



PATIENT

Chester Tanis

SPECIES

Canine

BREED

Daschund

SEX

Male Neutered

AGE

13 y

WEIGHT

N/A

INTERPRETED BY

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

IMAGING PERFORMED BY

Becca Hamilton

HOSPITAL NAME

Summit Dog and Cat
 Hospital

REFERRING VET

Dr. Baker

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DATE

1/14/26

PRESENTING CLINICAL SIGNS

History: Cardiac murmur grade 3/6 on 12/26/25. AlkPhos high elevation, abdomen looks distended, want to rule out tumors, liver disease, adrenal disease, other

Abnormal PE/Chem/CBC/UA Results: ALkP elevation (continuous) 12/26/25 ALkP 1522 (23-212)- H

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	3.9	--	--	1.3	50	83	0.35
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	94	1.5	0.9	N/A	3.1	2.9	--

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **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 revealed moderate eccentric MR. MR velocity measured 5.9 m/s. 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 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 cardiac / pericardial tumors was visible.



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Urinary System

Chester Tanis

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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The residual prostate was sonographically normal.

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The area of the aortic trifurcation was free of pathology.

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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. Pinpoint areas of medullary mineral was present. The left kidney measured 4.8 cm in length. The right kidney measured 4.8 cm in length.

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Adrenal Glands

The left adrenal gland was enlarged in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.9 cm width at the caudal pole. The right adrenal gland was enlarged in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.74 cm width at the caudal pole.

WEIGHT

N/A

Spleen

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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.

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Liver

The liver exhibited generalized hepatomegaly with primarily symmetrical and rounded hepatic capsule contour. Generalized non-homogeneous, hyperechoic hepatic parenchyma exhibiting diffuse, discrete to mildly non-homogeneous, hyperechoic nodular changes. Normal vascular volume. The gallbladder was non distended in size with mild, non-organized, gravity dependent, echogenic, nonmineralized biliary sludge. The cystic duct and common bile ducts were normal without evidence of dilation.

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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 contained mild, non-shadowing ingesta consistent with food echogenicity.

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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.

Pancreas

The area of the pancreas presented sonographically normal.



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Free Abdomen

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No overt lymphadenopathy or peritoneal effusion was present.

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ULTRASONOGRAPHIC FINDINGS

- Hepatomegaly exhibiting non-homogeneous, hyperechoic to non-homogeneous, diffusely hypoechoic nodular parenchyma
- Non-organized gallbladder debris (non-mucocele)
- Mild chronic renal changes
- Bilateral mild adrenomegaly
- Chronic mitral valve disease (B1)

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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 mitral valve insufficiency. The lack of left atrial enlargement implies that the risk of complication secondary to mitral valve insufficiency is low at this time and, without current clinical signs, indicates that medical therapy is not required. Prognosis is considered variable and sonographic monitoring is recommended. Recheck echo cardiogram is suggested in 6-12 months, sooner if clinical signs arise. No cardiac anesthetic contraindications. 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.

WEIGHT

N/A

No evidence of abdominal tumors present. The liver may indicate chronic vacuolar hepatopathy, inflammatory disease, diffuse nodular hyperplasia or hematopoiesis, cholestasis or hepatic neoplasia. Adrenal workup with LDDST warranted if clinical signs consistent with Cushing's Syndrome. Assuming normal clotting status, hepatic FNA cytology using 25-gauge needle could be considered for further clarification. Hepato-supportive medications including Denamarin and Ursodiol with clinical and as needed sonographic monitoring if evidence of progressive hepatopathy or for evidence of progressive hepatic parenchymal changes. Pending adrenal testing if clinically indicated would be reasonable.

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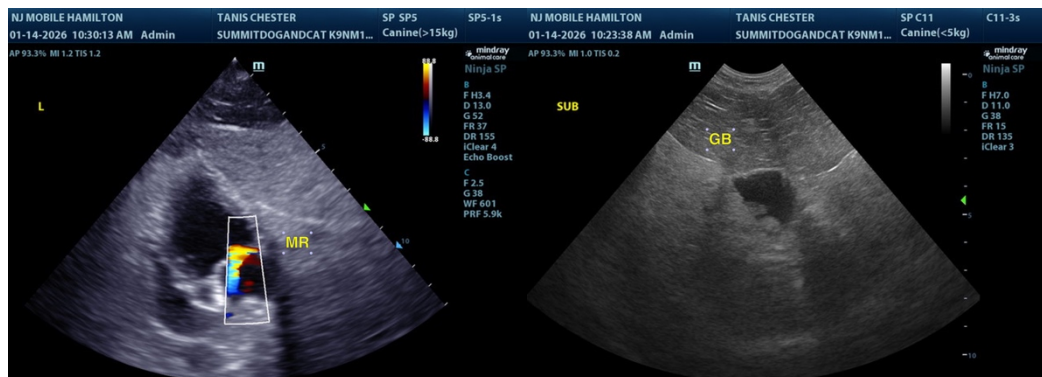
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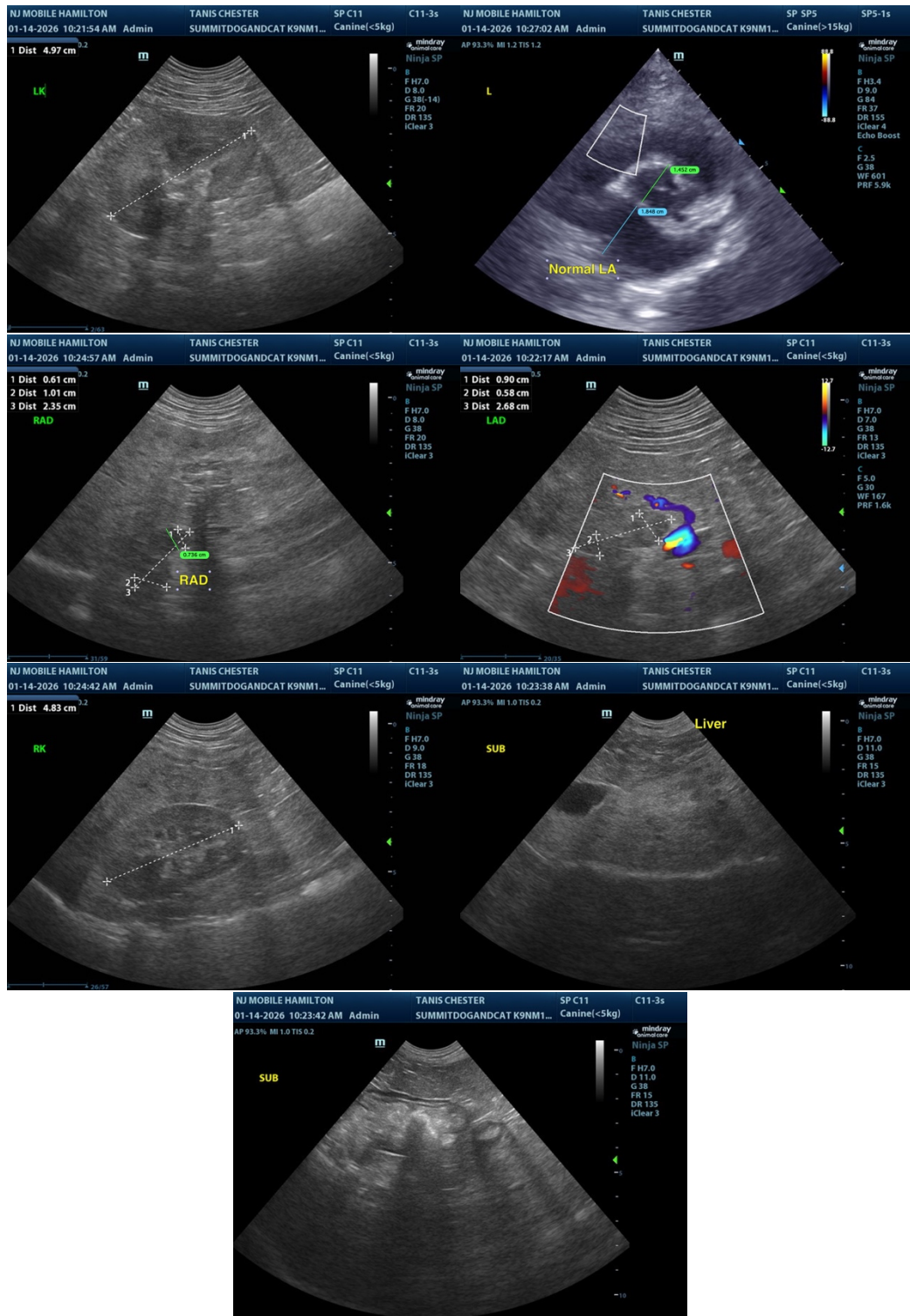
Dr. Baker

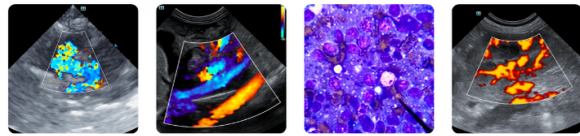
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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