 3+ protein SG: 1.025

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 3.0 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 **left kidney** was swollen in this patient with mild, irregular contour and slight, enhanced, surrounding pericapsular fat. The **right kidney** revealed similar changes to the left and was swollen with minor pyelectasia. There was some loss of corticomedullary definition and enhanced pericapsular fat. The right kidney measured 5.45 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 left adrenal gland measured 1.55 x 0.51 cm at the caudal pole and 0.39 cm at the cranial pole. The right adrenal gland measures 1.7 x 0.87 cm at the cranial pole and 0.5 cm 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 was noted.

Liver

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. There is no evidence of passive 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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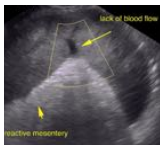

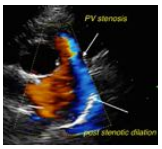

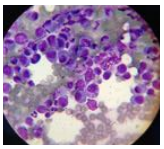
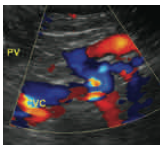

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Gastrointestinal

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 left limb of the **pancreas** was edematous and distinctly hypoechoic measuring 1.0 cm. This is consistent with remodeling from prior episodes of pancreatitis or possible low-grade edema.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

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 aortic valve was thickened in this patient. Aortic insufficiency was noted at 5.5 m/sec. Slight irregularity was noted to the **right auricle,** yet no masses were present. **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). **Pericardial** effusion was noted in this patient. Excessive heart based fat was noted. No tamponade effect was present.

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	<1.3	28-40	40-100	<0.6
PATIENT		2.0	1.14	1.4	40	72	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	109	1.47	0.8	10 lbs	2.4 max	2.6	

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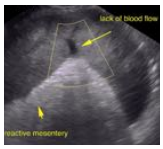
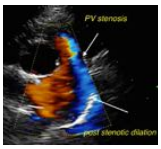
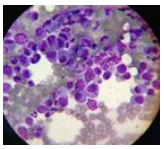
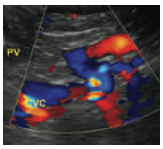

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ULTRASONOGRAPHIC FINDINGS

Tricuspid and aortic insufficiency, compensated at this time.

Idiopathic pericardial effusion.

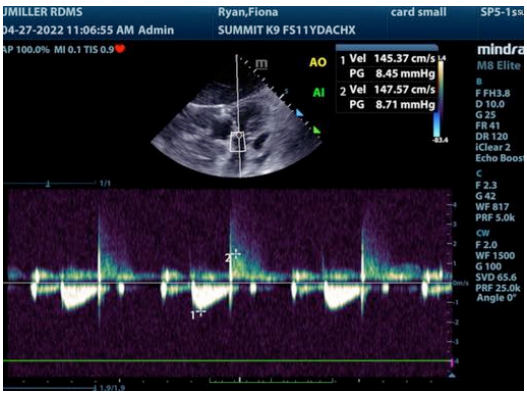
No tamponade effect.

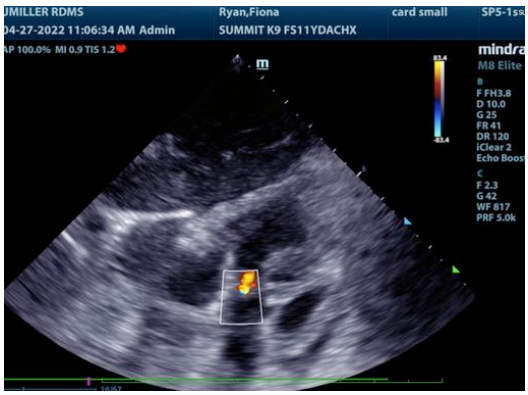
Swollen kidneys.

Minor, heterogenous left pancreatic limb.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

I am concerned for systemic inflammatory disease or emerging round cell neoplasia. Coagulation panel and FNA of either kidney is recommended. The pericardial effusion is minor and would be difficult to sample at this time without some risk as no tamponade effect is present. It is likely owing to manifestation of a systemic inflammatory event. Given the aortic valve thickening underlying endocarditis is a potential. A clinical trial of Enrofloxacin and Clindamycin and supportive care would be warranted as well as sampling of the lymphadenopathy +/- renal cortices after coagulation panel.





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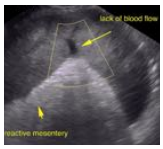
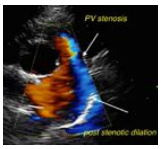
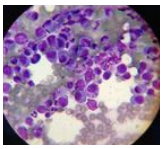
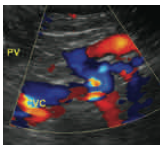

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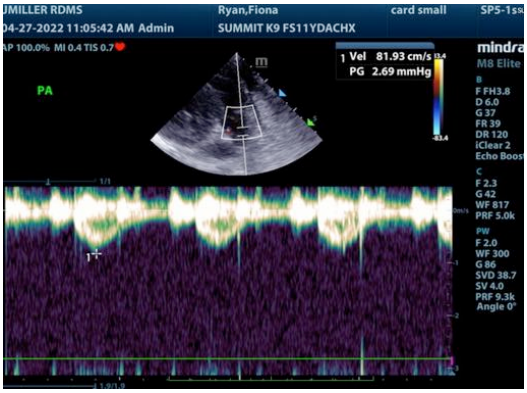

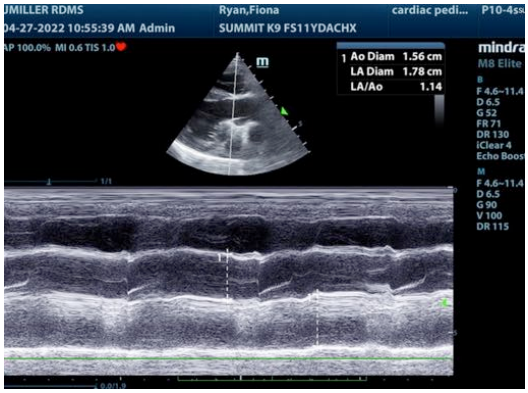

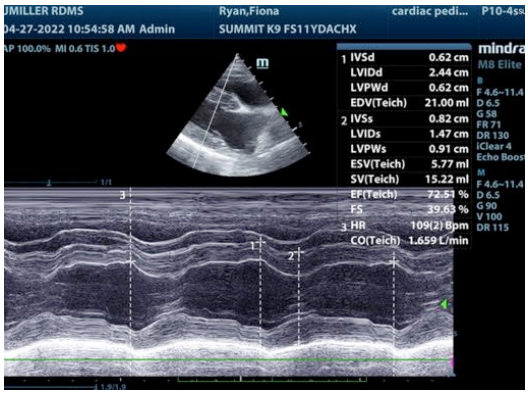

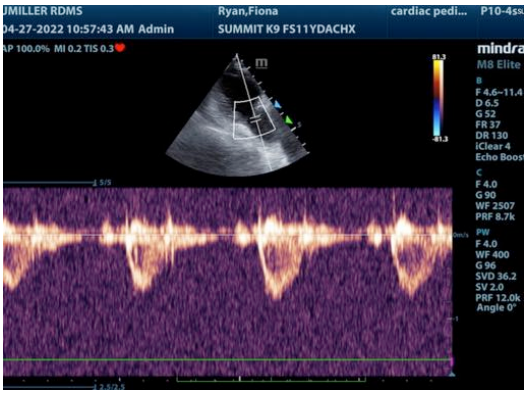

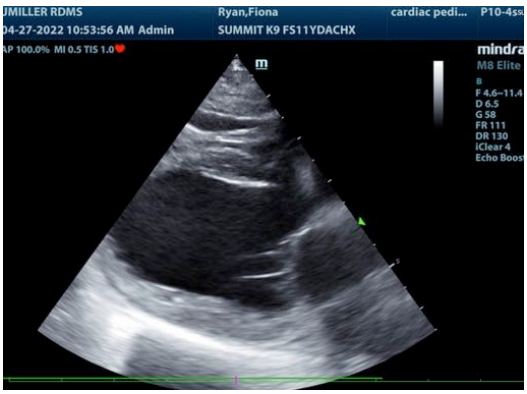

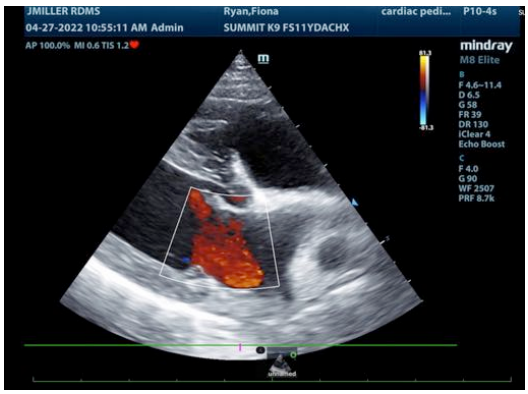

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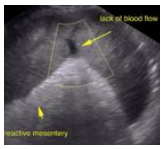
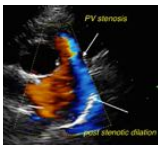
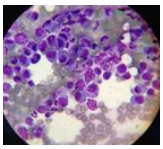
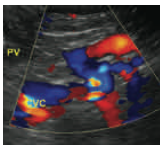

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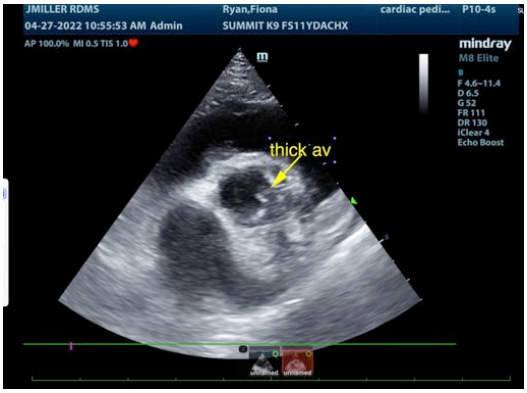

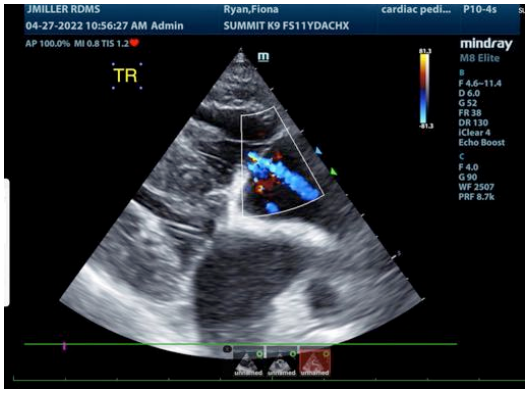

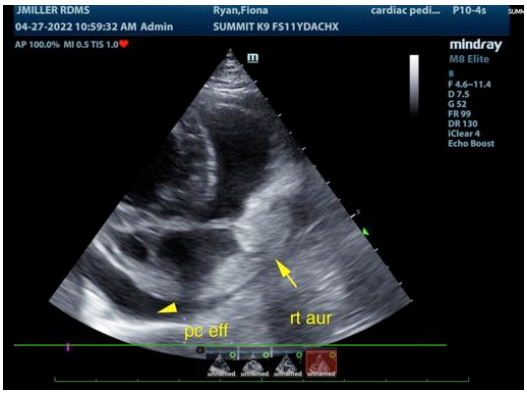



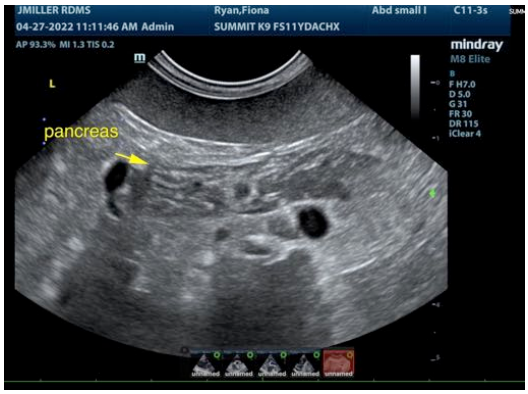

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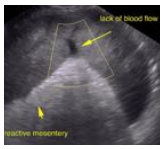

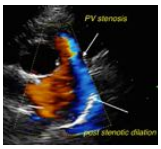

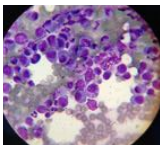
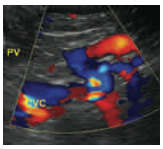

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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