


PATIENT PRESENTING CLINICAL SIGNS

Remmy Cook
 History: Grade 1/6 heart murmur, stage 5 periodontal disease, history of intermittent diarrhea.
 Current meds: Clindamycin. Patient needs dental.

SPECIES Abnormal PE/Chem/CBC/UA Results:

Canine **ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN AND HEART**

BREED

Miniature Schnauzer

SEX

Neutered male

AGE

12 years

WEIGHT

14.8 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	1.1	40.9	75.1	0.1
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	107	1.2	0.7		2.2	2.2	

INTERPRETED BY *Cardiac Presentation*

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

IMAGING PERFORMED BY
 Kelly Vasquez

HOSPITAL NAME

Westwood Regional
 Veterinary Hospital

REFERRING VET

Dr. Goldman

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The echocardiogram in this patient demonstrated normal left atrial size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal mitral valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable mild eccentric insufficiency. 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 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. 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). Moderate volume pleural free fluid without overt pericardial free fluid was present. A small to moderately sized nonhomogeneous mass lesion was visualized in the area of the right heart base adjacent to the right atrium and right ventricle yet not overtly originating from the left atrium or ventricle in the area of the pericardial thorax or potential cranial mediastinum. The mass measured approximately 3.2 cm x 3.0 cm. Although not definitive, a potential concurrent lesion noted in the caudal thorax in the area of the caudal thoracic vena cava. This potential lesion measured approximately 4 cm in diameter.



PATIENT

Urinary System

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The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra 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.

SPECIES

Canine

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.

BREED

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Nonexpansive non homogeneous nodules noted in the cranial pole of both the left and the right kidney, both measuring 1.2 cm in diameter. No evidence of pelvic dilation was present. The left kidney measured 5.2 cm in length. The right kidney measured 4.8 cm in length.

SEX

The area of the aortic trifurcation was free of pathology.

Neutered male

Adrenal Glands

AGE

12 years

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 1.2 cm length x 0.39 cm width. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 1.4 cm length x 0.35 cm width.

Spleen

WEIGHT

14.8 pounds

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

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Liver

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The liver was mildly enlarged with normal structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. Subtle dilation of the cranial abdominal caudal vena cava at the level of the liver and diaphragm measuring 1.5 cm in diameter was observed. Concurrent hepatic vein distension at the level of the hepatic vein caudal vena cava junction was noted.

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The gallbladder was non-distended in size. The gallbladder wall was thickened in appearance consisting of an echogenic double rim corresponding to the inner and outer portions of the wall. This is consistent with gallbladder wall edema. Possible causes may include acute inflammation, edema and anaphylaxis. Anechoic content was present in the gallbladder lumen with mild nondependent yet nonorganized luminal debris.

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Gastrointestinal

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The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained mild retained nonshadowing ingesta with no signs of ileus, obstruction or foreign material.

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.

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

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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.

Free Abdomen

BREED

Very minor cranial abdominal ascites was noted.

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ULTRASONOGRAPHIC FINDINGS

- Compensated chronic mitral valve disease (ACVIM B1)-no evidence of cardiac tamponade.
- Pericardial mass lesion in the area of the pericardial thorax or possible mediastinum.
- Possible concurrent lesion in the area of the caudal thoracic vena cava.
- Noncardiogenic moderate volume pleural and peritoneal free fluid.
- Gall bladder wall edema with mild luminal debris.
- Nonspecific yet suspicious bilateral kidney nodules.

WEIGHT

14.8 pounds

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Pleural effusion analysis cytology +/- C/S is recommended for further assessment. The pericardial mass lesions are primarily suggestive of neoplastic criteria although non neoplastic etiologies are possible. Given the lack of right heart enlargement or cardiac tamponade, the mild hepatic congestion and gallbladder wall edema may suggest non cardiogenic obstruction to returning blood flow to the heart potentially secondary to the caudal thoracic mass or other non-visualized pathology. Pending additional diagnostics thoracoabdominal CT is likely ideal for further assessment however a very guarded to potentially unfavorable prognosis is likely.

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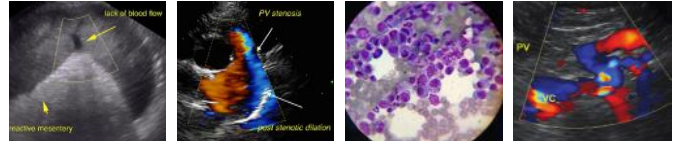
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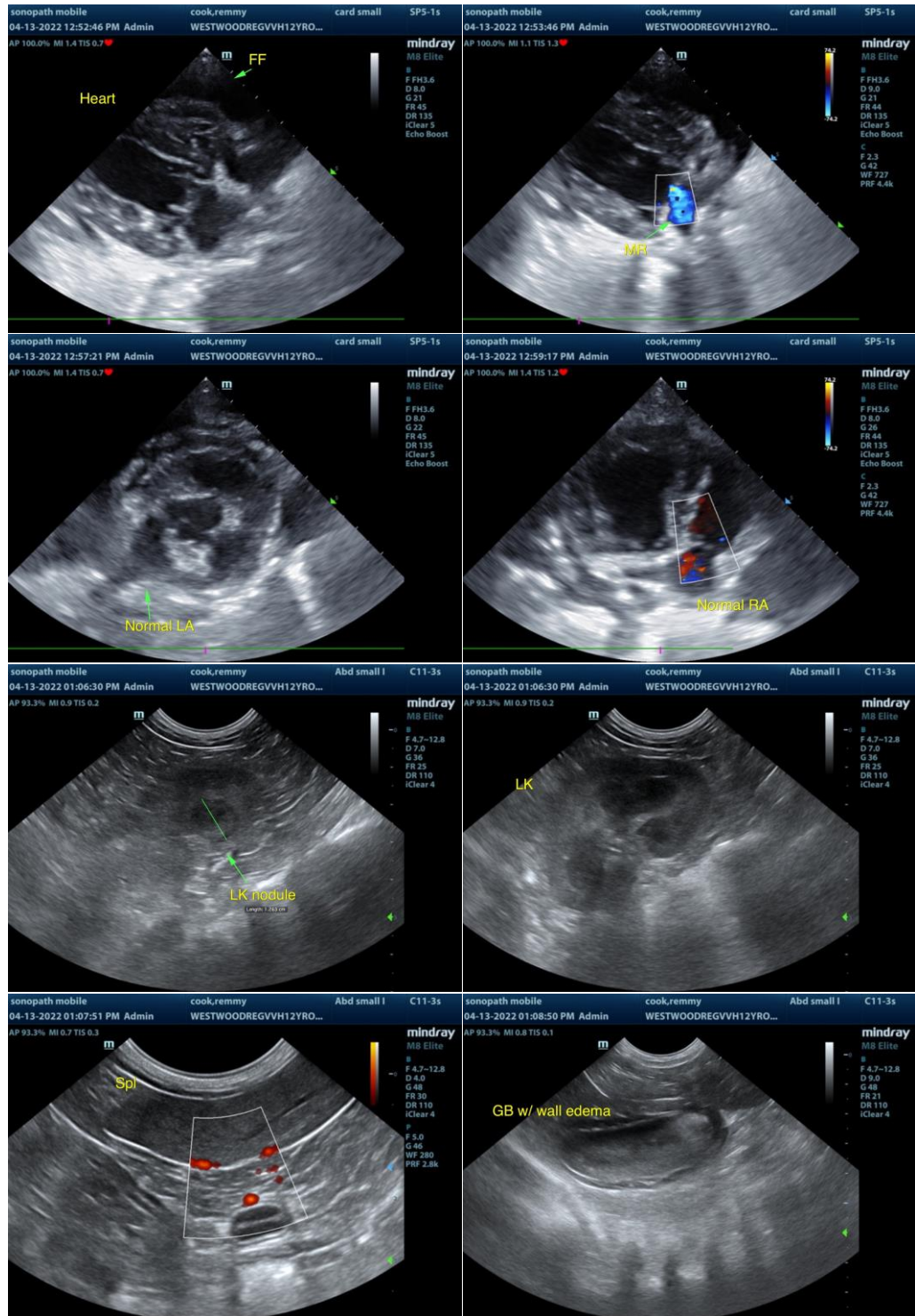
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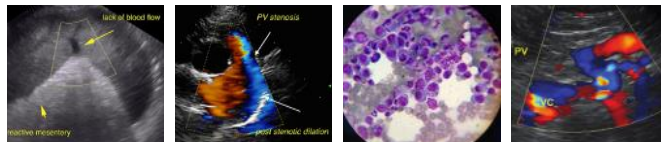
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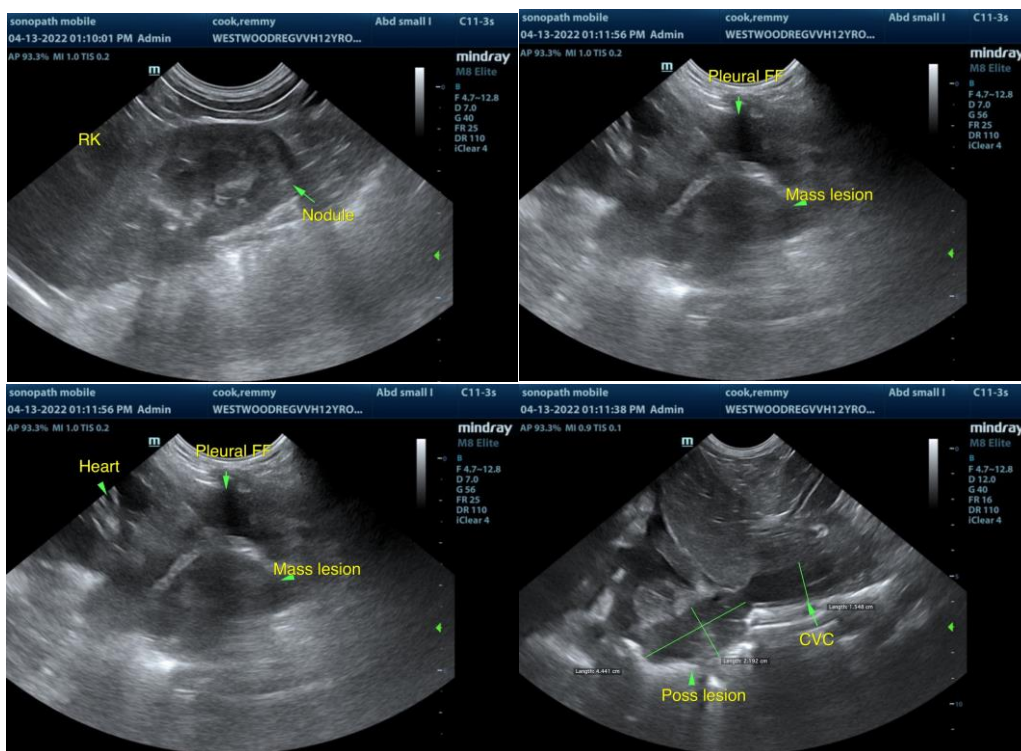
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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