



PATIENT

Froot Loop Spencer

SPECIES

Canine

BREED

Rat Terrier

SEX

Neutered Male

AGE

14 Years

WEIGHT

8.8 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Danielle Kitz

HOSPITAL NAME

Woodlands Animal
Hospital

REFERRING VET

Dr. Danielle Kitz

INVOICE

71526

DATE

11/3/25

PRESENTING CLINICAL SIGNS

Patient has history of Stage B2 mitral valve disease (progression to stage B2 detected Dec 2021. He has been on vetmedin long-term without any issues or progression as noted by follow-up echocardiograms annually. He was initially placed on enalapril for mild hypertension but developed some weakness that responded to cessation of that medication. In the past several weeks, the owner noted two separate episodes of seizure activity vs. syncope that occurred when he was on his routine walks. The episodes lasted a few seconds, with no loss of consciousness noted. Once the episode stopped, he was noted to be slightly off for a few minutes then back to normal without further issue. He currently eats the royal canin cardiac diet.

Abnormal PE/Chem/CBC/UA Results: Grade IV left parasternal murmur Blood pressure - 114 No other significant exam findings 6 lead diagnostic ECG shows occasional VPCs (attached below as supportive document only) Radiographs of thorax NSF Labwork shows persistently elevated ALT - started noticing elevation back in March 2024 - has gone down and back up to 333 now Slight elevation in BUN at 35, and borderline elevation in creatinine at 1.5 with normal SDMA PSL elevated, platelets elevated

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (M-Mode)	LA/AO (Heart Base; Swe)	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	5.0	--	NM	1.6	47	80	0.1
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (lbs)	LAD LA MAX 4 Chamber	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	--	1.49	0.81	8.8	2.9	2.42	--

E-wave velocity = 0.8

Cardiac Presentation

The left atrium measured at the upper limits of normal with slight swelling of the atrial septum. Prolapse of the anterior mitral valve leaflet noted. Contractility and left ventricular volumes were adequate and compensatory. Aortic outflow and pulmonary outflow were unremarkable. Minor tricuspid insufficiency noted.

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



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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 3.36 cm. The right kidney measured 3.54 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 0.46 cm at the cranial pole and 0.46 cm at the caudal pole. The right adrenal gland measured 0.46 cm.

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 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. The gallbladder presented some dependent debris with essentially normal contour. The cystic and common bile ducts were normal. No overt evidence of active inflammatory, infiltrative or regenerative pathology was noted but should be paired with current or past LE elevations regarding any clinical significance to this presentation. The hepatic lymph nodes were unremarkable.

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 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. 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.



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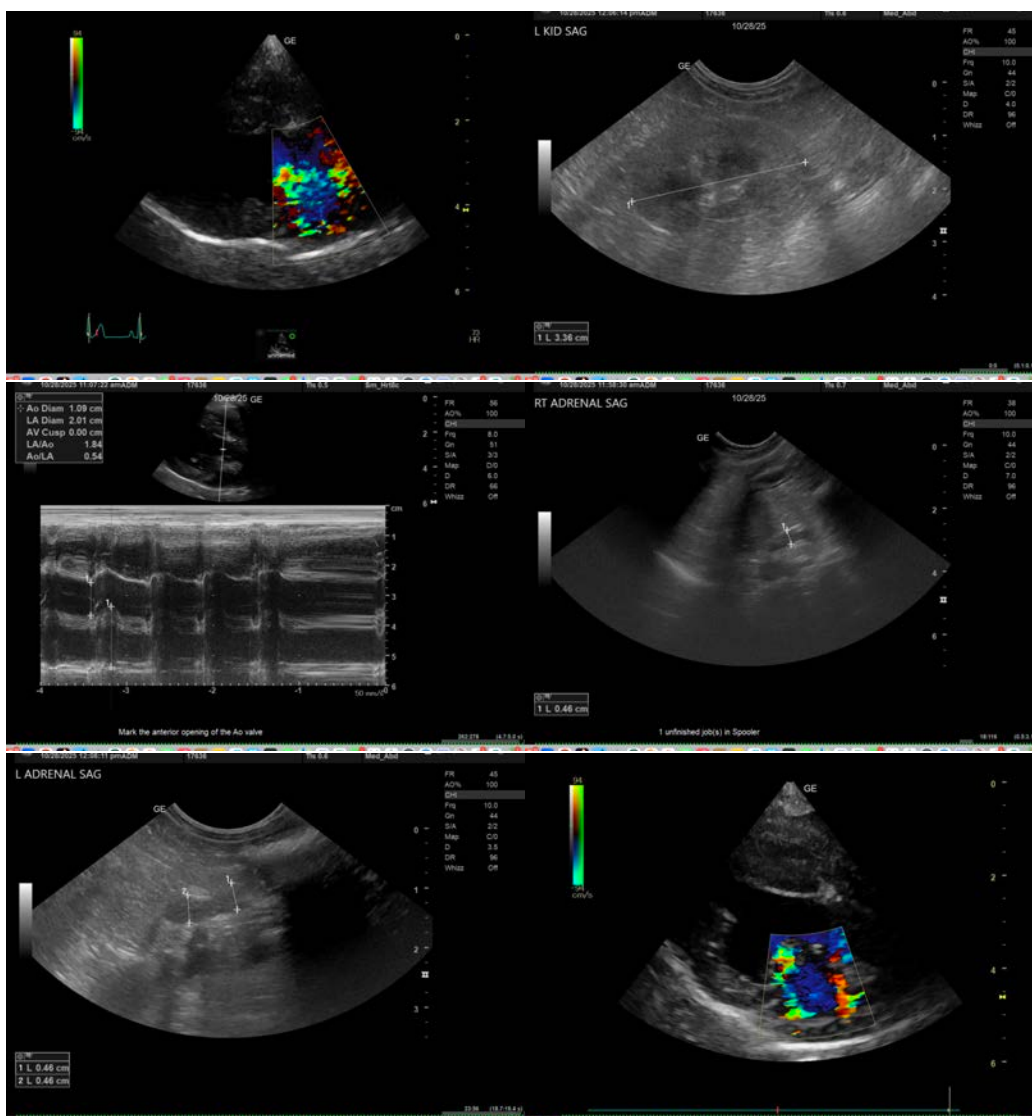
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ULTRASONOGRAPHIC FINDINGS

- Stable Stage B1 valvular disease on current protocol.
- Age related abdominal changes, non-specific.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

I cannot rule out potential syncope related to this patient's cardiac presentation. However, it would likely be a paroxysmal arrhythmia issue. Holter monitor would likely be in this patient's best interest. However, full CNS examination warranted. If any abnormalities are noted in the CNS, skull CT would be indicated. Holter monitor may be obtained from SonoPath's office. Blood pressure measurements also indicated. No adjustment of current cardiac medication protocol based on the echocardiogram performed. Largely expected abdominal changes for this age and breed.





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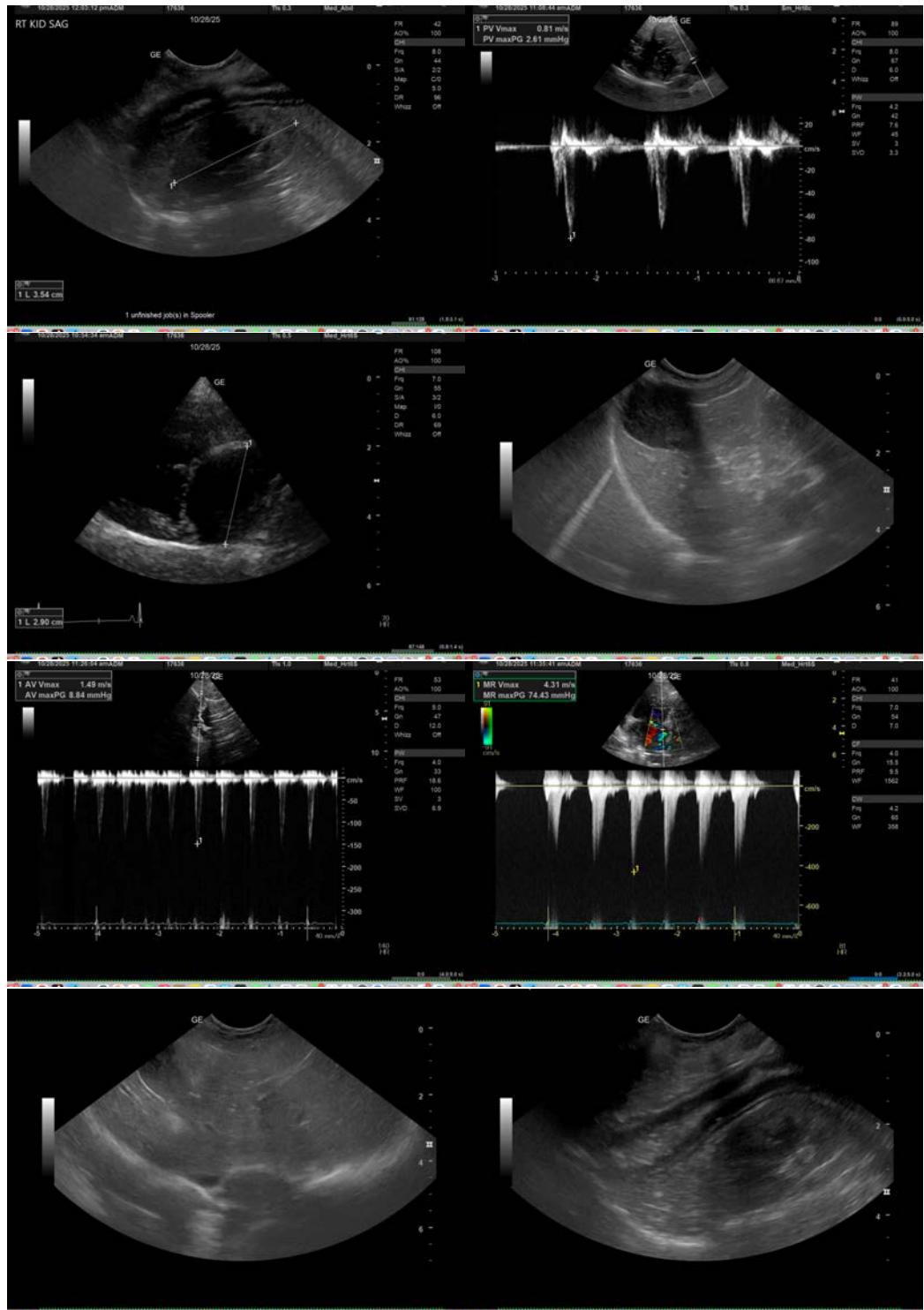
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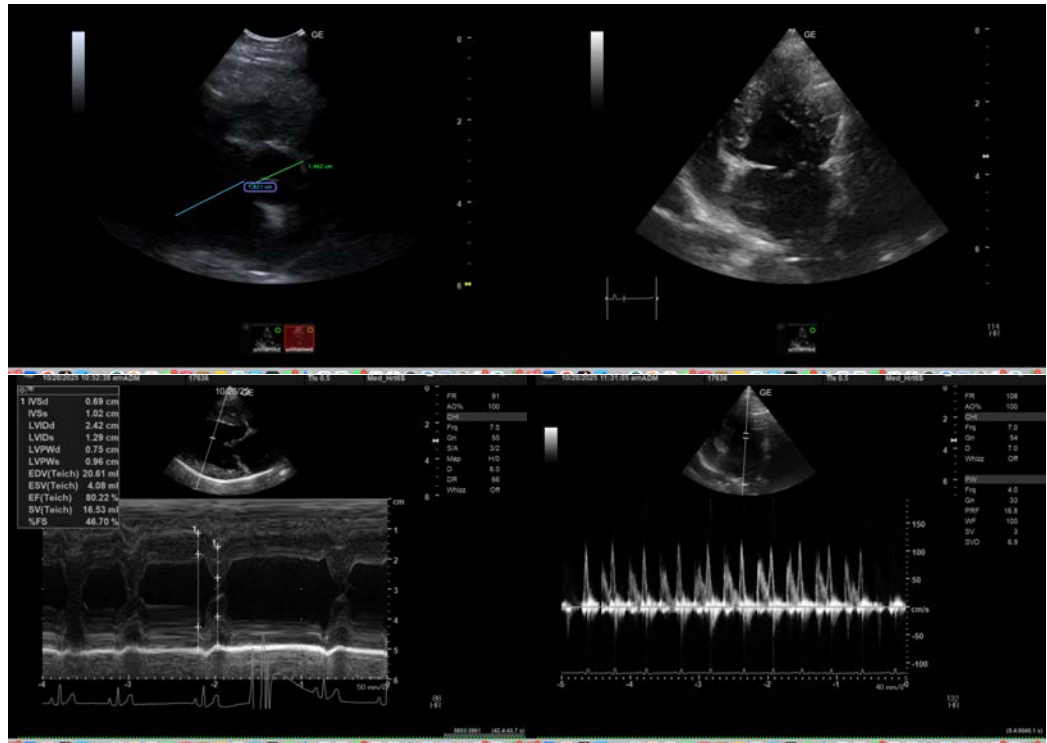
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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