



PATIENT

Optimus Olson

SPECIES

Canine

BREED

German Shorthair
Pointer X

SEX

Neutered Male

AGE

8 Years 8 Months

WEIGHT

80.2

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Leon Anderson

HOSPITAL NAME

Elizabeth AH

REFERRING VET

Dr. Leon Anderson

INVOICE

25326

DATE

9/10/21

PRESENTING CLINICAL SIGNS

Left ventricular enlargement 11/2019, pancreatic enzyme elevation. Abnormal PE/Chem/CBC/UA Results: PE: Looked great. Murmur I/VI left base The blood work was done in July of 2021. UA: Specific Gravity 1.012 PH 7 Sediment looked clear. CBC looked normal Chem: Amylase 1,479 U/L Lipase >1,800 U/L Creatine Kinase 753U/L Spec CPL 1,687 ug/L Cardiopet Pro BNP 1,043 pmol/L Total T4 all was normal Heartworm negative Fecal was Negative

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

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			1.3	1.2	21	41	0.6
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		1.76	1.35		4.66	5.83	

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. Minor **mitral** insufficiency noted at 5.2 m/sec with centralized jet. The **left ventricle** was slightly dilated with minor subnormal contractility. 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 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.

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 **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 6.25 cm. The right kidney measured 6.63 cm.



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Adrenal Glands

The **left adrenal gland** was 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 2.16 cm x 0.6 cm.

The region of the **right adrenal gland** was unremarkable.

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.

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. 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.

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. 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.

ULTRASONOGRAPHIC FINDINGS

- Stage B1 valvular disease, no evidence of volume overload
- Mitral and tricuspid insufficiency
- Unremarkable abdomen

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Grain free diet history should be evaluated in this patient as well as thyroid assessment, yet not a clinical issue at this time. Given the Amylase/Lipase elevation, low-grade pancreatic or GI inflammation suspected. Diet change to hydrolyzed diet, broad-spectrum antiparasitic protocol, and reassessment of the pancreatic values in 10-14 days recommended. Amoxicillin/Metronidazole could also be considered from an empirical standpoint. However, structurally the abdomen appears largely benign.



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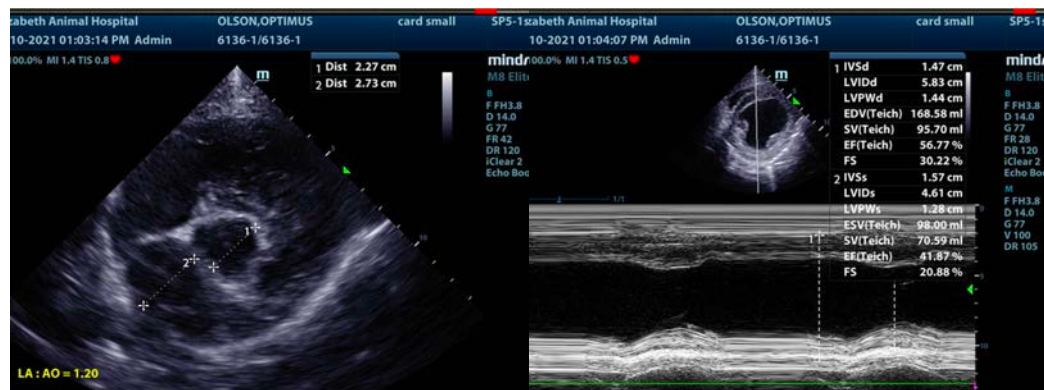
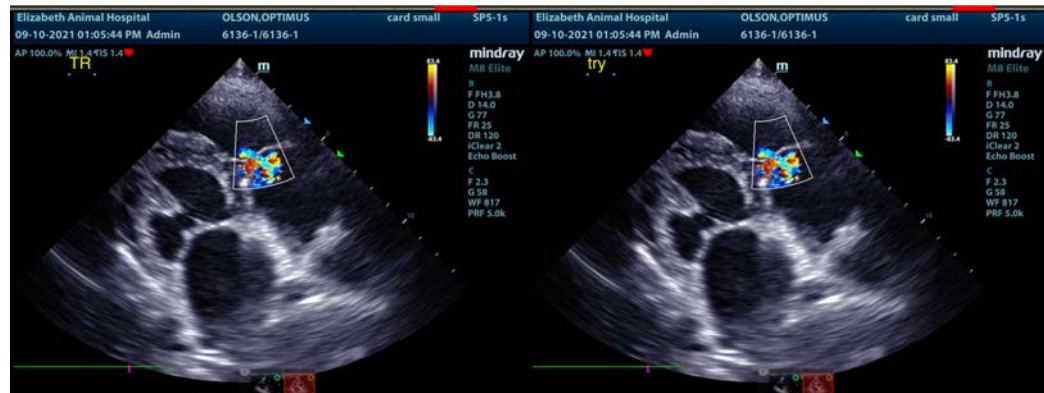
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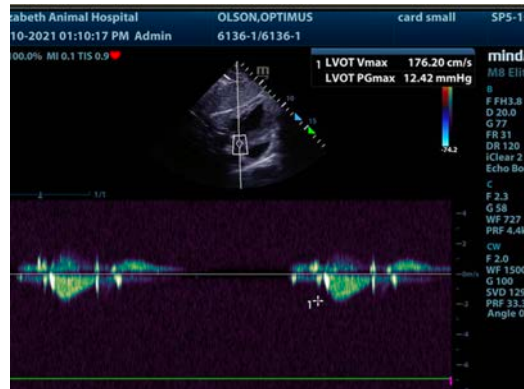
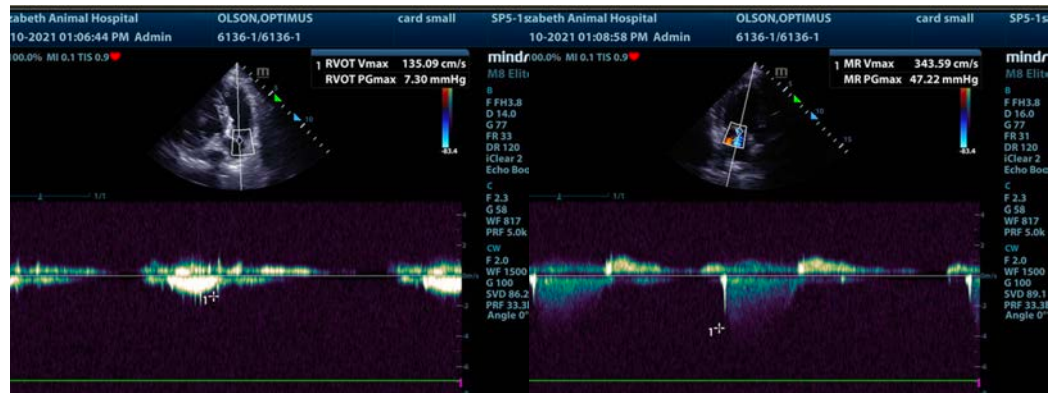
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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