



PATIENT

Aries Campos

SPECIES

Canine

BREED

Shih Tzu Mix

SEX

Male Neutered

AGE

8.5 yrs

WEIGHT

23.7 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

West Eugene AH

REFERRING VET

Dr. Powers

INVOICE

12841

DATE

11/19/25

PRESENTING CLINICAL SIGNS

History: Clinical Exam Findings: Grade 3/6 left systolic murmur. No coughing or dyspnea. Lungs auscultate WNL. Evaluating heart prior to dental cleaning and extractions. Normal eating, drinking, and behavior. No vomiting or diarrhea other than when associated with dietary indiscretion (mushrooms in yard are a frequent culprit). ABNORMAL Lab work Values ALP 213, AST 12, triglycerides 521, PSL 573, 3+ proteinuria For ECHO Only: Blood Pressure Pending HR/RR/BP: 140/30 Is there a Heart Murmur? If so, please grade. Grade 3/6 left systolic

Current Medications Rimadyl, Welactin fish oil

Radiographic Findings: N/A

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	5.7	--	--	1.5	45	78	0.2
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	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	NM	1.3	0.9	--	4.0	3.8	--

Cardiac Presentation

The echocardiogram in this patient demonstrated normal to borderline increased **left atrial** size based on 2 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented thickening consistent with endocardiosis. Doppler indicated measurable moderate eccentric insufficiency. MR velocity measured 5.7 m/s. The **left ventricle** presented normal thicknesses with linear contour and borderline increased LV dimension. 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



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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 cardiac / pericardial tumors was visible.

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Urinary System

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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 were noted.

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No obvious pathology in the area of the residual prostate.

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The area of the aortic trifurcation was free of pathology.

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Normal renal size with asymmetrical margination was present in both kidneys. The renal cortex presented uniformly increased in echogenicity with uniform echotexture. The renal cortex appeared to be hypertrophied resulting in an altered cortex: medulla ratio. Mild indistinct loss of corticomedullary distinction was also present. The renal medullary volume was subjectively reduced. The left kidney measured 5.2 cm in length. The right kidney measured 5.4 cm in length.

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Adrenal Glands

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The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.61 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 0.54 cm width at the caudal pole.

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Spleen

The spleen was normal in size with primarily symmetrical contour and homogeneous parenchyma. Mildly expansive non-homogeneous medial splenic nodule with mild associated symmetrical medial splenic capsule distortion measuring 2.0 cm in diameter.

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Liver

The liver presented borderline enlarged in size. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with primarily anechoic luminal content. The cystic and common bile ducts were normal.

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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 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

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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.

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Free Abdomen

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No overt lymphadenopathy or peritoneal effusion was present.

Shih Tzu Mix

ULTRASONOGRAPHIC FINDINGS

SEX

- Chronic mitral valve disease exhibiting borderline increased LA/LV dimension (ACVIM B1 – emerging B2)
- Mildly expansive non-homogeneous splenic nodule – hyperplasia, hematopoiesis, granuloma, inflammation, emerging tumor possible
- Mild benign hepatopathy
- Nonspecific chronic renal changes
- Sonographically normal gastrointestinal tract/area of pancreas

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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The cause of the murmur is chronic degenerative valvular changes with secondary eccentric MR. The borderline increased LA/LV enlargement is not consistent with volume overload criteria without anticipated clinical signs. In a non-clinical patient with only borderline increased LA/LV dimension, no obvious indicated for cardiac medication. However, serial sonographic monitoring is advised as prognosis is variable. Recheck echo recommended in 6 months, sooner is clinical signs arise. Anesthetic risk is considered low. Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists.

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UPC level on sterile urine sample is recommended for further assessment of the proteinuria. Chronic pancreatitis may present sonographically normal and may be suspected if concurrent clinical signs or cranial abdomen/subxiphoid discomfort on palpation. Assuming normal clotting status and no pathology on 3-view chest radiographs, considerations for the splenic nodule may include FNA cytology and sonographic monitoring if no evidence of neoplastic criteria vs diagnostic and prophylactic splenectomy.

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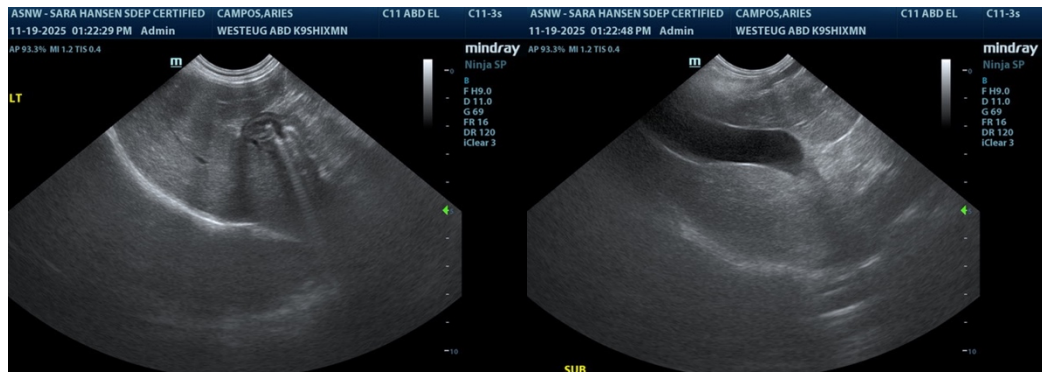
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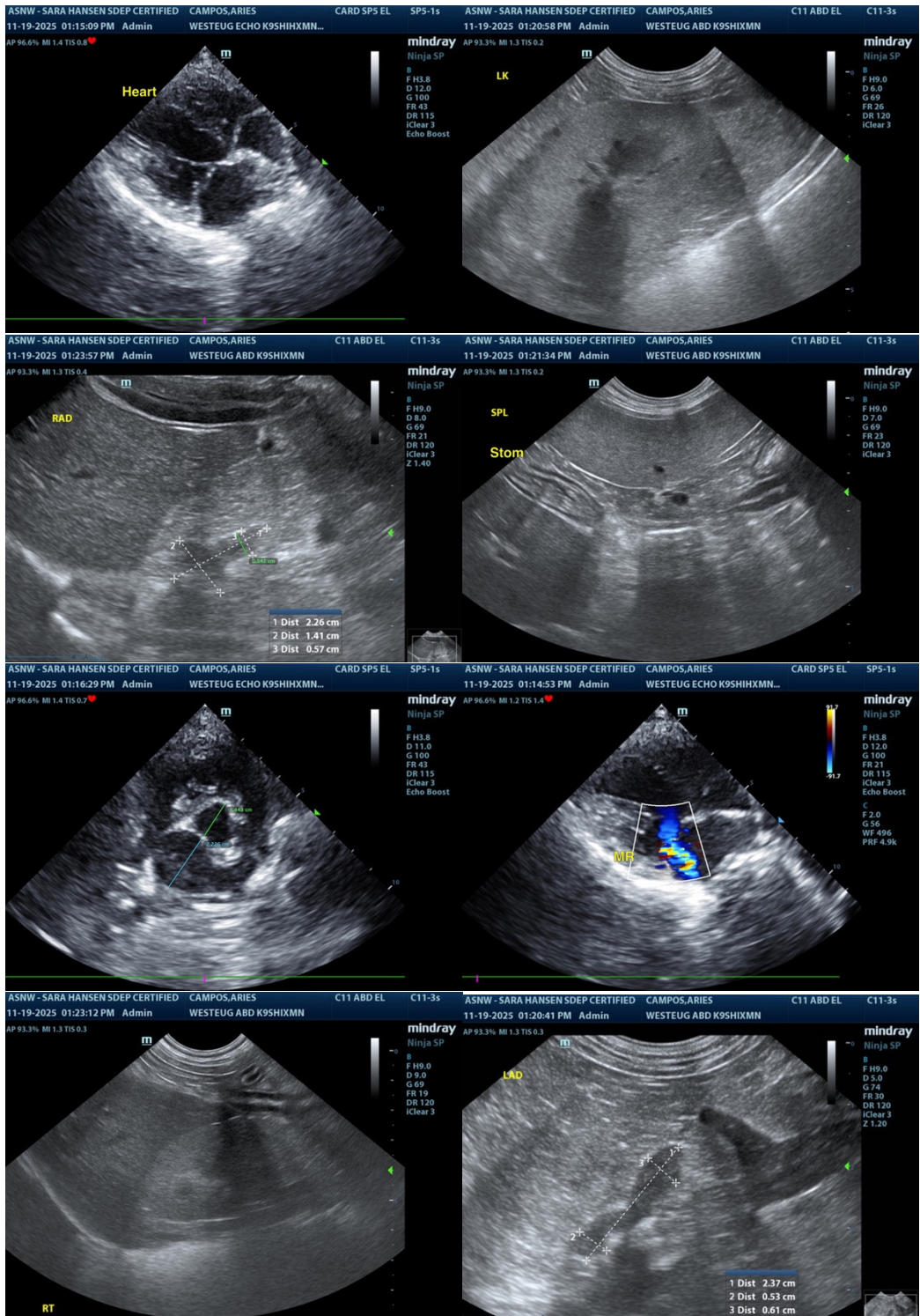
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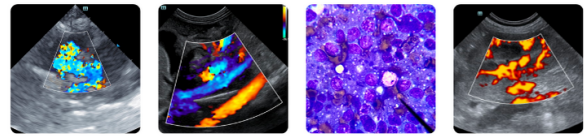
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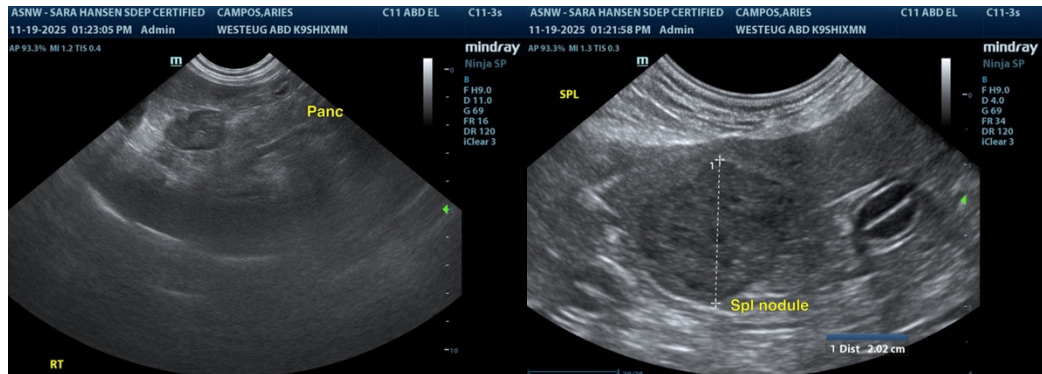
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

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