



PATIENT PRESENTING CLINICAL SIGNS

Max Parisi Heart murmur II-III/VI. Hx of pancreatitis/sensitive stomach. GI issues waxing and waning. Tense abdomen. Current meds: RC GI low fat, Provable.
SPECIES Abnormal PE/Chem/CBC/UA Results: MCH 21.4, MCHC 32.3, Retics 23, WBC 18.7, LYmph 5.629, Mon 1.4, ALB 2.5, CHol 83

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

BREED

Terrier X

SEX

Neutered Male

AGE

14 Years 8 Months

WEIGHT

33 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	5.02		1.3	1.43			0.4
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		1.46	0.84		3.6		

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

Long Valley AH

REFERRING VET

Dr. Welch

INVOICE

33637

DATE

12/22/21

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 different LA measurement methods. Moderate filling of the left atrium noted. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable insufficiency. 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 or chamber overload. Minor **tricuspid** insufficiency noted. 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. No echographically detectable evidence of infiltrative disease was visible. The cranial **mediastinum** and **pericardial** regions were free of masses in the visible window.

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 residual prostate measured 1.27 cm.



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The caudal vena cava at the iliac trifurcation revealed echogenic luminal thrombosis. Thrombus measured approximately 2.0 cm x 0.5 cm.

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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. Anechoic cyst noted in the dorsal cortex of the right kidney measuring 1.78 cm. The right kidney measured 6.29 cm. Cortical mineralization noted at the caudal dorsal cortex of the left kidney. Anechoic cyst noted in the dorsal cortex of the left kidney.

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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 2.47 cm x 0.69 cm at the cranial pole and 0.69 cm at the caudal pole. The right adrenal gland measured 2.74 cm x 0.75 cm at the cranial pole and 0.59 cm at the caudal pole.

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Spleen

The **spleen** revealed a parenchymal mass measuring 5.0 cm without cavitation, moderately vascular.

Liver

The **liver** was enlarged with deviated gallbladder. Coarse hepatic architecture and irregular contour noted. Subtle micronodular changes noted.

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Gastrointestinal

Examination of the **gastrointestinal tract** revealed variable thickening with areas of loss of mural detail and regional inflammation. Mesenteric lymph nodes were enlarged, hypoechoic and irregular. Reactive mesentery noted throughout the GI tract. An overt intestinal mass with loss of mural detail was noted in the jejunum, measuring 3.0 cm.

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Pancreas

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Some parenchymal remodeling, however, with mild deviation from curvilinear normalcy was observed. Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxyphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

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ULTRASONOGRAPHIC FINDINGS

- Stage B1 valvular disease
- Multicentric round cell neoplasia pattern involving spleen, intestine, lymph nodes and liver with areas of free fluid owing to lymphatic obstruction
- Concurrent caval thrombus at the iliac trifurcation

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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B1: The heart is stable without clinical disease. No overt contraindication for anesthesia of brief to moderate duration. I suggest Torbutrol premed, Propofol induction, Isoflo maintenance or similar protocol if anesthesia is desired. Blood pressure recommended if not already performed and target white coat negative systolic pressure of < 160 mmHg. If higher than this ACE-inhibitor is suggested to



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reach this level. Recheck echocardiogram is recommended in 6 months, earlier if murmur grade increases or clinical signs initiate.

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Recommend full coagulation panel and FNA spleen, liver and lymph node.

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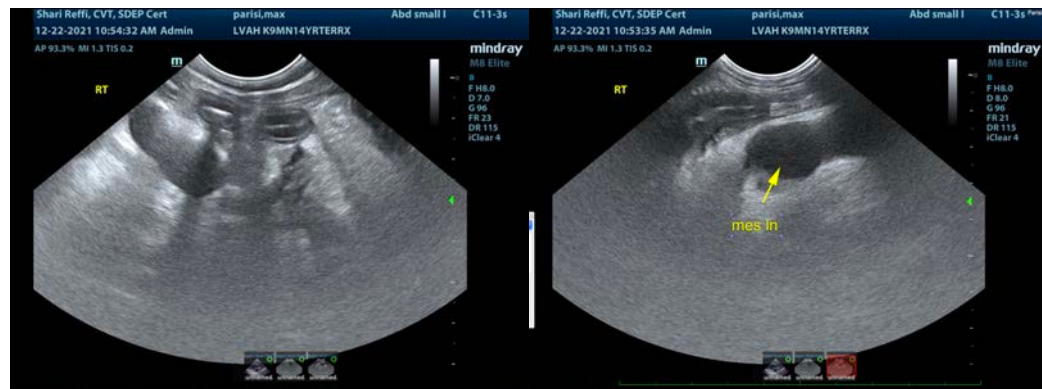
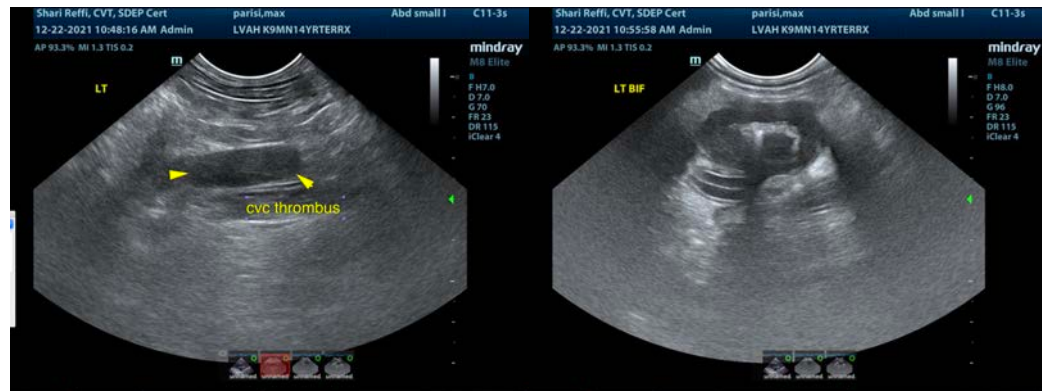
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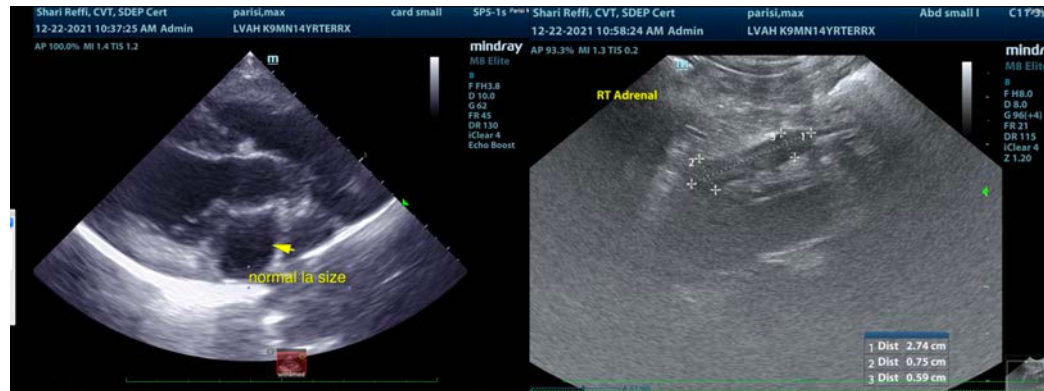
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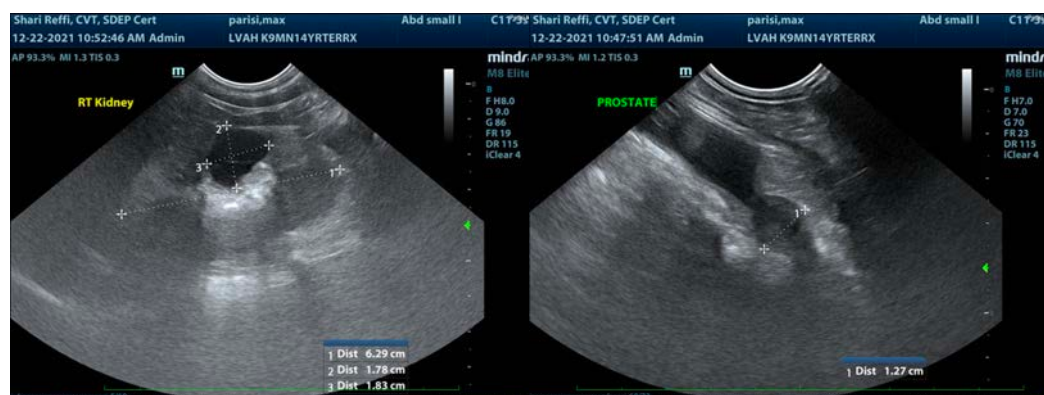
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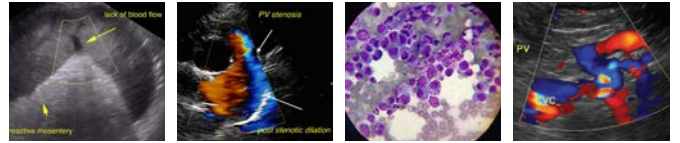
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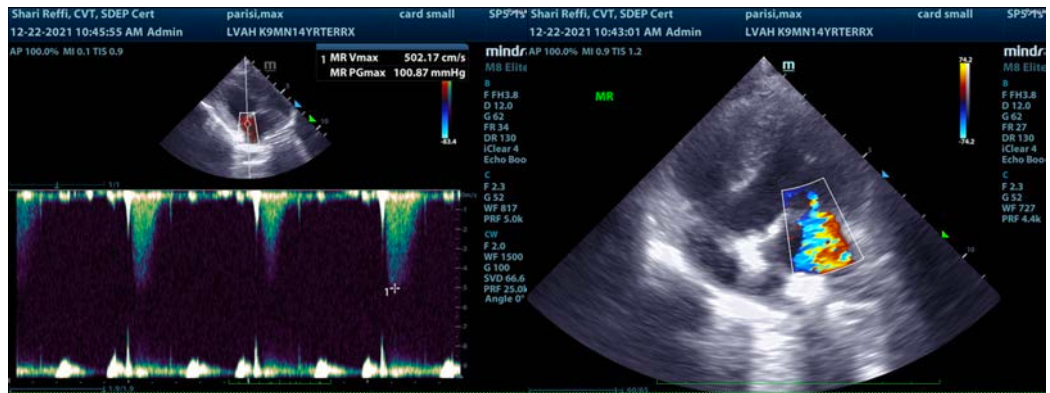
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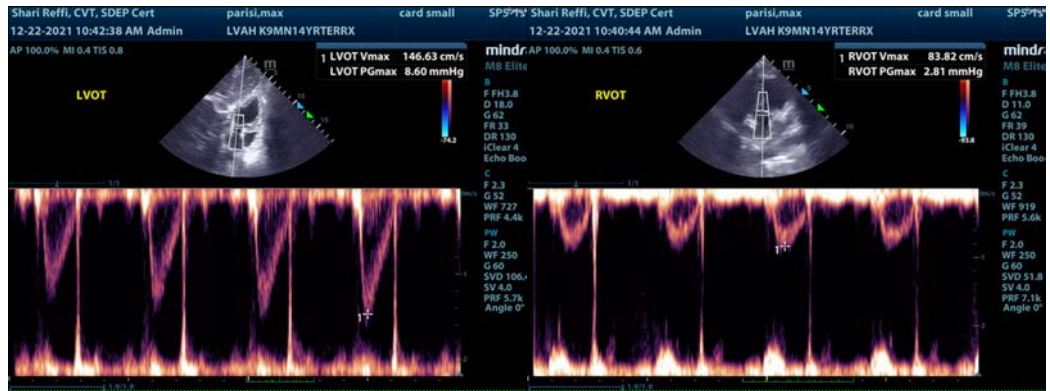
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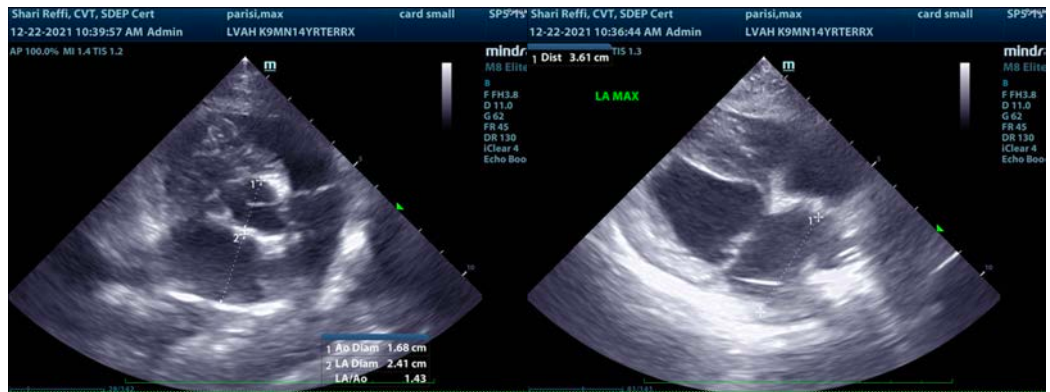
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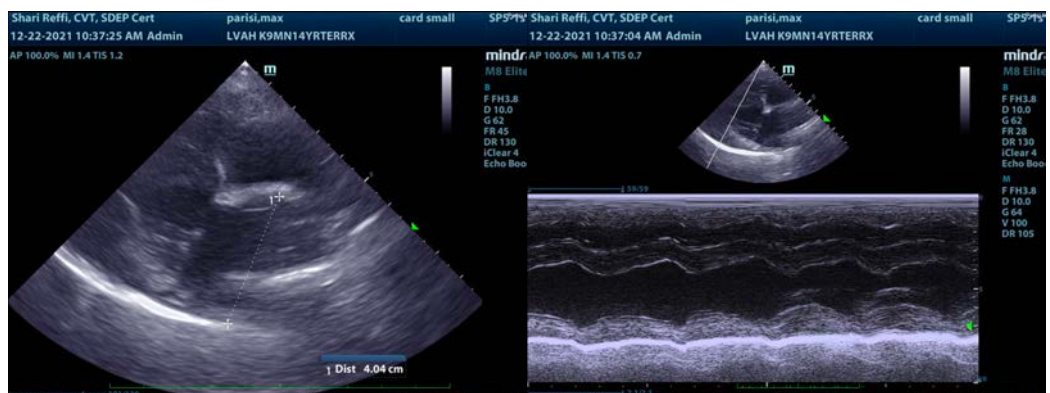
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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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