



**PATIENT**

Max Lilienthal

**SPECIES**

Canine

**BREED**

Yorkshire Terrier Mix

**SEX**

Male Intact

**AGE**

10Y

**WEIGHT**

22lbs

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Rebecca Hamilton

**HOSPITAL NAME**

Animal Paradise  
Hospital

**REFERRING VET**

Dr. Elshafie

**INVOICE**

75551

**DATE**

6-17-26

**PRESENTING CLINICAL SIGNS**

Gastroenteritis R/O FB vs. pancreatitis vs. others. rad report: mild splenomegaly, mild generalized cardiomegaly, mild diffuse bronchointerstitial pulmonary pattern. Meds: Clavamox tabs 125 mg 1 BID, Provable DC 1SID, Metronidazole 2 ml BID

Abnormal PE/Chem/CBC/UA Results: K 3.3, TP 8.4, WBC 37.27, Neu 33.20, Mono 2.93, CPL Normal, T4 1.8, 4dx neg

**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			--	1.3	44	77	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	132	1.5	1.0	22	3.0	3.0	

**Cardiac Presentation**

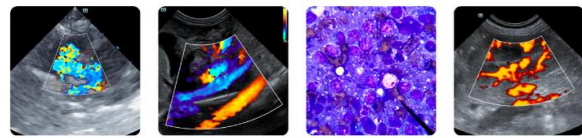
The echocardiogram in this patient demonstrated normal **left atrial** size based on 2 different LA measurement methods. The cranial and caudal **mitral** valve leaflets presented mild thickening consistent with endocardiosis. Mild centralized eccentric MR 5.5 m/s. Doppler indicated measurable insufficiency. 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. 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. Mild TR on Doppler. Measured TR velocity 2.5 m/s. 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**

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



<b>PATIENT</b>	sediment. The ureteral papillae were normal. The ureters were not visible, which is normal. No evidence of inflammatory or neoplastic changes were noted.
Max Lilienthal	
<b>SPECIES</b>	The prostate was mildly enlarged in size with intact, symmetrical capsule contour. The margins of the gland were intact and able to be differentiated from the surrounding tissue. The prostatic parenchyma was mildly echogenic to heteroechoic without parenchymal mineralization. The prostate measured 2.5 cm diameter.
Canine	
<b>BREED</b>	The left and right testicle were sonographically normal.
Yorkshire Terrier Mix	The area of the iliac trifurcation was free of pathology.
<b>SEX</b>	Normal size and margination were 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 with no evidence of pelvic dilation. The left kidney measured 5.2 cm in length. The right kidney measured 5.8 cm in length.
Male Intact	
<b>AGE</b>	<b><i>Adrenal Glands</i></b>
10Y	The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.53 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 0.49 cm width at the caudal pole.
<b>WEIGHT</b>	<b><i>Spleen</i></b>
22lbs	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.
<b>INTERPRETED BY</b>	<b><i>Liver/ Gallbladder</i></b>
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	The liver presented subjectively 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.
<b>IMAGING PERFORMED BY</b>	The gallbladder was non-distended in size with thin walls and mild nonorganized gallbladder debris. The cystic and common bile ducts were normal.
Rebecca Hamilton	
<b>HOSPITAL NAME</b>	<b><i>Gastrointestinal</i></b>
Animal Paradise Hospital	The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty without evidence of retained ingesta, fluid, or foreign material.
<b>REFERRING VET</b>	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.
Dr. Elshafie	Normal visible colon wall layers were present with formed feces in lumen.
<b>INVOICE</b>	<b><i>Pancreas</i></b>
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The pancreas was mildly prominent in size with capsule asymmetry and isoechoic mildly heterogeneous parenchyma compared to adjacent mild hyperechoic peripancreatic omentum. No evidence of regional inflammation.

**SPECIES**

Canine

**Free Abdomen**

No overt lymphadenopathy or peritoneal effusion was present.

**BREED**

Yorkshire Terrier Mix

**ULTRASONOGRAPHIC FINDINGS**

**SEX**

Male Intact

- Normal cardiac structure/function.
- Mild compensated mitral valve insufficiency (B1).
- Mild tricuspid valve insufficiency - no clinical pulmonary hypertension.
- Benign hepatomegaly.
- Mild nonorganized gallbladder debris (nonmucocele).
- Normal spleen.
- Normal gastrointestinal tract/colon.
- Probable chronic active pancreatitis.
- Mild benign prostatic hyperplasia.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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.

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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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Dr. Elshafie

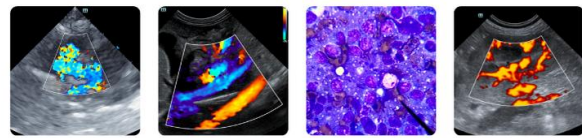
Despite normal cPL, the pancreas exhibited mild sonographic inflammatory criteria with mild surrounding reactive peripancreatic omentum. Correlation with cranial abdomen or subxiphoid palpation to assess for evidence of discomfort. Full GI panel to include PLI/TLI/Cobalamin/Folate may be considered. Gastrointestinal support and empirical therapy for mild chronic active pancreatitis with clinical monitoring recommended. Sonographic reassessment if nonresponsive or continued gastrointestinal signs. Monitoring of liver parameters for evidence of hepatopathy or cholestasis is recommended.

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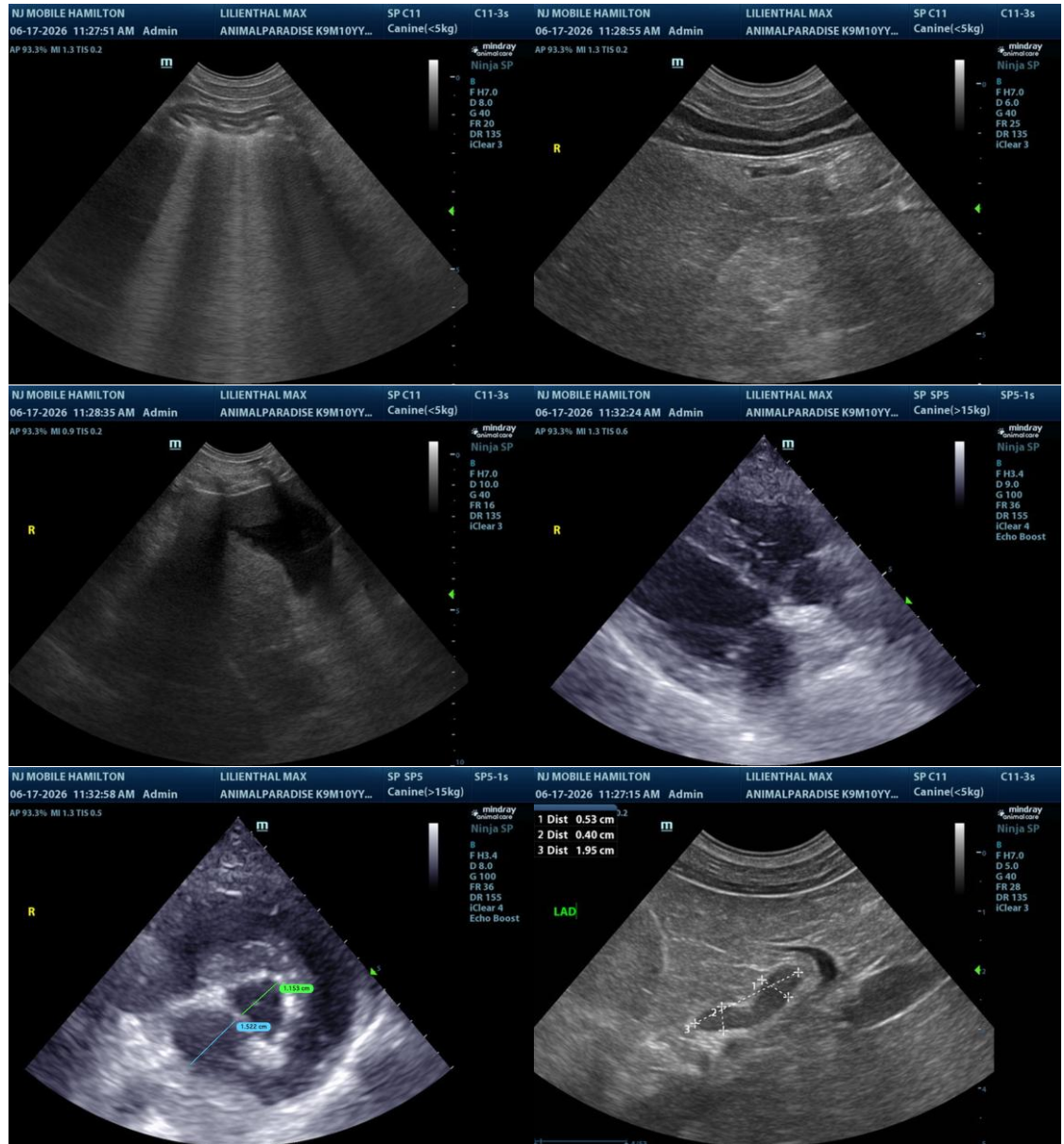
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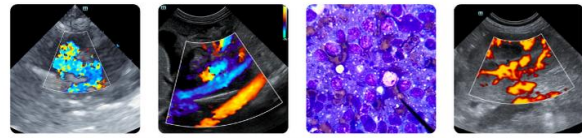
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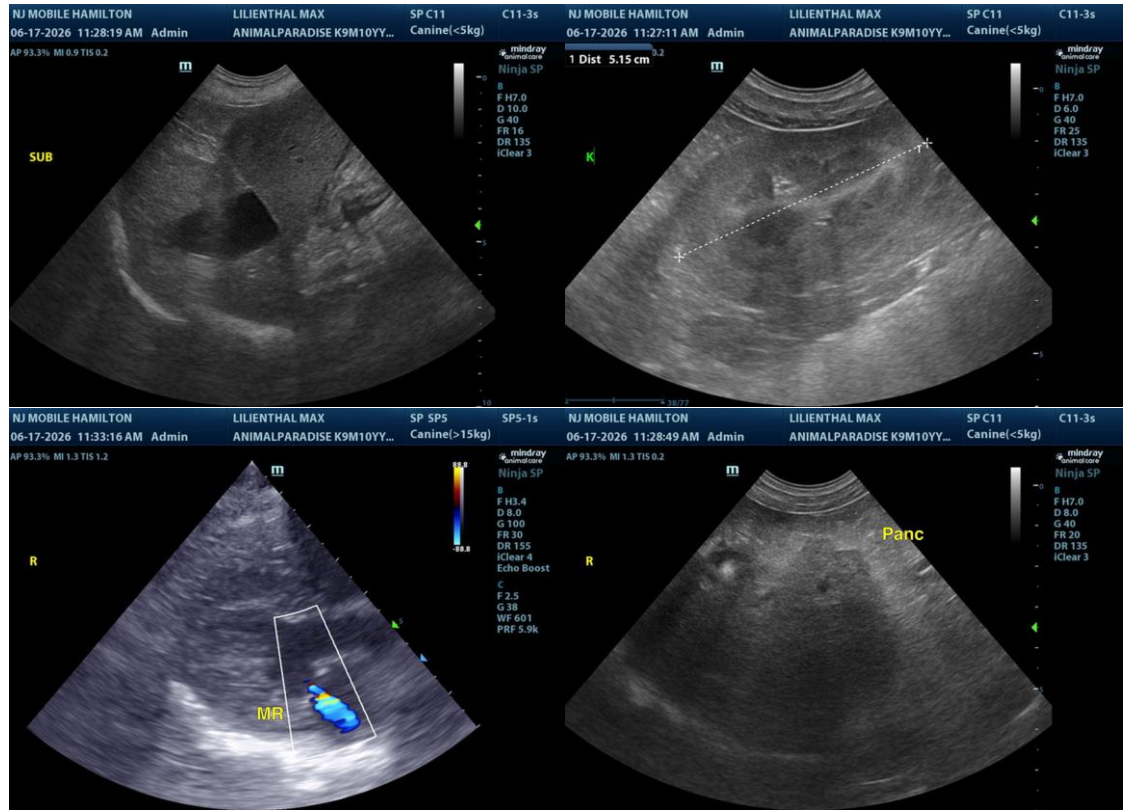
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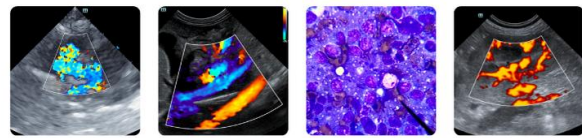
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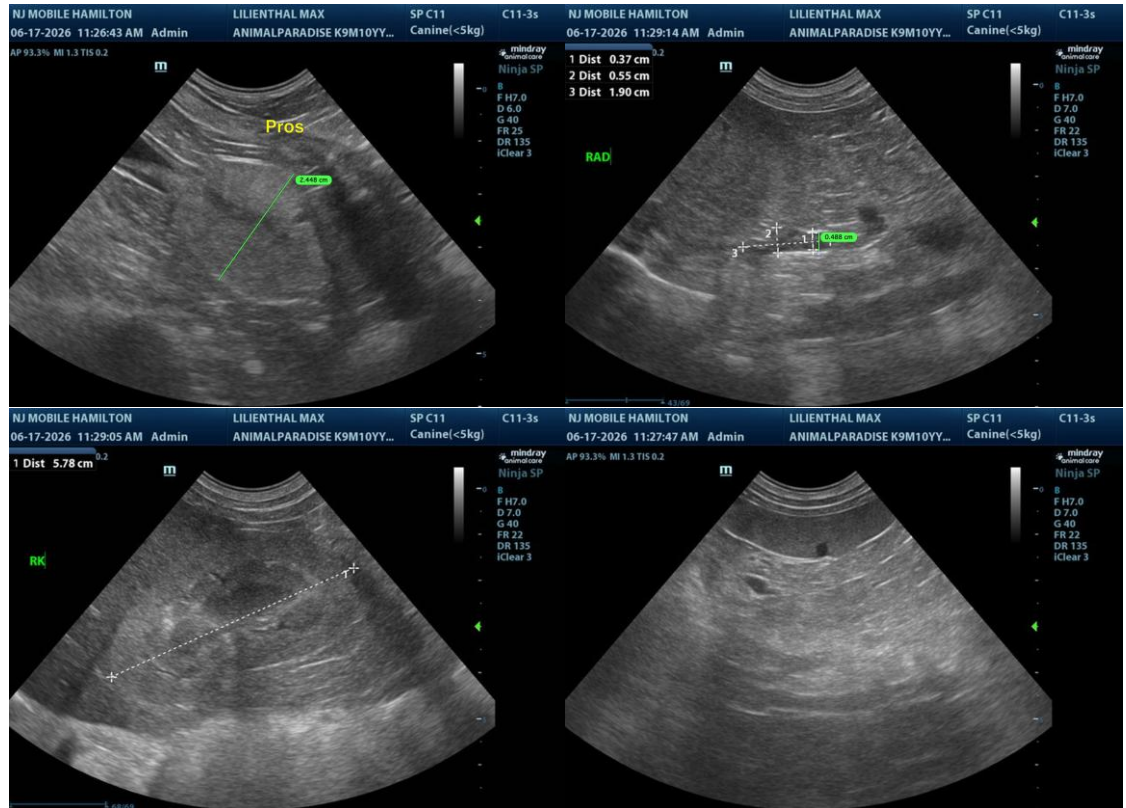
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)