



PATIENT PRESENTING CLINICAL SIGNS

Frezkno Nissen

History: acute onset lethargy/anorexia. Hemothorax diagnosed. Clotting times/CBC WNL. Abnormal PE/Chem/CBC/UA Results: 2/6 systolic murmur. mm light pink; CRT < 2 seconds. Slightly increased RR/RE.

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

BREED

Labrador Retriever

SEX

Neutered Male

AGE

10 Years

WEIGHT

67 Pounds

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	<1.3	28-40	40-100	<0.6
PATIENT	--	--	NM	1.25	31.2	60.5	0.15
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	NM	1.5	0.75	--	3.3	3.1	--

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

IMAGING PERFORMED BY

Jessica Bailes

HOSPITAL NAME

All Creatures Great and
Small VC, Corvallis, OR

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Dr. Chatal Litalien

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Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. The cranial and caudal **mitral** valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. No overt MR noted. The **left ventricle** presented mild subjective increased thicknesses with maintained linear contour and was not dilated nor restricted. This may potentially indicate decreased myocardial volume owing to hemothorax. 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 atrium** and auricle revealed overly normal size. A nonhomogeneous mass in the area of the right atrial free wall to right auricle was present, measuring approximately 3.7 cm in diameter. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. Mild TR was present on doppler without overt evidence of clinical pulmonary hypertension. 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). Potential for scant pericardial free fluid, yet no evidence of cardiac tamponade. Moderate volume free pleural fluid was visualized. No overt evidence of additional tumors in the area of the cranial mediastinum, pericardial or extracardiac regions.

Urinary System



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The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

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The area of the residual prostate appeared normal and free of pathology.

The area of the aortic trifurcation was free of pathology.

BREED

Labrador Retriever

Normal size and margination was present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The right kidney measured 8.2 cm in length.

SEX

Neutered Male

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.84 cm width at the caudal pole.

AGE

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The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.75 cm width at the caudal pole.

Spleen

WEIGHT

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The spleen exhibited overall normal. A nonhomogeneous mildly expansive mass was present in the subjective caudal spleen, measuring 3.2 cm in diameter. Concurrent non-expansive hypoechoic to nonhomogeneous separate splenic nodules were also visualized. An example of splenic nodule measured 1.5 cm in diameter. Splenic vascularity was normal.

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Liver

The liver exhibited potential for mild enlargement. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. No evidence of hepatic vascular congestion. Intermittent nondisruptive isoechoic to nonhomogeneous intraparenchymal nodules were visualized. An example of liver nodule measured 1.9 cm in diameter.

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The gallbladder was non distended in size with mild gallbladder debris. The cystic duct and common bile ducts were normal without evidence of dilation.

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Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained minor retained gastric ingesta/chyme.

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The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material.

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Normal visible colon wall layers were present with apparent formed feces in lumen.

Pancreas

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The parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.



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Free Abdomen

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No omental masses, lymphadenopathy or evidence of peritoneal effusion was present.

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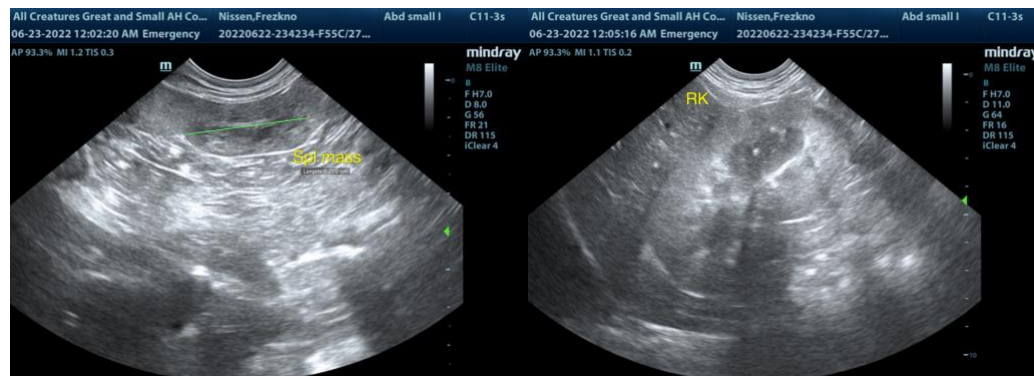
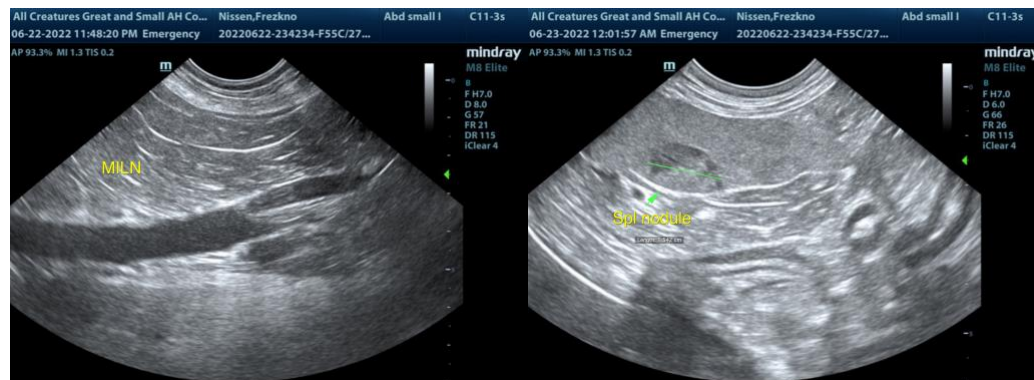
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ULTRASONOGRAPHIC FINDINGS

- Right atrial mass, no overt cardiac tamponade
- Moderate volume pleural free fluid with potential for concurrent very scant pericardial free fluid
- Nonhomogeneous small splenic mass with concurrent separate hypoechoic to nonhomogeneous splenic nodules
- Nonspecific yet suspicious intermittent hepatic parenchymal nodules

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Unfortunately, the findings in this study are most consistent with multicentric neoplastic disease involving the spleen, right atrium/auricle and given the overall cardiac presentation, which was not consistent with cardiogenic pleural effusion, normal clotting times and documented hemothorax, likely concurrent intrathoracic involvement. Multicentric hemangiosarcoma may be considered a top differential in this case versus other neoplastic etiologies. Given this presentation, an unfavorable prognosis is most likely indicated.





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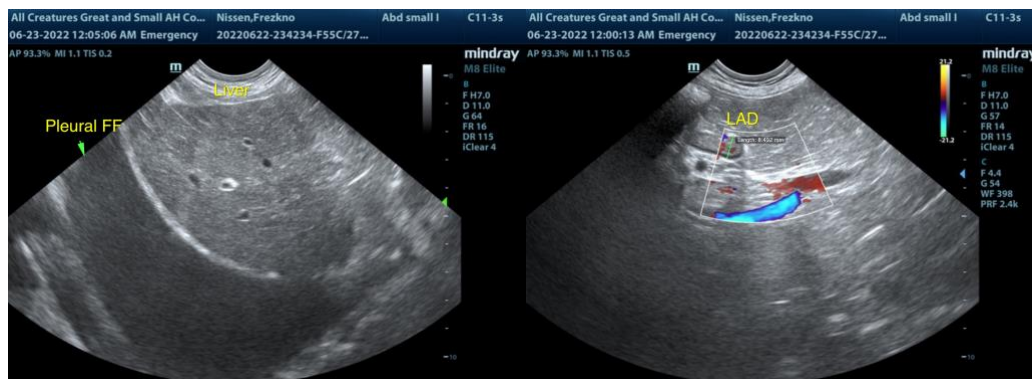
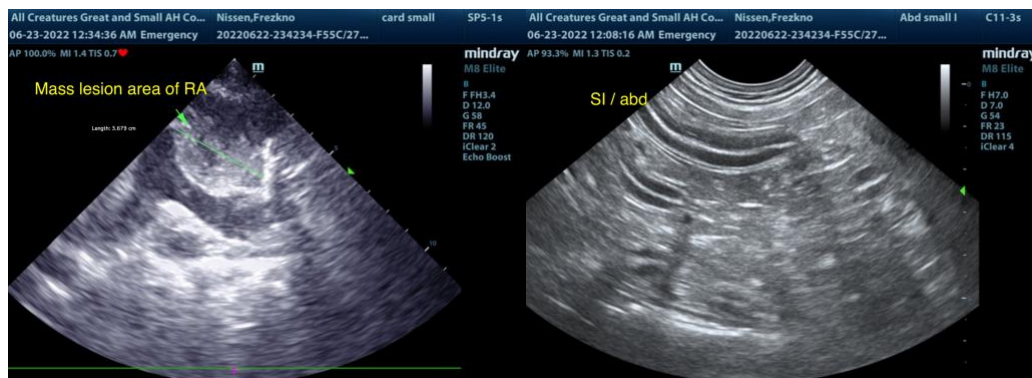
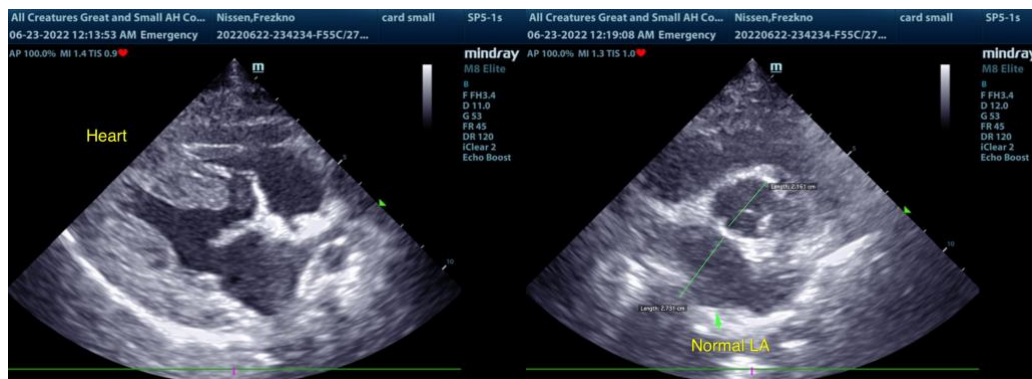
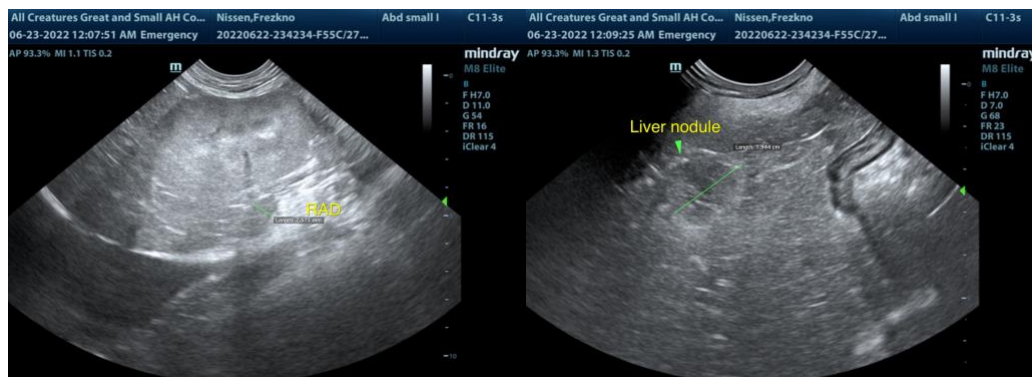
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.



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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.

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