



**PATIENT**

Casper Hornung

**SPECIES**

Feline

**BREED**

Domestic Shorthair

**SEX**

Neutered Male

**AGE**

15 Years

**WEIGHT**

17.1 lbs

**INTERPRETED BY**

Eric Lindquist, DMV,  
DABVP (CFM), Cert.  
IVUSS

**IMAGING PERFORMED BY**

Meghan Morse, LVT,  
CVT

**HOSPITAL NAME**

Black River Veterinary  
Hospital

**REFERRING VET**

Dr. Tack

**INVOICE**

72453

**DATE**

12/9/25

**PRESENTING CLINICAL SIGNS**

Concern for cardiomegaly/ mediastinal mass. Severe tachycardia- HR 233, thyroid normal. Concern for kidney stone. Current meds: Amlodipine 1.25mg SID, Gabapentin 25mg SID, Renal Care K+ SID

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN**

FELINE CARDIAC PARAMETERS	BODY WEIGHT (lbs)	HR (BPM)	IVSd (cm)	LVIDd (cm)	LVWd (cm)	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT	17.1	220	0.62	1.44	0.64	49	84
FELINE CARDIAC PARAMETERS	LA/AO (M-mode)	LA/AO HEART BASE (Sisson)	LAD LA MAX 4 Chamber		LVOT VEL. (m/s)	RVOT VEL. (m/s)	IVRT (m)
NORMAL PARAMETER	<1.5	1.6	0.7-1.7		<1.6	<1.3	40-60
PATIENT	1.2	1.3	1.5		NM	0.9	NM
Adapted from June Boon, Veterinary Echocardiography, 1998 Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705							

**Cardiac Presentation**

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate LA measurements. The cranial and caudal **mitral** valve leaflets presented normal linear structure and kinetics. The **left ventricle** presented essentially normal to slightly excessive septal and free wall thicknesses and myocardial remodeling, yet not clinically significant. Changes were minor and largely normal for this patient. **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 and angles 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. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinetics. 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 or extra cardiac pathology in the visible planes. The aorta presented excessive arch/pronounced angle along with cranial mediastinal fat, likely playing a role in the appearance of cardiomegaly. However, chamber sizes were normal in this patient.

**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 pelvic urethra was imaged 2.0 cm beyond the cystourethral junction.



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The **kidneys** presented interstitial nephrosis pattern. Right kidney measured 4.1 cm with pyelectasia with echogenic debris. The pyelectasia measured 1.7 cm. Mineralization noted in both kidneys as well. Left kidney measured 4.7 cm. Blood flow to the kidneys was subnormal on power doppler assessment.

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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. Right measured 0.37 cm. Left measured 0.30 cm.

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**Spleen**

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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.

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**Liver**

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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.

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**Gastrointestinal**

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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**

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The **pancreas** presented mixed hypoechoic parenchymal changes in the left limb with enhanced surrounding hyperechoic fat. The right limb of the pancreas was also enlarged and irregular. Suspect history of pancreatitis if not active pancreatitis.

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**ULTRASONOGRAPHIC FINDINGS**

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- Normal geriatric heart with minor myocardial remodeling and a large amount of thoracic fat.
- Prominent aortic arch.
- Moderate chronic degenerative renal changes with pyelectasia (kidneys subjectively 50-60% compromised).
- Potential chronic active pancreatitis.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Effector organ issues owing to hyperthyroidism/hypertension/systemic disease likely playing a role in this patient. The cranial mediastinal density is fat related and not clinically significant.



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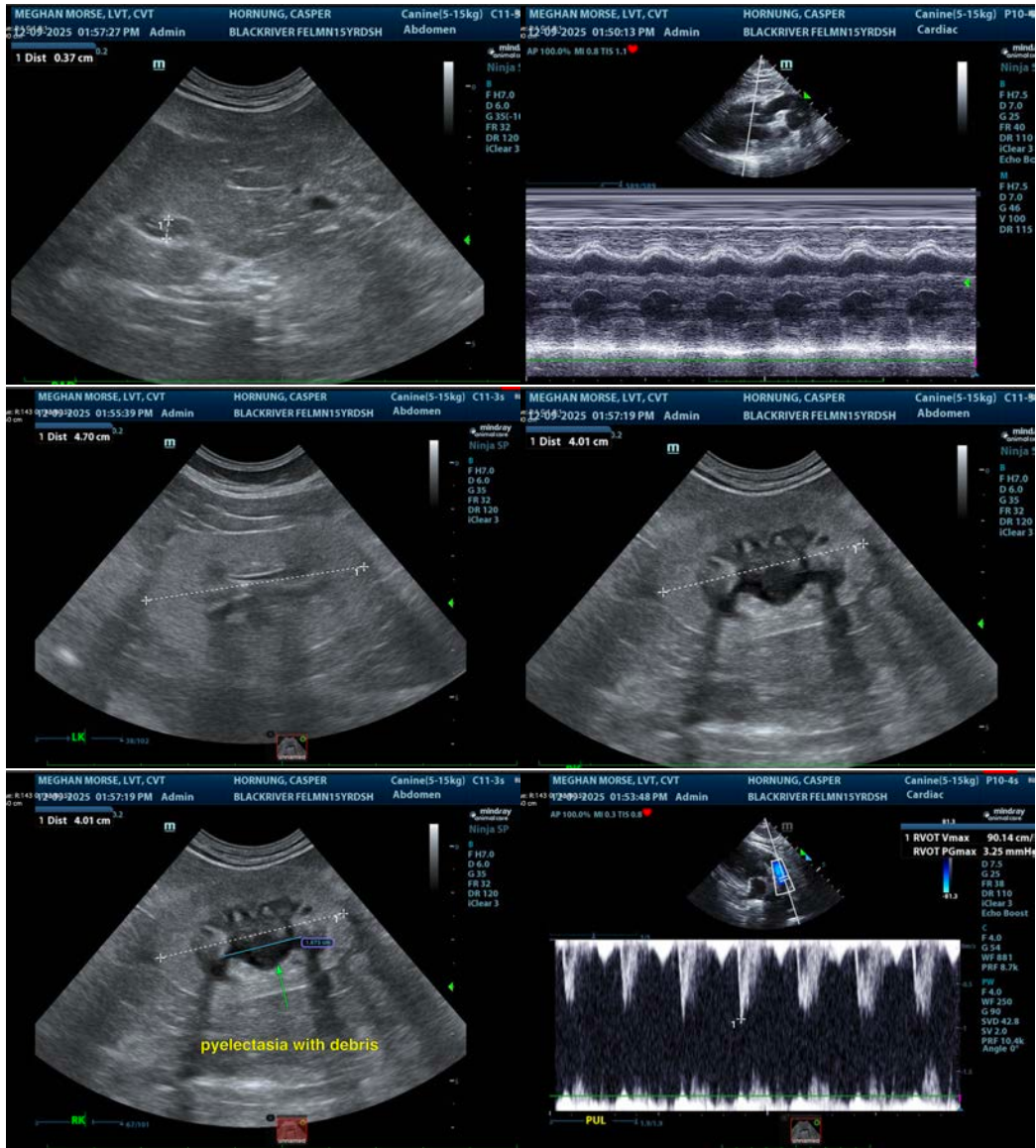
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Full urinary workup warranted if not already performed. Both prerenal and renal issues likely playing a role. I am most concerned about the kidneys and pancreas in this patient.





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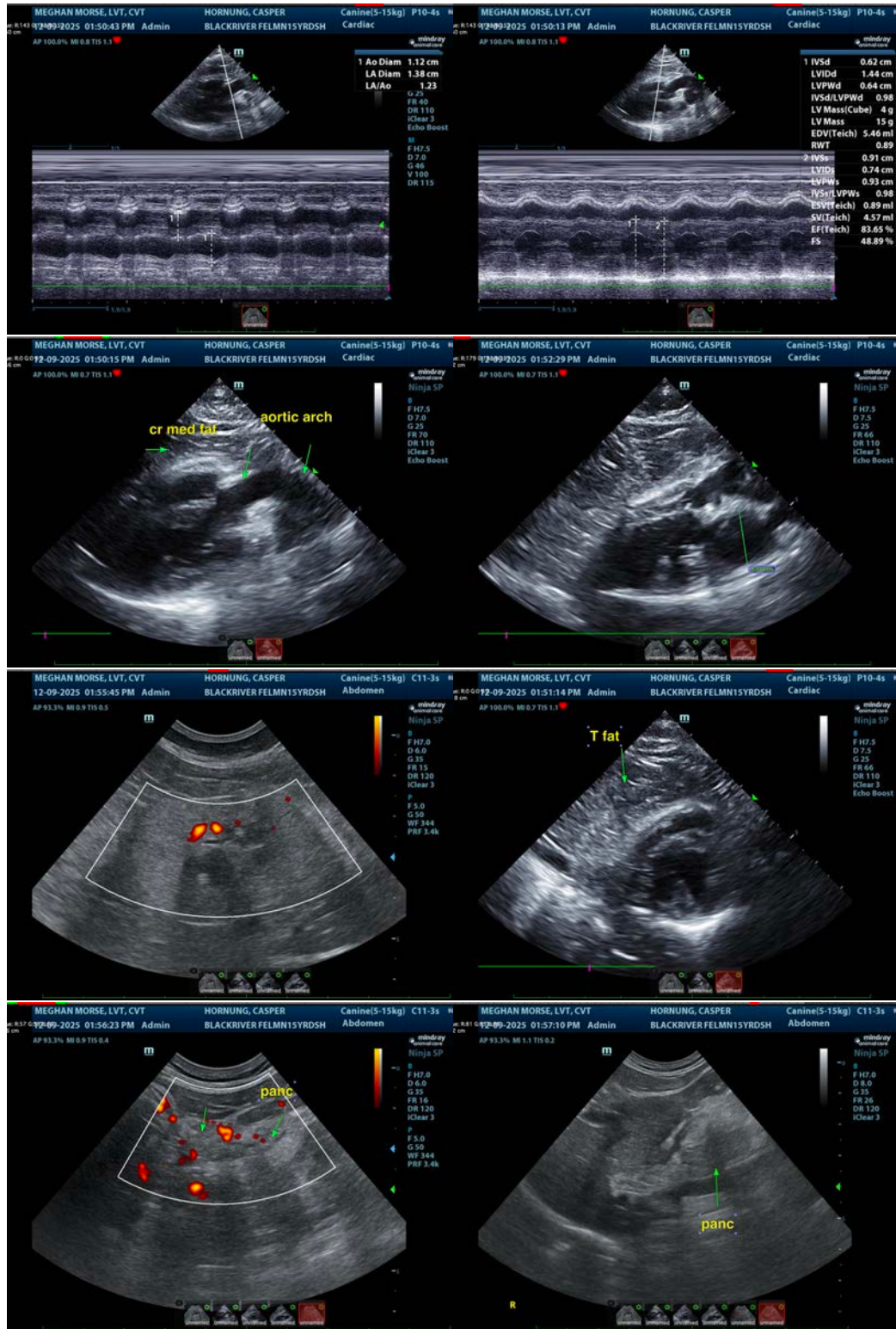
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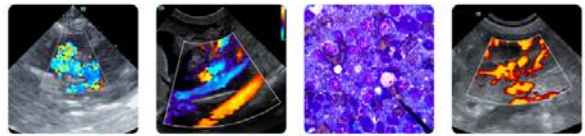
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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(CFM), Cert. IVUSS,  
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