



PATIENT

Lily Dicastro

SPECIES

Canine

BREED

Shih Tzu Mix

SEX

Spayed Female

AGE

14 Years

WEIGHT

16.3 pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Sorbo

HOSPITAL NAME

JM Pet Resort &
Veterinary Clinic

REFERRING VET

Dr. Sorbo

INVOICE

13884

DATE

02/19/26

PRESENTING CLINICAL SIGNS

- Vomiting for several months, increased thirst, no change in weight
- Recheck echo from a year ago: Early stage B-2 valvular disease.

Abnormal PE/Chem/CBC/UA Results: Grade III/VI pansystolic murmur. Texas A&M GI labs sent out.

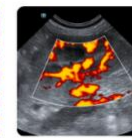
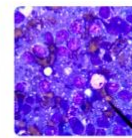
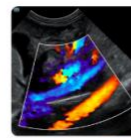
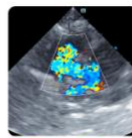
ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

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	1.9	45	78	0.3
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	NM	1.1	0.9	16.3	3.7	3.0	--

Cardiac Presentation

The echocardiogram in this patient demonstrated moderate increased **left atrial** dimension based on 2 different LA measurement methods with minor deviation of the intra-atrial septum. The cranial and caudal **mitral** valve leaflets presented thickening consistent with endocardiosis with valvular prolapse. Doppler indicated moderate eccentric MR. The **left ventricle** presented borderline to mild 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 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.

Urinary System



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The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra 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.

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 3.5 cm in length. The right kidney measured 4.0 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 0.44 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 0.40 cm width at the caudal pole.

Spleen

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.

Liver & Gallbladder

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The hepatic and portal vasculature were normal in appearance without signs of congestion.

The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

Gastrointestinal

The stomach presented mildly thickened wall. Intact wall layering was maintained and distinct. The stomach contained a mild amount of retained anechoic fluid.

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 pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.



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ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease with mitral valve prolapse (B2).
- Mild hypomotile gastritis.
- Normal empty small intestine.
- Mild pancreatic remodeling.
- Age-related renal changes.
- Normal adrenal glands.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is chronic degenerative valvular changes with secondary eccentric mitral valve insufficiency. The left atrial enlargement implies that the risk of complication secondary to mitral valve insufficiency is elevated, yet overall the heart appears stable. No other clinical issues such as LV systolic dysfunction or clinical pulmonary hypertension. Pimobendan 0.3 mg/kg BID is recommended. No overt indication for additional medication. Prognosis is considered variable and sonographic monitoring is recommended. Recheck echo cardiogram is suggested in 6 months, sooner if clinical signs arise. Anesthetic risk is considered mild to moderate yet likely reduced once on Pimobendan for 3-5 days. If required, the following protocol is recommended. 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.

Correlation with pending GI panel is recommended. Mild to chronic pancreatitis at times may present sonographically normal and may be suspected of cranial abdomen/subxiphoid discomfort on palpation. Empirical therapy for gastritis, which may include dietary trial and as needed gastroprotectants +/- empirical coverage for helicobacter may prove beneficial.

Sonographic monitoring indicated if continued gastrointestinal signs with consideration for upper gastrointestinal endoscopy. Although thought less likely, screening cortisol level to rule out occult Addison's disease is warranted.





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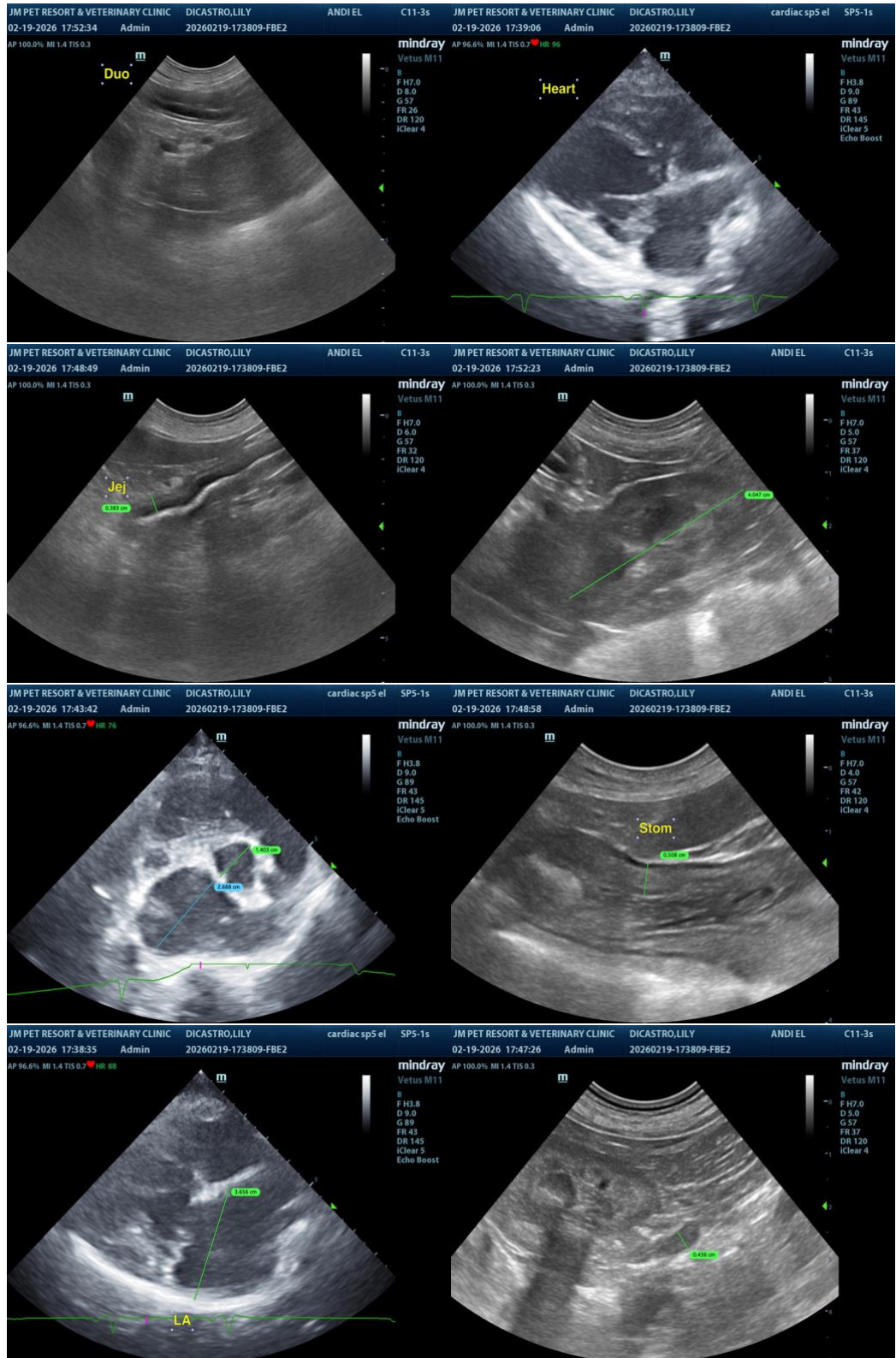
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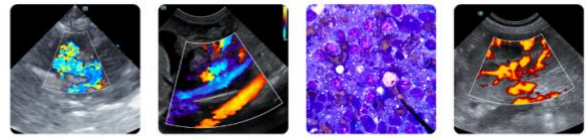
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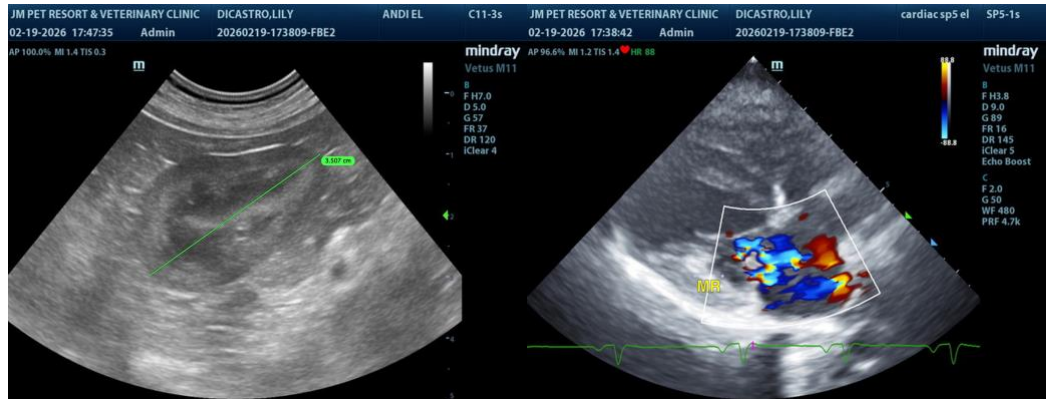
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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