



PATIENT PRESENTING CLINICAL SIGNS

Jaden Sanders History: Wellness check AUS. Hx of benign mass removed at Blue Pearl in abdomen and chest. Hx of Cushings Dz. Current meds: Vetoryl

SPECIES Abnormal PE/Chem/CBC/UA Results: wnl

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

BREED

Lab Mix

SEX

Spayed Female

AGE

14 Years

WEIGHT

64 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	1.3	42	77	0.30
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	1.3	0.75	--	3.6	3.4	--

INTERPRETED BY

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

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

All Creatures Great &
Small Denville

REFERRING VET

Dr. Ashmore

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19049

DATE

12/6/22

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. 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. **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). 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.

Urinary System

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



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sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted. Aortic trifurcation was normal.

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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 7.1 cm in length. The right kidney measured 7.2 cm in length.

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Adrenal Glands

Both adrenal glands were enlarged in size with asymmetrical capsule contour yet subjective maintained capsule integrity without evidence of parenchymal escape. Generalized nonhomogenous to indistinctly nodular parenchyma. No overt evidence of parenchymal mineralization and no obvious left or right adrenal vascular invasion. The left adrenal gland measured 5.6 cm in length x 4.5 cm in width. The right adrenal gland measured 5.8 cm in length x 3.5 cm in width.

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Spleen

The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. 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. The parenchymal heterogeneity is likely consistent with benign changes such as hematopoiesis or age-related remodeling without evidence of inflammatory or neoplastic criteria.

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Liver

The liver was subjectively normal in size, 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. The hepatic and portal vasculature were normal in appearance without signs of congestion.

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The gallbladder was non distended in size with anechoic content and mild echogenic, nonorganized debris without evidence of gallbladder or peripheral gallbladder inflammation. 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 was empty with no signs of ileus, obstruction or foreign material.

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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.

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Pancreas

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia. This is likely consistent with age-related pancreatic changes and incidental.

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Free Abdomen



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No overt lymphadenopathy or peritoneal effusion was present.

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ULTRASONOGRAPHIC FINDINGS

SPECIES

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- Normal echocardiogram
- Bilateral mild irregular nonhomogenous to indistinctly nodular adrenomegaly
- Hepatic parenchymal remodeling- benign
- Mild gallbladder debris (non-mucocele)
- Mild chronic renal changes
- Mild age-related spleen

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The bilateral adrenomegaly is consistent with a history of Cushings disease and may indicate bilateral chronic hyperplasia, functional versus nonfunctional adenomatous change, while the potential for left, right or bilateral adrenal tumors is possible.

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Assessment and monitoring of systemic blood pressure is recommended to assess for evidence of hypertension, which may potentially allude to mixed adrenal pathology and potential pheochromocytoma. Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered. Sonographic monitoring of the adrenal glands for evidence of progressive enlargement is likely ideal.

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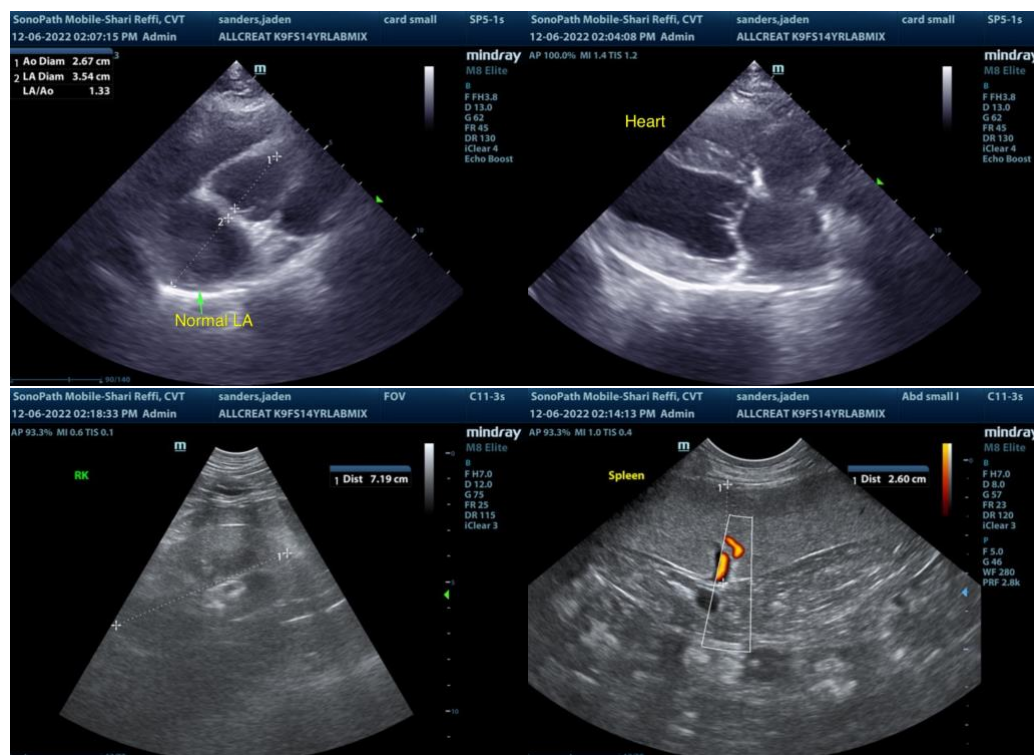
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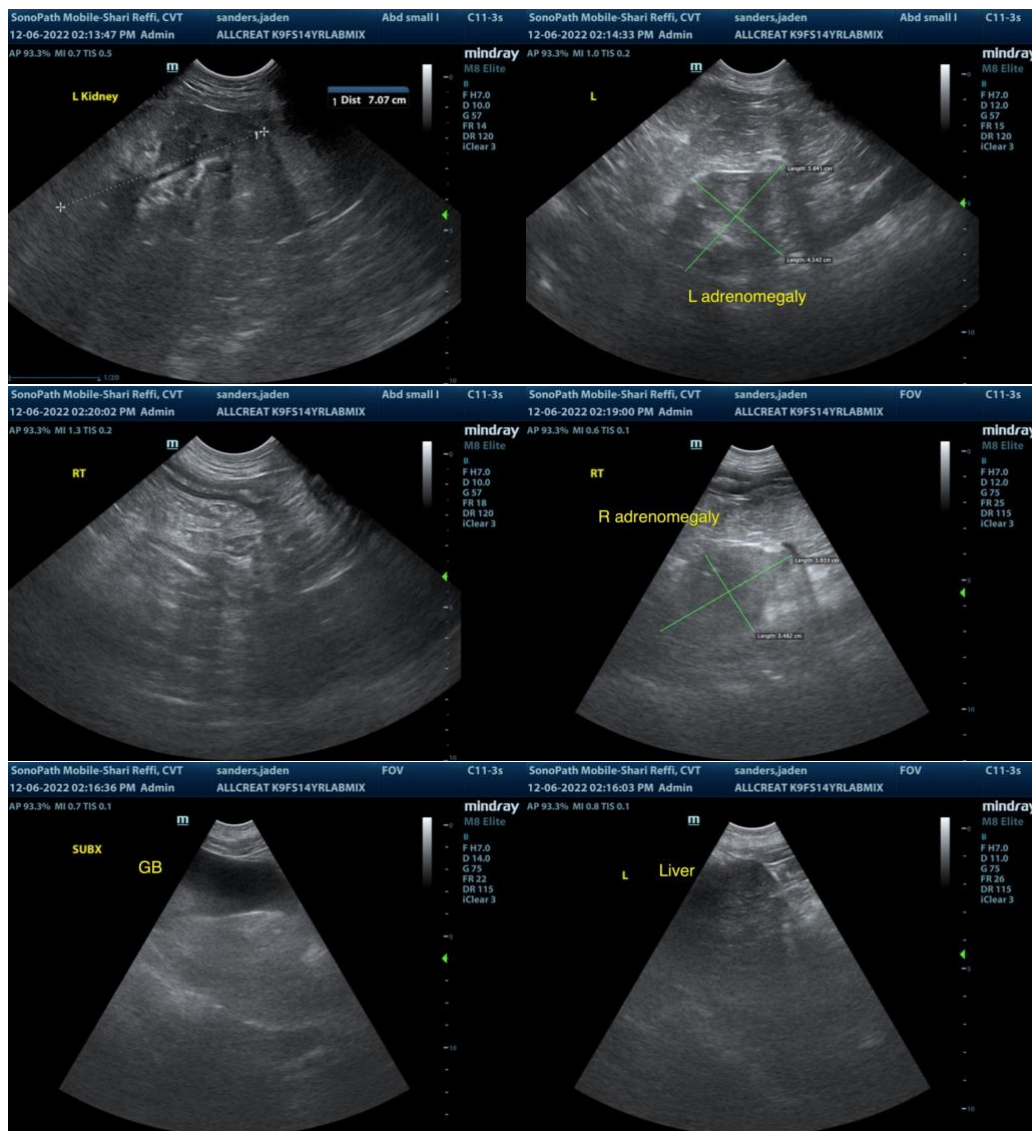
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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