



**PATIENT**

Sweet Pea Deihl

**SPECIES**

Canine

**BREED**

Chihuahua/Pug Mix

**SEX**

Spayed Female

**AGE**

8 Years 5 Months

**WEIGHT**

25 pounds

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Chloe Lowe CVT

**HOSPITAL NAME**

William Penn  
Veterinary Hospital

**REFERRING VET**

Dr. Bouzaout

**INVOICE**

14684

**DATE**

03/27/26

**PRESENTING CLINICAL SIGNS**

- cardiomegaly
- hepatomegaly
- splenomegaly
- falling over
- gave blood transfusion

Abnormal PE/Chem/CBC/UA Results: RBC 2.7, HCT 18.%, HGB 6.0, ALP 346, TBil 1.5

**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	5.5	--	NM	1.42	48	81	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	129	1.2	1.0	25.0	3.4	2.9	--

**Cardiac Presentation**

The echocardiogram in this patient demonstrated normal **left atrial** size based on 2 different LA measurement methods. The cranial and caudal **mitral** valve leaflets presented thickening consistent with endocardiosis. Doppler indicated measurable moderate eccentric MR. 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. Minor aortic valve insufficiency on doppler. 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. No evidence of arrhythmia.



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**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 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 change were noted.

The visualized medial iliac lymph nodes were sonographically normal.

Normal size and margination was present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex. Minor to focal medullary mineral was present. The left kidney measured 5.2 cm in length. The right kidney measured 5.8 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 0.46 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 0.44 cm width at the caudal pole.

**Spleen**

The spleen was subjective borderline mildly enlarged and 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.

**Liver & Gallbladder**

The liver presented mildly 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 mild nonorganized 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 contained mild nonshadowing gastric ingesta consistent with food echogenicity.

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**



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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**

No overt lymphadenopathy or peritoneal effusion was present.

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Chihuahua/Pug Mix

**ULTRASONOGRAPHIC FINDINGS**

**SEX**

Spayed Female

- Chronic mitral valve disease (B1).
- Minor aortic valve insufficiency.
- Benign hepatomegaly and borderline/mild splenomegaly.
- Nonorganized gallbladder debris (non-mucocele).
- Normal gastrointestinal tract with mild gastric ingesta- consistent with food/chyme.
- Pinpoint renal medullary mineral.

**AGE**

8 Years 5 Months

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

No evidence of a significant structural or functional cardiomyopathy as a cardiogenic cause of the patient's clinical signs. The lack of LA enlargement indicates the current and future risk of complication at this stage is low. No indication for cardiac medication. Assessment of systemic BP given minor aortic valve insufficiency for evidence of hypertension as well as ECG for evidence of paroxysmal arrhythmia is recommended. Echocardiographic monitoring is suggested with recheck in six months, sooner if clinically indicated.

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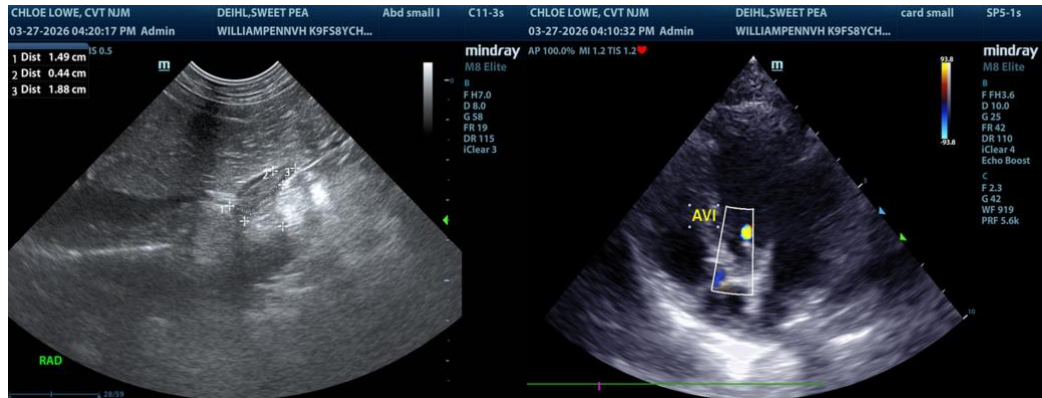
No overt evidence of abdominal neoplastic criteria or visceral pathology as an obvious contributing factor to the anemia. CBC pathology review and infectious disease serology may be considered. Empirical therapy for immune-mediated or infectious anemia would be appropriate. Hepatosupportive medications may prove beneficial. No cardiac contraindications to steroid use.

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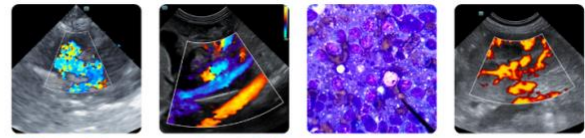
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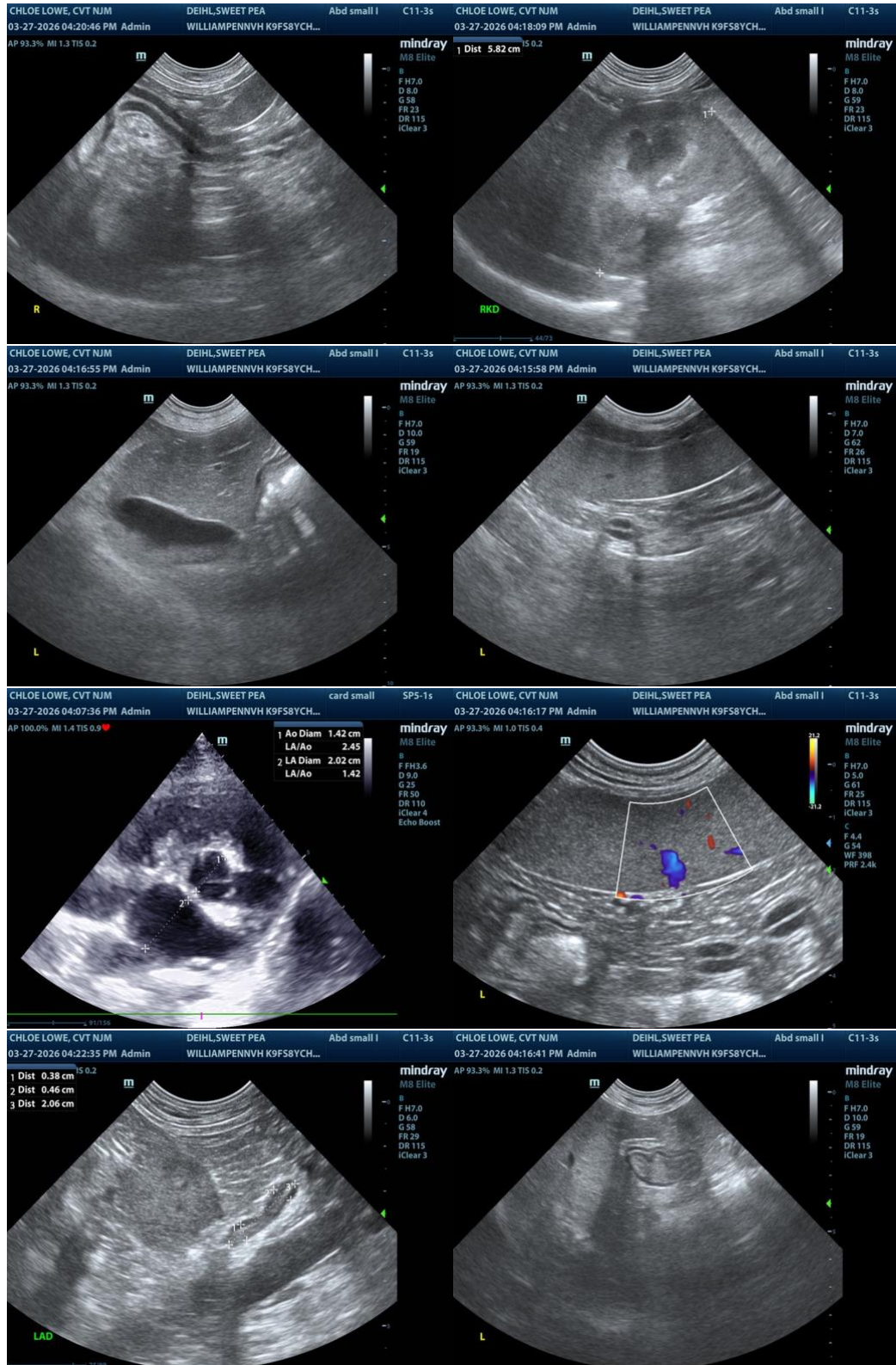
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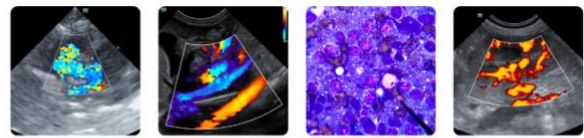
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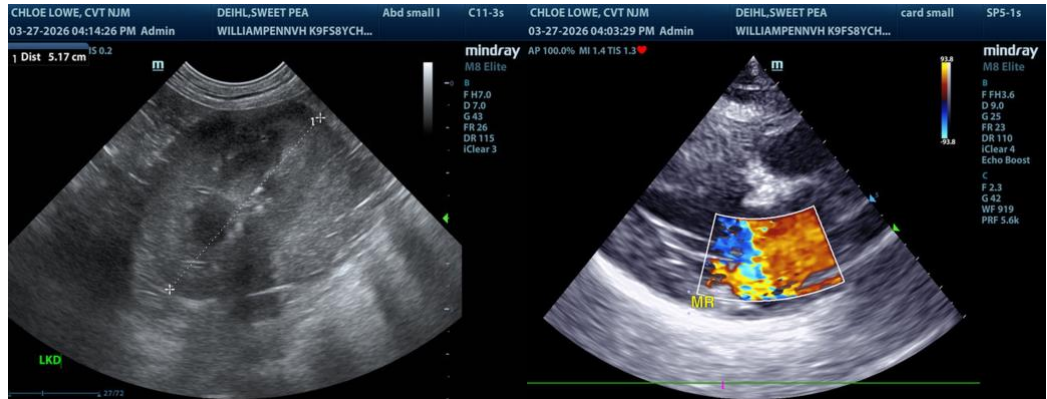
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

[info@SonoPath.com](mailto:info@SonoPath.com)