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Clinical Sonography & Telecytology
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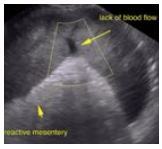
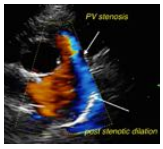
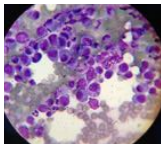
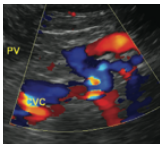





SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Theo Hero

SPECIES
Canine

BREED
Mastiff Mix

SEX
Neutered male

AGE
7 years

WEIGHT
105 lbs

INTERPRETED BY
Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY
Jessica Miller, RDMS

HOSPITAL NAME
Animal Care Center of Flanders

REFERRING VET
Dr. Casulli

INVOICE
46760

DATE
8/24/23

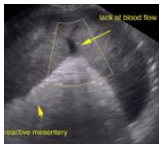
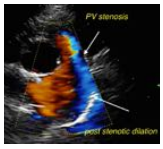
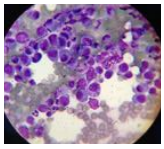
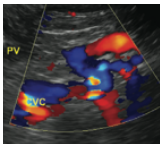
PRESENTING CLINICAL SIGNS

History: Quick onset wt loss (started with bloody diarrhea + now decreased appetite + vomiting) Possible intestinal mass seen on rads. Also severe trachea elevation w/ NL size heart
Abnormal PE/Chem/CBC/UA Results: Borderline regen anemia, leukocytosis w/ neutrophilia + monocytosis, mild ^ Alk Phos

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. Trivial **mitral** valve insufficiency was noted with a minor centralized jet. The **left ventricle** presented normal volume, yet hypocontractility. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. The heart was hypocontractile. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. **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). An 8.0 cm, mixed echogenic mass was noted and superimposed the pulmonary artery. The heart base mass appeared to enter into the **right atrium**. The position of the mass would suggest aortic body tumor. However, other forms of neoplasia are possible. The mass encompasses the pulmonary artery and aorta. It does not appear resectable.

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base;)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
PATIENT			1.1	1.32	19	39	0.42
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	BELOW	BELOW	BELOW	BELOW
PATIENT	95	1.6	0.9	105 lbs	4.7 max	4.39	

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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 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** 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 right kidney measured 7.07 cm. The left kidney measured 7.09 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 2.9 x 0.62 cm at the caudal pole and 0.67 cm at the cranial pole. The right adrenal gland measured 2.52 x 1.12 cm at the cranial pole and 0.64 cm at the caudal pole.

Spleen

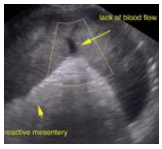
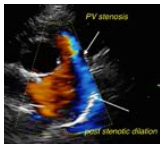
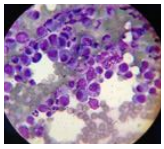
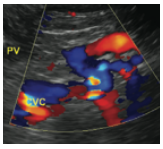
The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or 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. 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

There was some residual chyme and gas was noted in the **stomach**, yet not pathological. This is consistent with end post prandial presentation. Transit of chyme into the small intestine was normal. Curvilinear patterns were maintained throughout the GI tract. No evidence of pathology. Small and

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large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. The mesenteric lymph nodes were reactive. .

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.

ULTRASONOGRAPHIC FINDINGS

Structurally unremarkable abdomen.

Heart base mass. Chemodectoma versus sarcoma is possible.

Trivial mitral insufficiency.

Mild hypocontractility.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Minimal views were available in the acoustic window provided by the heart in this patient. The mass appears to extend beyond acoustic visibility. Hypocontractility of the heart is likely secondary to the mass. Blood pressure measurements are warranted. CT and oncology consultation is recommended.

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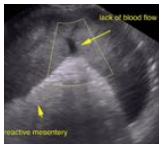
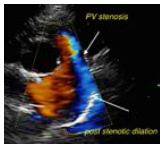
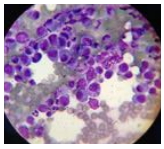
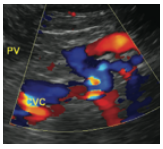

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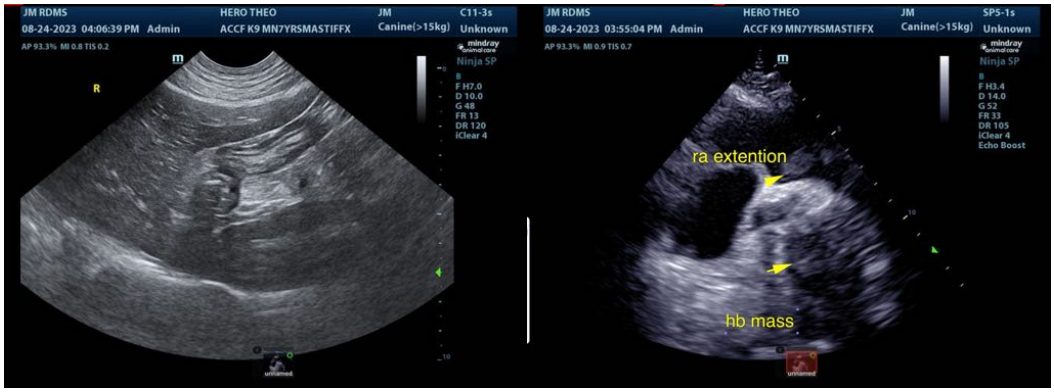

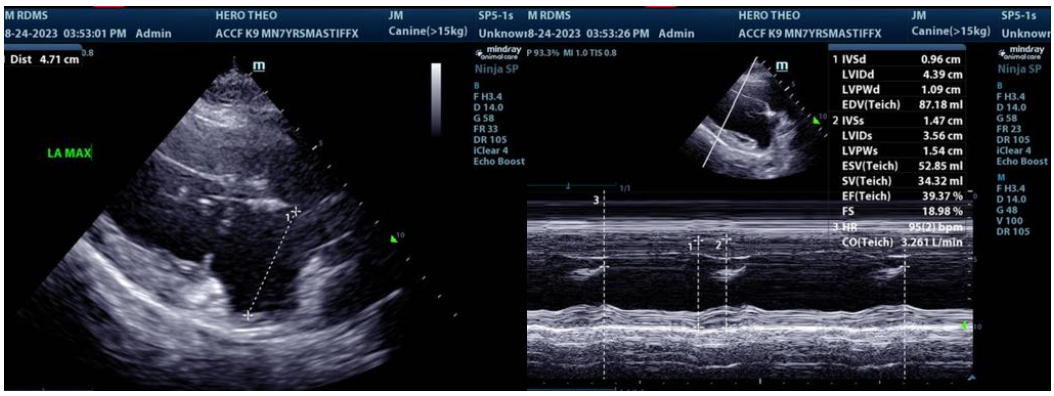

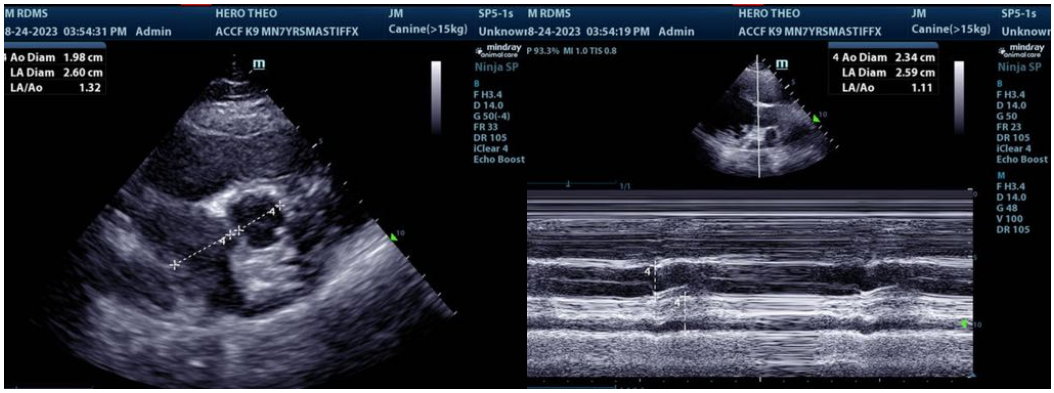

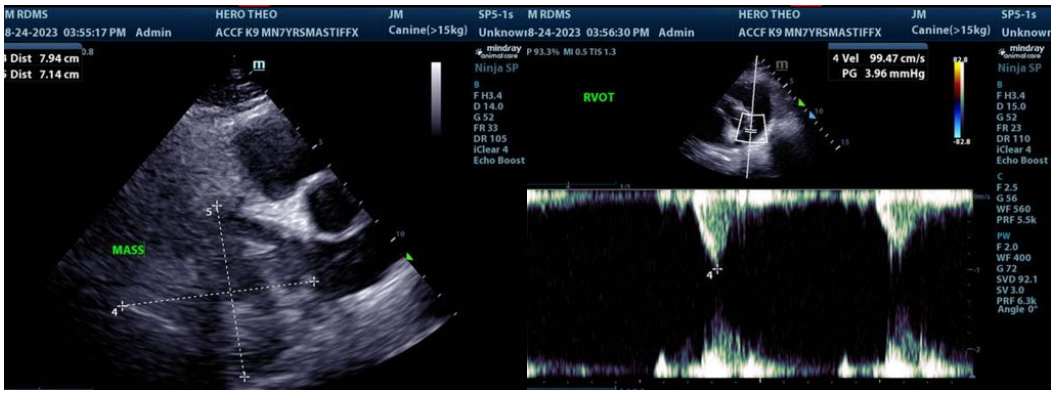

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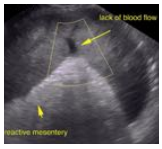
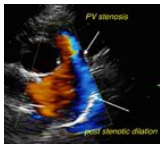
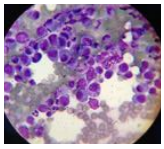
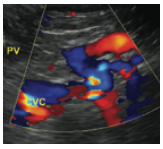

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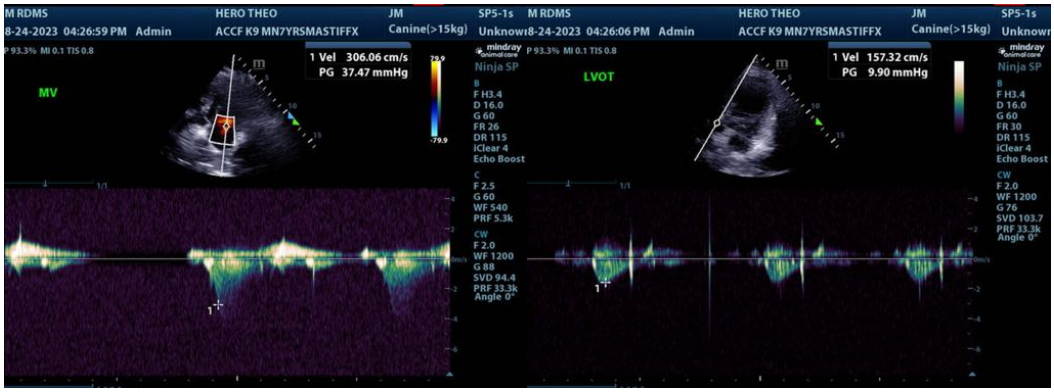

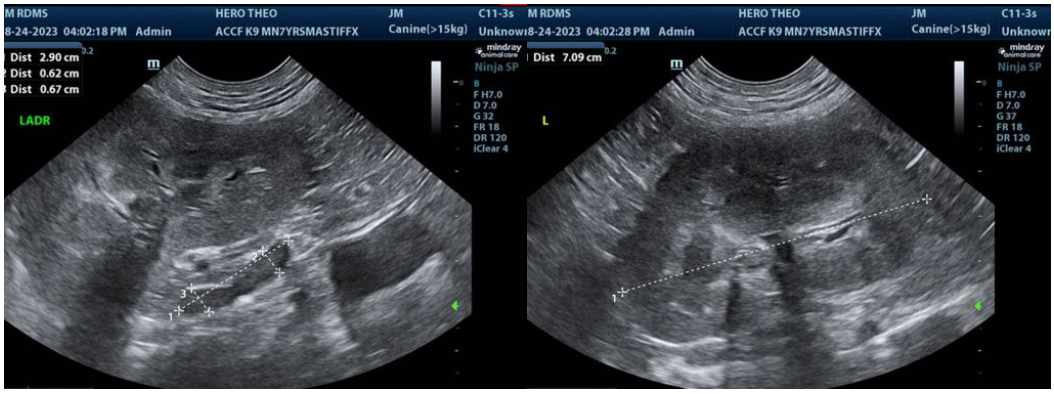

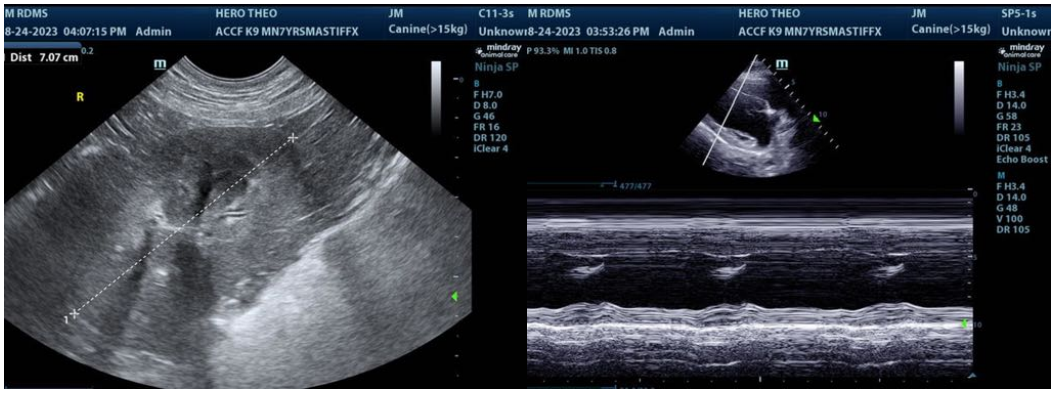

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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