



PATIENT

Coco Chaves

SPECIES

Canine

BREED

German Shepherd

SEX

Neutered Male

AGE

8 years

WEIGHT

82.6 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Jenna Walsh, CVT

PRESENTING CLINICAL SIGNS

Clinical Exam Findings: 7/12/21 - came in upon ER visit. Splenic mass found and splenectomy performed. Heart Rate and Respiratory Rates HR: 84 bpm Resp: 40bpm Blood Pressure Measurements 136/90 (103)

Abnormal PE/Chem/CBC/UA Results: ABNORMAL Laboratory Findings 7/12/21 - Biopsy sample of spleen sent to Idexx. Findings: hemangiosarcoma. 8/23/21 Blood sample taken to send to Texas A&M GI Vet Cancer Screening. Plasma nucleosome= 22.9 ng/mL. Reference Interval 9.1 - 57.4 ng/mL.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

CANINE	MR	TR	LA/AO	LA/AO	FS	EF	EPSS
CARDIAC PARAMETERS	VMAX (m/s)	VMAX (m/s)	(Boon method)	(Heart Base; Swe)	(%)	(%)	(cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT			1.1	1.2	33.3	63.0	0.28
CANINE	HR	AV	PV	BODY WEIGHT	LA	LVIDd	LVIDs
CARDIAC PARAMETERS	(BPM)	VMAX (m/s)	MAX (m/s)	(kg)	2D short axis Base view (cm)	Avg; 2D and m-mode short axis (cm)	Avg; 2D and m-mode short axis (cm)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
PATIENT	124	1.5	1.0		4.0	3.55	

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. Color Doppler assessment of the mitral valve revealed mild 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. Color Doppler assessment of the aortic valve revealed minor insufficiency. Aortic valve insufficiency measured 3.4 m/s. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated adequate linear

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PATIENT	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). Color Doppler assessment of the pulmonic valve revealed mild insufficiency. Pulmonic valve insufficiency measured 1.0 m/s. 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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BREED	Urinary System
German Shepherd	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 was noted.
SEX	
Neutered Male	The area of the aortic trifurcation was free of pathology.
AGE	
8 years	Normal size and margination were 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 8.2 cm in length.
WEIGHT	
82.6 lbs.	
INTERPRETED BY	Adrenal Glands
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 2.5 cm length x 0.57 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 2.6 cm length x 0.86 cm width at the caudal pole.
IMAGING PERFORMED BY	Spleen
Jenna Walsh, CVT	The spleen was not visualized owing to previous splenectomy.
HOSPITAL NAME	Liver/ Gallbladder
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DATE	Gastrointestinal
10/18/21	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.

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

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 were evident.

Free Abdomen

Moderate peritoneal free fluid, along with regional to generalized nonuniform to potentially nodular omentum were present.

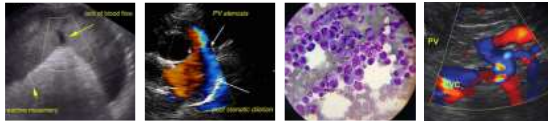
ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Overtly normal cardiac structure and function - no evidence of cardiac or pericardial metastasis
- Mild mitral aortic and pulmonic valve insufficiencies
- Peritoneal free fluid
- Nonspecific yet suspicious intrahepatic parenchymal nodules, as well as ill-defined, suspected perihepatic nodules
- Regional nonuniform to subtly nodular omentum

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Recommend abdominocentesis for effusion analysis, cytology, +/- C/S if clinically indicated. If the effusion is consistent with hemoabdomen, a coagulation panel is recommended. However, given the lack of cardiac disease, as well as hepatic congestion and assuming normal albumin levels, and in light of the patient's history of hemangiosarcoma, primary concern for hepatic, perihepatic to omental metastasis is warranted. Oncology consultation could be considered. Screening blood pressure is suggested, given the presence of aortic valve insufficiency.



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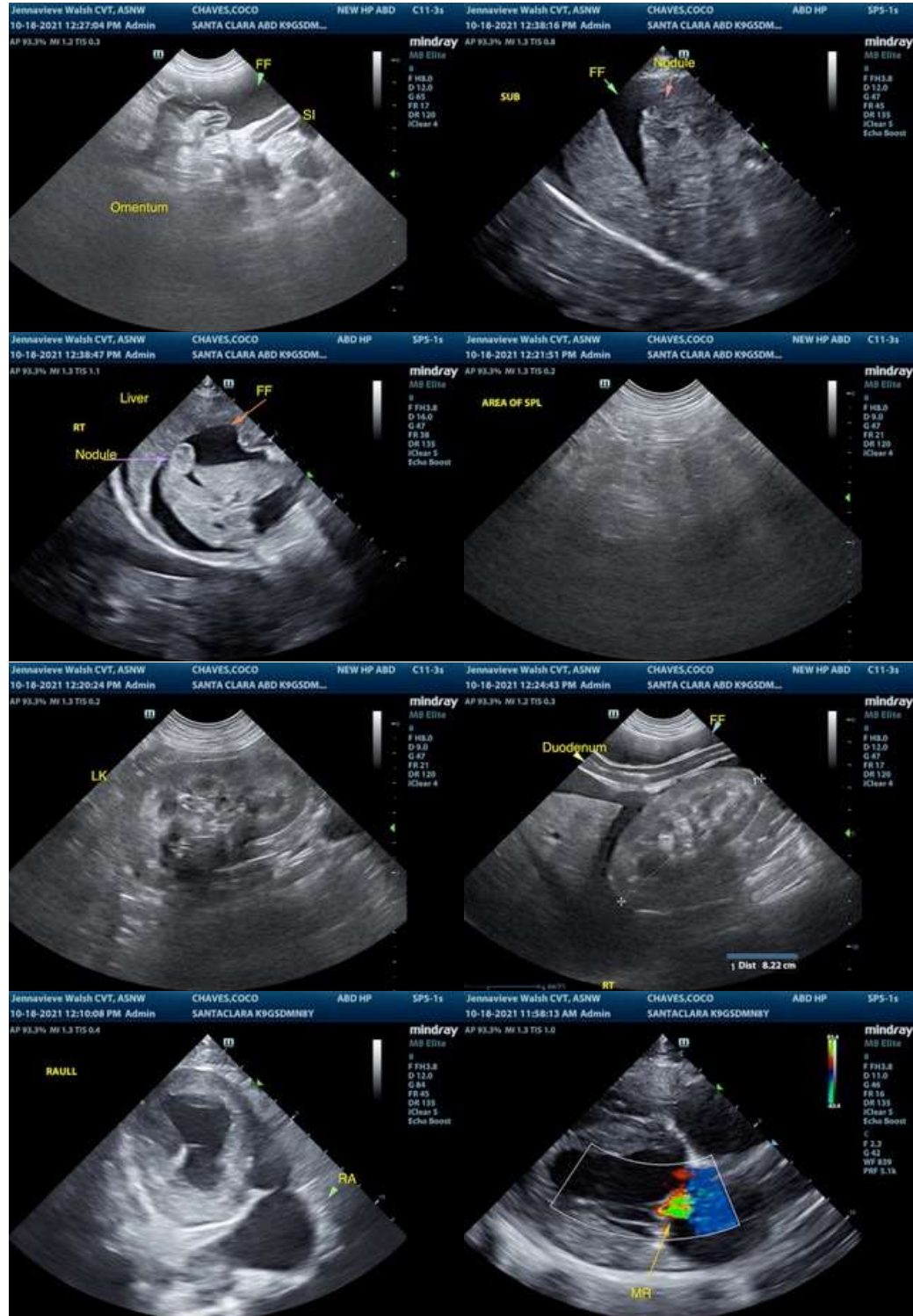
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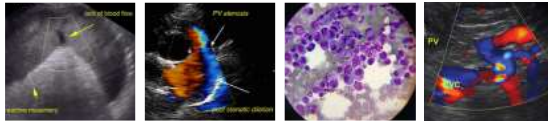
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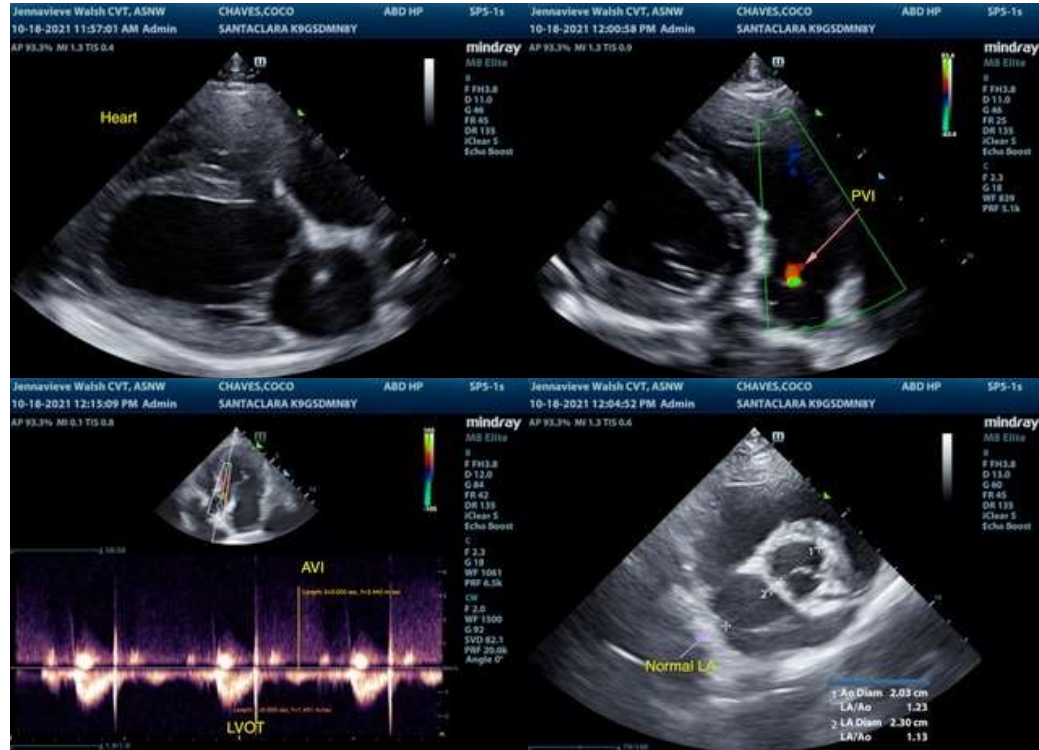
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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