



PATIENT PRESENTING CLINICAL SIGNS

PATIENT Petey Higham
SPECIES Canine
BREED Pitbull Mix
SEX Neutered male
AGE 10 years
WEIGHT 63.2 lbs

History: Seen on ER for tachycardia, pale mucous membranes, Noted fluid in pericardium pericardiocentesis extracted 50ml of blood
 Abnormal PE/Chem/CBC/UA Results: Rare intermediate- sized to large lymphocytes seen.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. Mild **mitral** valve insufficiency was noted in this patient and compensated at this time. 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 auricle** revealed minor heterogenous changes without an overt mass. This may be artifactual owing to the pericardial effusion. However, emerging neoplasia is a potential and should be monitored with follow-up. . Minor **tricuspid** insufficiency was present. 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). A minor amount of pericardial effusion was noted without tamponade effect.

INTERPRETED BY

Eric Lindquist, DMV
 DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Waffle

HOSPITAL NAME

Torch Lake VC

REFERRING VET

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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	<1.6	28-40	40-100	<0.6
PATIENT			1.15		45		NM
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		2.0	1.2	63.2 lbs		2.6	

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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



PATIENT

was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

Petey Higham

SPECIES

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 left kidney measured 7.13 cm. The right kidney measured 5.45 cm.

Canine

BREED

Pitbull Mix

SEX

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 0.5 cm.

Neutered male

AGE

10 years

WEIGHT

63.2 lbs

Adrenal Glands

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.

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Liver

The **liver** images from right and left intercostal as well as subcostal views revealed subjectively normal liver size, contour, and structure. Some age-related parenchymal remodeling was noted but likely not clinically significant at this time. Vascular and biliary tracts were of normal volume and no evidence of congestion was noted. A mildly, hyperechoic, irregular, nodular lesion was noted in the liver. This measured 2.5 cm and is hyperechoic to the normal parenchyma. This nodular lesion is likely unrelated to the pericardial effusion. However, ultrasound-guided FNA would be indicated. The gallbladder presented some dependent debris with essentially normal contour. The cystic and common bile ducts were normal.

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Gastrointestinal

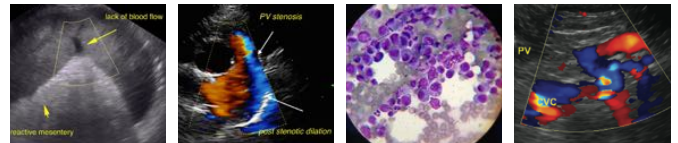
The **stomach** revealed some shadowing material that measured up to 1.5 cm. The intestine were free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

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Pancreas

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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.

SPECIES

Canine

ULTRASONOGRAPHIC FINDINGS

BREED

Pitbull Mix

Shadowing gastric material, non-obstructive.

Liver nodule. Hyperplasia versus carcinoma.

Age related abdominal changes.

SEX

Neutered male

Slight pericardial effusion.

Minor mitral and tricuspid insufficiency.

AGE

10 years

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

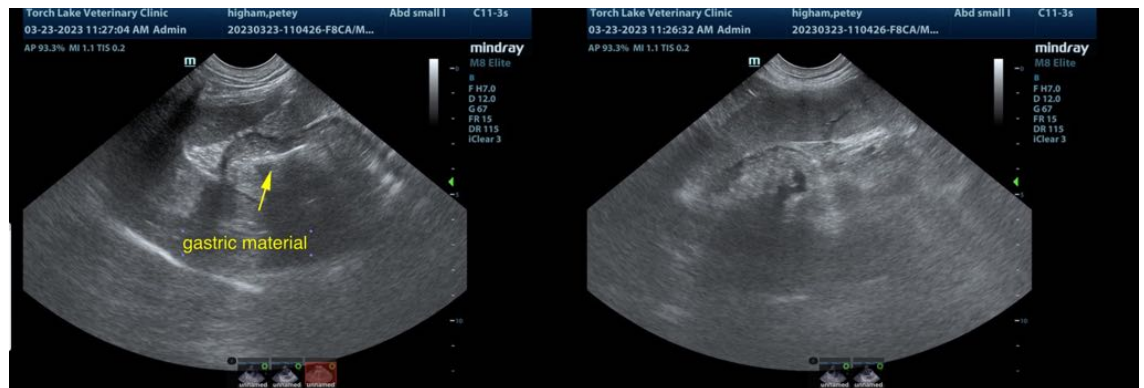
Pericarditis and idiopathic pericardial effusion or emerging neoplasia is all possible. Chest radiographs +/- chest CT would be ideal. Recheck echocardiogram in 5-10 days for further definition to assess if emerging neoplasia is an issue. FNA of the liver nodule is indicated.

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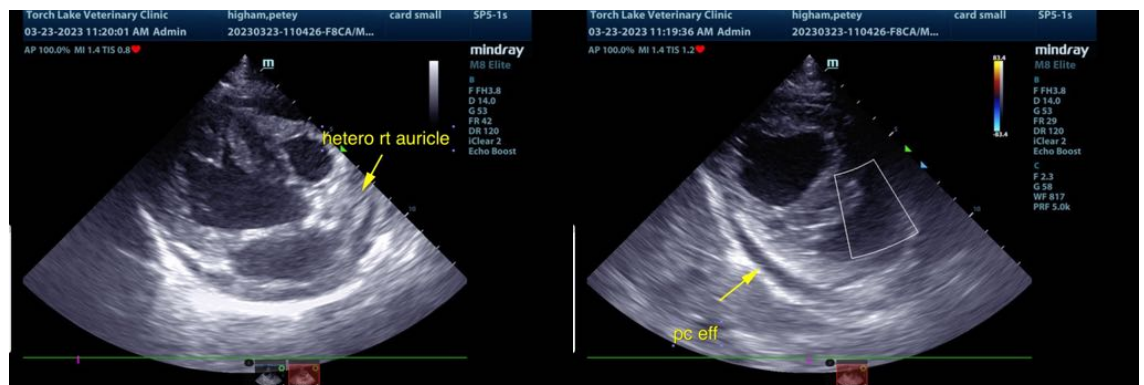


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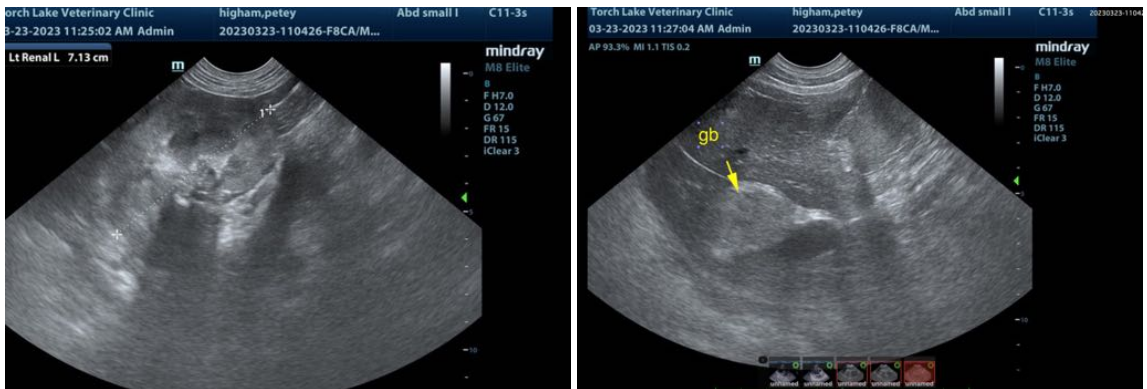
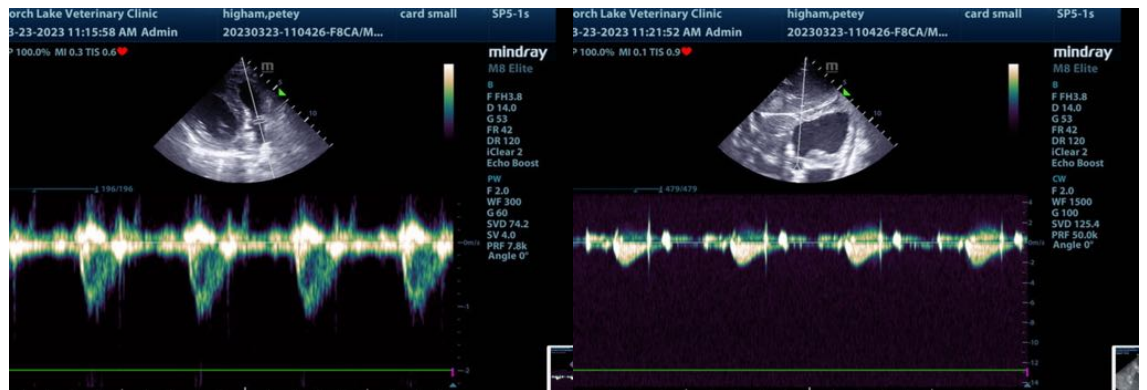
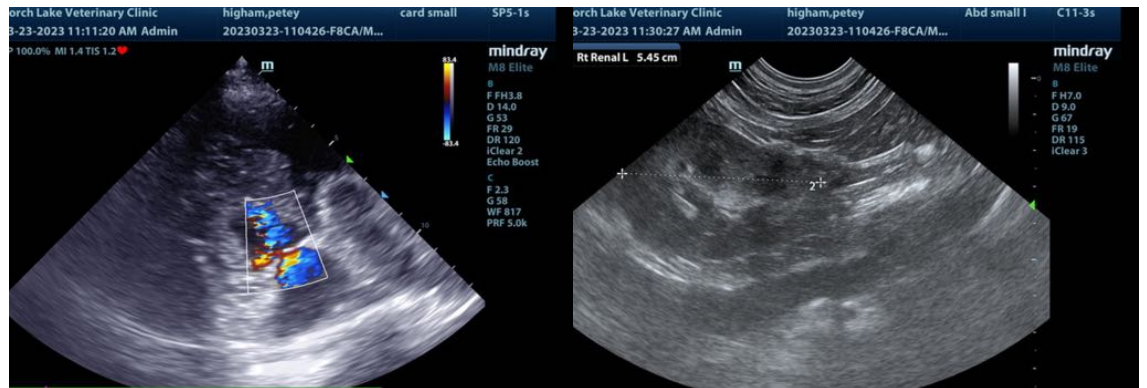
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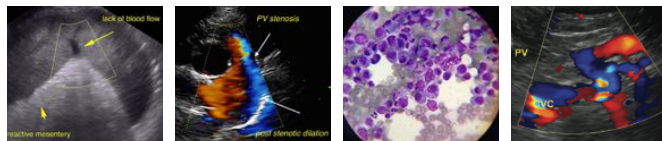
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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Canine

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.

BREED

Pitbull Mix

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info@SonoPath.com

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