



PATIENT PRESENTING CLINICAL SIGNS

Layla Kus History: Pu/Pd, NSF on PE.

SPECIES Meds: Stasis breaker (herbal Supplement)

Canine Abnormal PE/Chem/CBC/UA Results: ALT 133, ALP 156, T protein 7.6, Urine: UPC 2.1, USG 1.004

BREED ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

Jack Russell Mix

SEX

Female Spayed

AGE

10y 11m

WEIGHT

40 lbs

INTERPRETED BY

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

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	--	--	--	1.38	35	64	0.2
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	185	2.0	1.35	40	3.5	3.5	--

IMAGING PERFORMED BY

Becca Hamilton

HOSPITAL NAME

Animal Hospital of
 Sussex

REFERRING VET

Dr. Catania

INVOICE

13066

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1/13/26

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 on doppler. 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. Normal measured LVOT velocity noted. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. 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). Normal measured RVOT velocity noted. No visible **pericardial** or free pleura fluid was noted. The cranial **mediastinum** and **pericardial** and **extra-cardiac** regions were free of masses in the visible window.



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Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 4.0 cm exhibited normal thickness and tone. Primarily anechoic urine was present in the lumen. Minor, non-dependent, echogenic to particulate sediment was present without evidence of calculus formation. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic mural changes were noted.

The area of the aortic trifurcation was free of pathology.

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 left kidney measured 5.7 cm in length. The right kidney measured 5.9 cm in length.

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.66 cm width at the caudal pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.62 cm width at the caudal pole.

Spleen

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. Intermittent, minor areas of hyperechoic parenchyma to emerging hyperechoic nodules present, most consistent with benign criteria.

Liver

The liver exhibited subjective borderline to mild hepatomegaly with normal vascular volume. No mass or nodules present. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a mild to moderate coarse echotexture and subjective mild parenchymal remodeling. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non distended in size with mild, non-organized, echogenic, nonmineralized biliary sludge. The cystic duct and common bile ducts were normal without evidence of dilation.

Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty 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

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

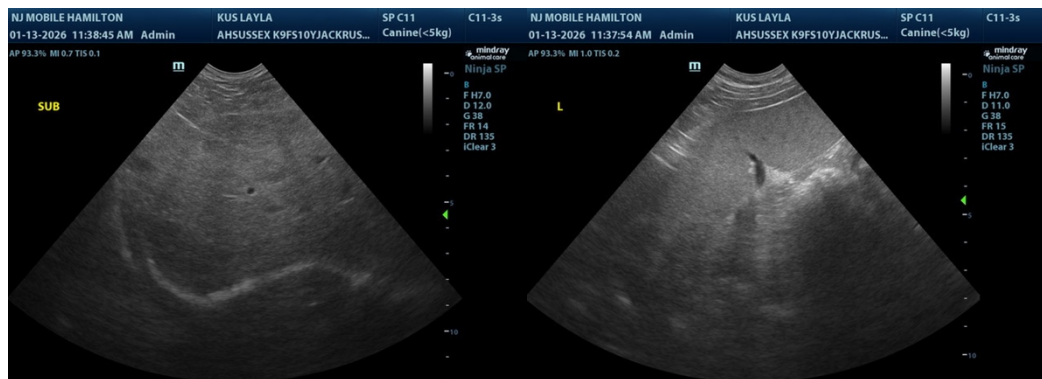
No overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

- Normal echocardiogram
- Nonspecific mild chronic renal changes
- Normal adrenal glands
- Borderline to mild hepatomegaly exhibiting non-homogeneous parenchyma – vacuolar or non-obstructive cholestatic hepatopathy, inflammatory/mediated/infectious disease, hyperplasia, fibrosis, hepatic neoplasia (thought less likely) all potentials
- Gallbladder debris (non-mucocele)
- Small to emerging hyperechoic nodules – most consistent with emerging to small myelolipomas

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Although no adrenal pathology, adrenal screening or workup if clinical signs consistent with Cushing's Syndrome is warranted. Monitoring of UPC with potential PLN therapy if progressive elevated UPC greater than 2.0 without concurrent azotemia may be indicated. Further assessment of the liver may include, assuming normal clotting status, FNA cytology and +/- leptospirosis titer/PCR if clinically indicated. Hepato-supportive medications may prove beneficial.





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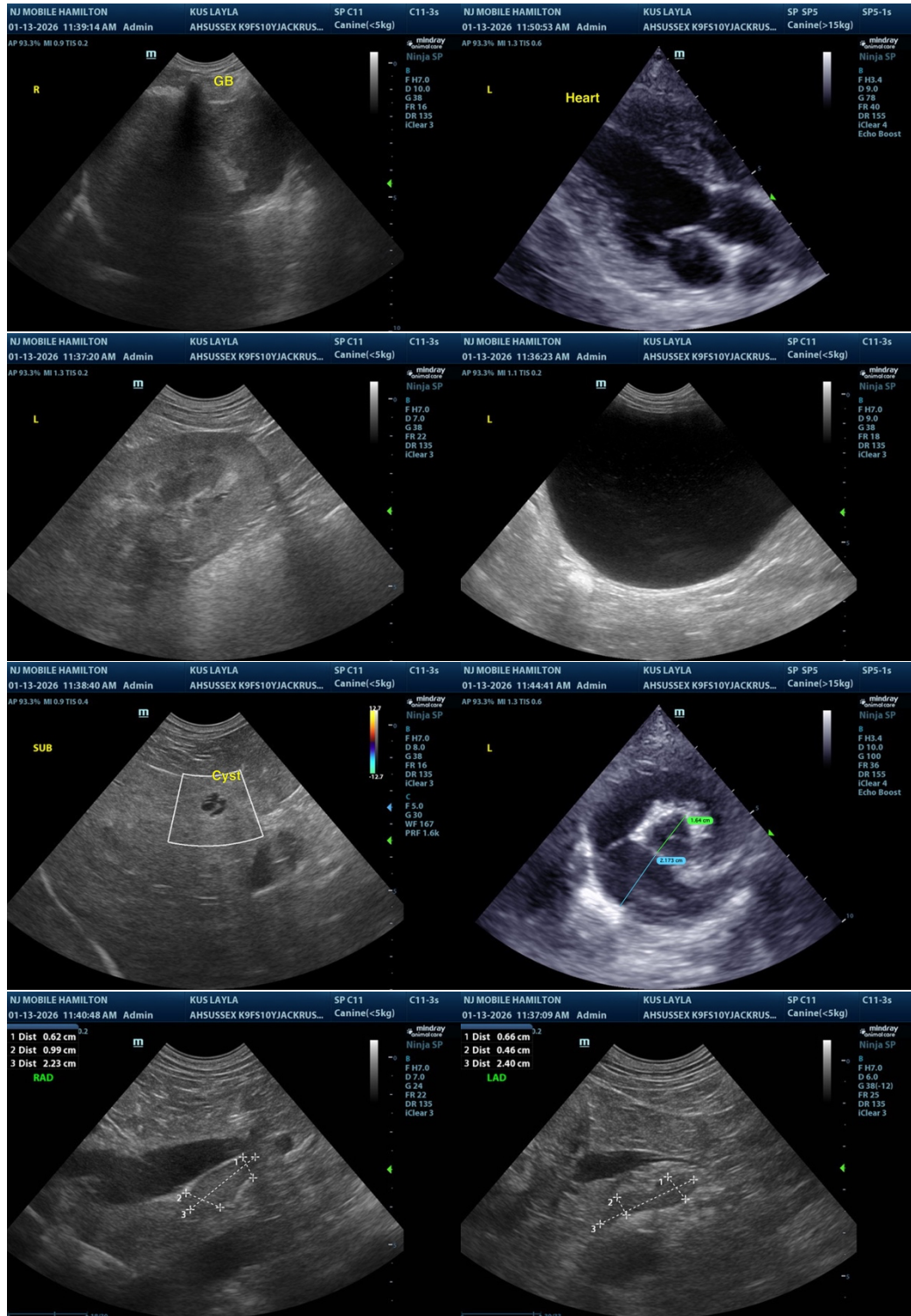
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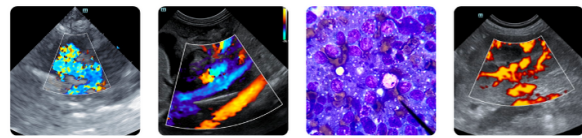
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

info@sonopath.com