



**PATIENT**

Mudd Lawson

**SPECIES**

Canine

**BREED**

Labrador Retriever

**SEX**

Neutered Male

**AGE**

9 Years

**WEIGHT**

108 lbs

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Rebecca Hamilton

**HOSPITAL NAME**

Animal Hospital of  
Sussex County

**REFERRING VET**

Dr. Lovell

**INVOICE**

72040

**DATE**

11/21/25

**PRESENTING CLINICAL SIGNS**

New grade 2/6 L apical systolic murmur. Pu/Pd, panting, pre-anesthetic work up for mass removal on hip. Non clinical for heart disease.

Abnormal PE/Chem/CBC/UA Results: ALP 2476, UrineSG 1.038

**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	--	--	NM	1.1	57	87	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	120	2.7	1.52	108	4.5	4.7	--

**Cardiac Presentation**

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 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 was structurally unremarkable, yet mild increased LVOT velocity noted at 2.7 m/sec. This is most likely idiopathic, or may be a very minor form of subaortic stenosis. However, no structural changes to that regard noted. Secondary aortic insufficiency noted. 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). No visible pericardial or free pleura fluid was noted. No echographically detectable evidence of infiltrative disease was visible. The cranial mediastinum and pericardial regions were free of masses in the visible window.



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**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 3.0 cm beyond the cystourethral junction.

Aortic aneurysm noted in this patient at the iliac trifurcation with turbulent flow, clinically insignificant at this time.

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. A cyst was noted at the caudal pole of the right kidney measuring 2.0 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 right adrenal gland measured 2.33 cm x 1.08 cm at the cranial pole and 0.65 cm at the caudal pole. The left adrenal gland measured 3.05 cm x 0.62 cm at the caudal pole and 0.57 cm at the cranial pole.

**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** presented multifocal hypoechoic nodular changes and diffuse hyperechoic parenchyma. A particular nodule in the left lateral lobe measured 3.7 cm. The gallbladder and common bile duct were unremarkable. Increased portal markings noted.

**Gastrointestinal**

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**

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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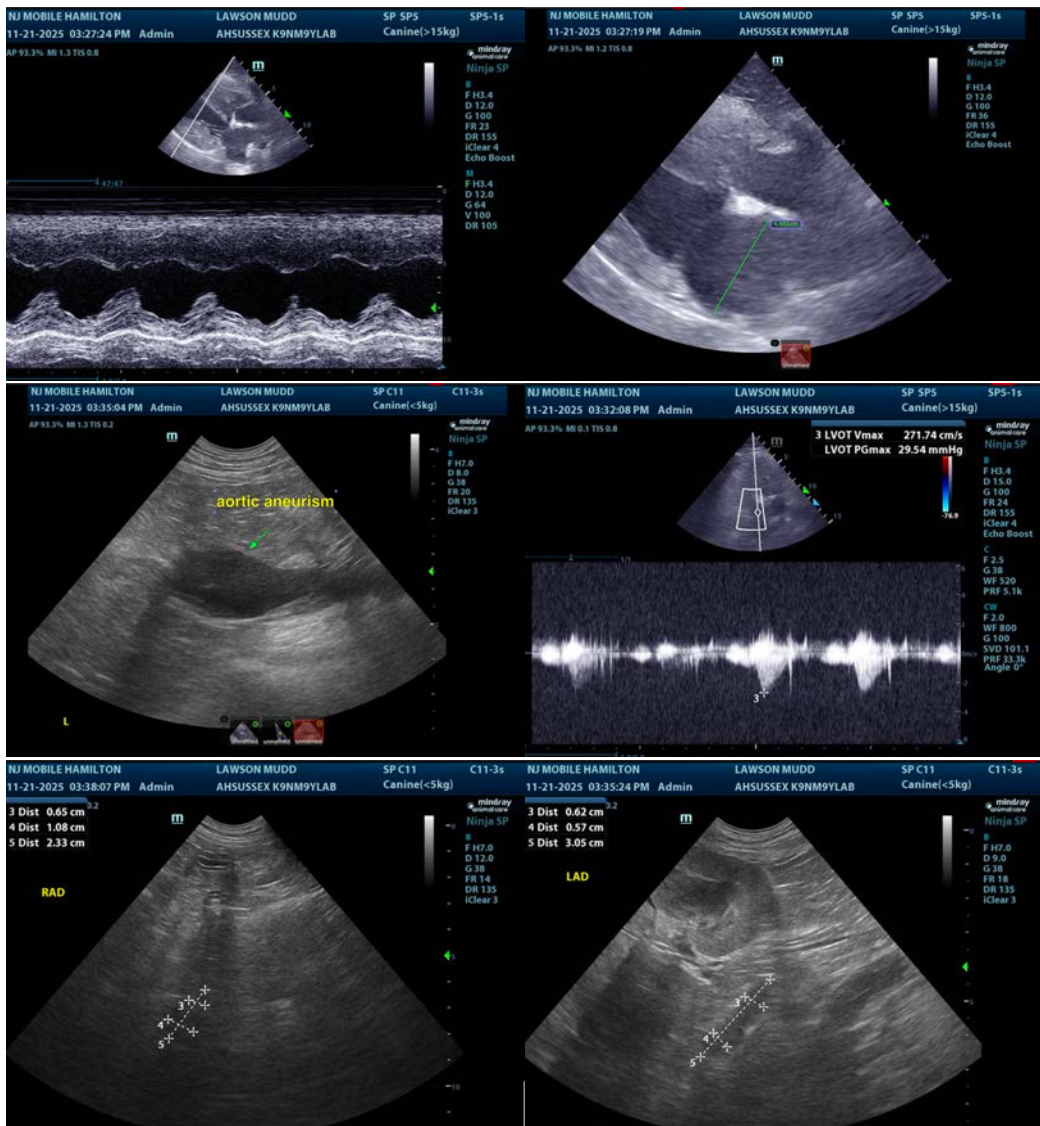
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**ULTRASONOGRAPHIC FINDINGS**

- Mild increased LVOT velocity and aortic insufficiency, compensated at this time.
- Diffuse nodular hyperplasia liver pattern and remodeling.
- Right renal cyst.
- Aortic aneurysm.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Blood pressure measurements recommended in this patient to ensure hypertension is not an issue. If any fever is an issue, blood culture would be indicated, given the aortic insufficiency. Bile acid profile +/- FNA of the left lateral hepatic nodule as well as general hepatic parenchyma indicated. Recheck echocardiogram and aortic imaging in 6 months, earlier if clinical signs necessitate. Suggest abdominal vascular CT to assess for arteriovenous fistula.







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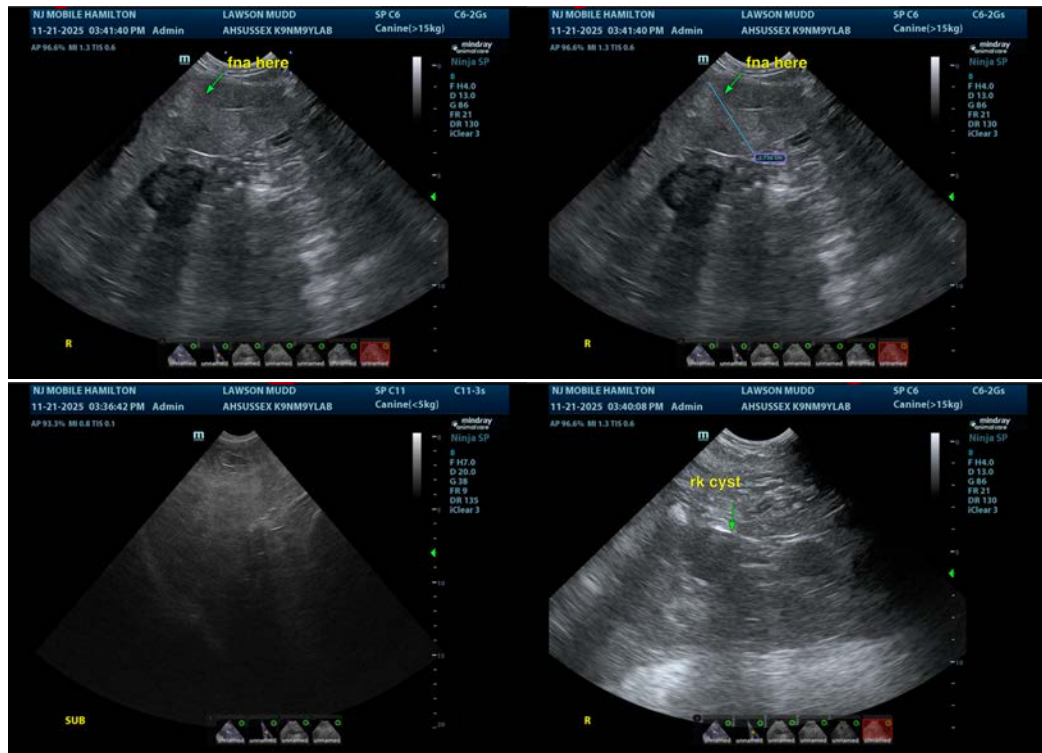
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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