



## PATIENT

Max Lojoi

## SPECIES

Canine

## BREED

Coton De Tulear

## SEX

Neutered Male

## AGE

11 Years

## WEIGHT

18 Pounds

## PRESENTING CLINICAL SIGNS

History: History of CHF - advanced, free fluid in abdomen, renal compromise. Current meds: Azodyl, Epakitin, Lasix, Enalapril, Theophylline, Denamarin.

Abnormal PE/Chem/CBC/UA Results: Elevated liver values, elevated renal values.

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
PATIENT	5.8	3.8	2.4	2.7	47.4	82.3	0.23
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LA 2D short axis Base view (cm)	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	104	1.5	1.1	--	5.2	4.18	--

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Kelly Vazquez

## HOSPITAL NAME

Westwood Regional  
VH

## REFERRING VET

Dr. Cattiny

## INVOICE

14791

## DATE

4/15/22

### Cardiac Presentation

The **left atrium** was severely enlarged expressed both in the LA/AO and LA max measurements. Deviation of the intraatrial septum toward the right atrium, consistent with elevated left atrial pressure. Doppler indicated measurable moderate to severe eccentric insufficiency. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable insufficiency. The **left ventricle** presented thicknesses with linear contour with increased left ventricle volume. 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 mildly dynamic to turbulent systolic flow with moderate insufficiency, measuring 5.5 m/s, on doppler.

The **right atrium** and auricle revealed mild increased size with normal content and without evidence of masses. **Tricuspid** valvular assessment demonstrated concurrent vegetative thickening with moderate TR on doppler. The **right ventricle** exhibited subjective minor enlargement compared to the left ventricle with normal myocardial echogenicity and thickness. **Pulmonic** tract assessment revealed

overtly normal valve structure, mild dynamic to turbulent systolic flow, normal diameter with moderate insufficiency (3.0 m/s) on doppler. No visible **pericardial** or free pleura fluid was noted. A nonspecific, primarily homogeneous lesion, associated with the tricuspid valve, extending mildly into the right ventricle was present, measuring 2.4 cm x 0.89 cm. The cranial **mediastinum and pericardial regions** were free of masses in the visible window.



**PATIENT**

Max Lojoi

**Urinary System**

**SPECIES**

Canine

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 changes were noted. Aortic trifurcation was normal.

**BREED**

Coton De Tulear

The residual prostate was free of pathology.

**SEX**

Neutered Male

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 moderate loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 5.9 cm in length. The right kidney measured 6.4 cm in length. Small cortical cysts were present.

**AGE**

11 Years

**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 1.6 cm x 0.73 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 2.6 cm x 0.46 cm width at the caudal pole.

**WEIGHT**

18 Pounds

**Spleen**

The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. 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. The parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age-related remodeling with minor potential for inflammatory or neoplastic disease. Pinpoint hyperechoic foci, consistent with pinpoint areas of microinfarction, fibrosis or mineralization. This is an incidental finding.

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Kelly Vazquez

**Liver**

**HOSPITAL NAME**

Westwood Regional  
VH

The liver presented enlarged in size with symmetrical yet swollen contour. The parenchyma exhibited generalized parenchymal remodeling. The hepatic vasculature was dilated in appearance, most notable at the level of the hepatic vein / caudal vena cava junction, without evidence of thrombosis.

**REFERRING VET**

Dr. Cattiny

The gallbladder was normal with very minor luminal sludge. The cystic and common bile ducts were normal.

**Gastrointestinal**

**INVOICE**

14791

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained moderate non-shadowing ingesta/chyme without signs of obstruction or foreign material.

**DATE**

4/15/22

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.



**PATIENT**

***Pancreas***

Max Lojoi

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.

**SPECIES**

Canine

***Free Abdomen***

Moderate volume, subjectively acellular ascites was noted. Generalized mild reactive mesentery was present. No evidence of concurrent lymphadenopathy.

**BREED**

Coton De Tulear

**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings**

**SEX**

Neutered Male

- Chronic mitral valve disease (advanced ACVIM Stage C)
- Moderate pulmonary hypertension- estimated pulmonary pressure gradient approximately 58 mmHg.
- Aortic/pulmonic valve insufficiency
- Possible yet not definitive homogeneous mass lesion associated with tricuspid valve
- Congestive hepatomegaly, exhibiting parenchymal remodeling
- Moderate volume ascites

**AGE**

11 Years

**WEIGHT**

18 Pounds

**Secondary Findings**

- Mild chronic renal changes with cortical cysts

**INTERPRETED BY**

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

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The left heart volume overload in this patient, which predisposes to secondary increased pulmonary pressure and moderate pulmonary hypertension, is consistent with congestive heart failure and cardiogenic ascites.

**IMAGING PERFORMED BY**

Kelly Vazquez

The cardiomyopathy in this patient is advanced with very guarded to potentially poor prognosis, going forward, with high probability of continued episodes of congestive heart failure, development of malignant arrhythmias and potential for sudden death given the moderate pulmonary hypertension.

**HOSPITAL NAME**

Westwood Regional  
VH

Pimobendan at 0.3 mg/kg PO BID, continued diuretic protocol, including Lasix/Spironolactone combination at 1-2 mg/kg PO BID +/- low-dose sildenafil at 1 mg/kg PO BID recommended. Continued close monitoring of renal parameters, given chronic renal disease, assessment of systemic blood pressure and ideally, ECG recommended. Prophylactic abdominocentesis may be required.

**REFERRING VET**

Dr. Cattiny

Recheck echocardiogram suggested, as needed, if continued episodes of CHF or other signs of cardiac disease. Very guarded to unfavorable long-term prognosis.

**INVOICE**

14791

**DATE**

4/15/22



**PATIENT**

Max Lojoi

**SPECIES**

Canine

**BREED**

Coton De Tulear

**SEX**

Neutered Male

**AGE**

11 Years

**WEIGHT**

18 Pounds

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Kelly Vazquez

**HOSPITAL NAME**

Westwood Regional  
VH

**REFERRING VET**

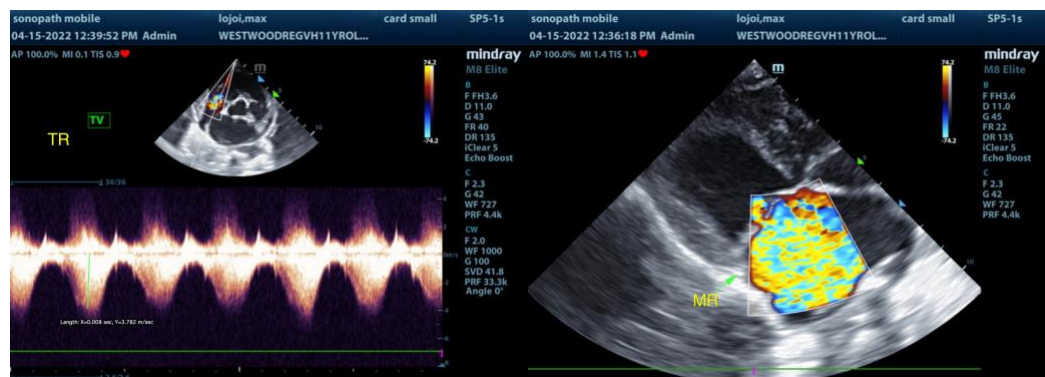
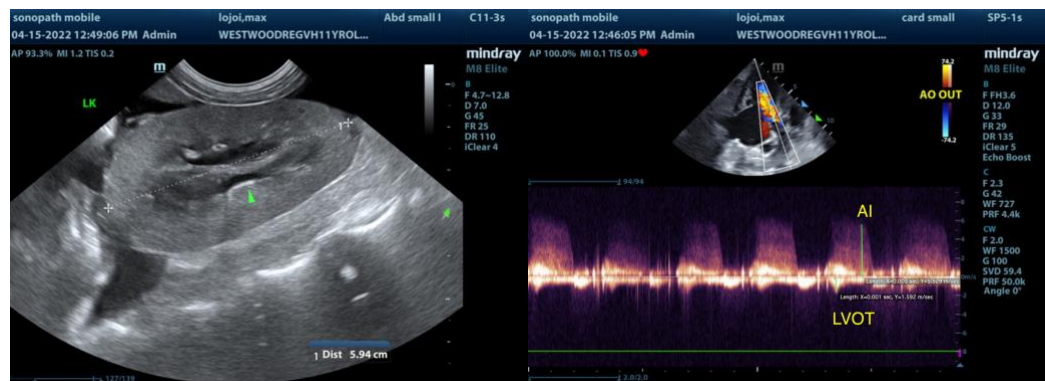
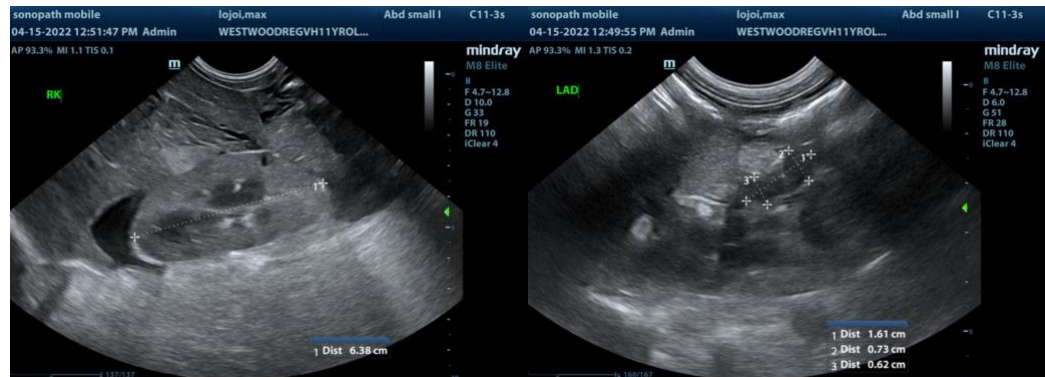
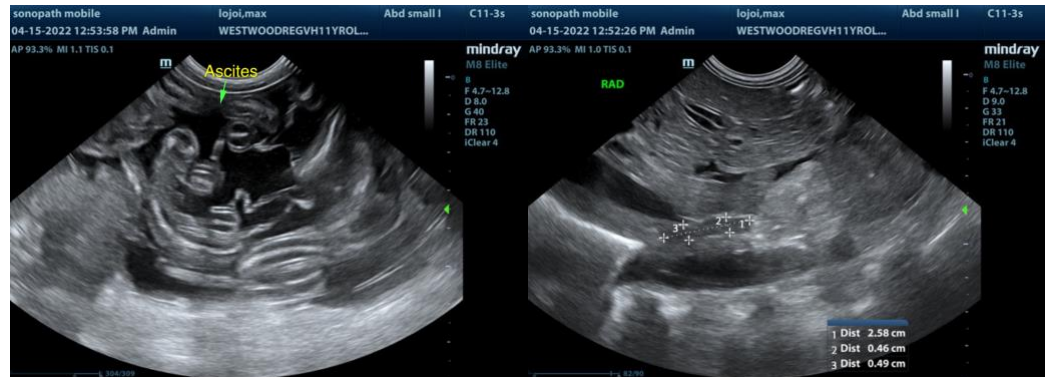
Dr. Cattiny

**INVOICE**

14791

**DATE**

4/15/22





**PATIENT**

Max Lojoi

**SPECIES**

Canine

**BREED**

Coton De Tulear

**SEX**

Neutered Male

**AGE**

11 Years

**WEIGHT**

18 Pounds

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Kelly Vazquez

**HOSPITAL NAME**

Westwood Regional  
VH

**REFERRING VET**

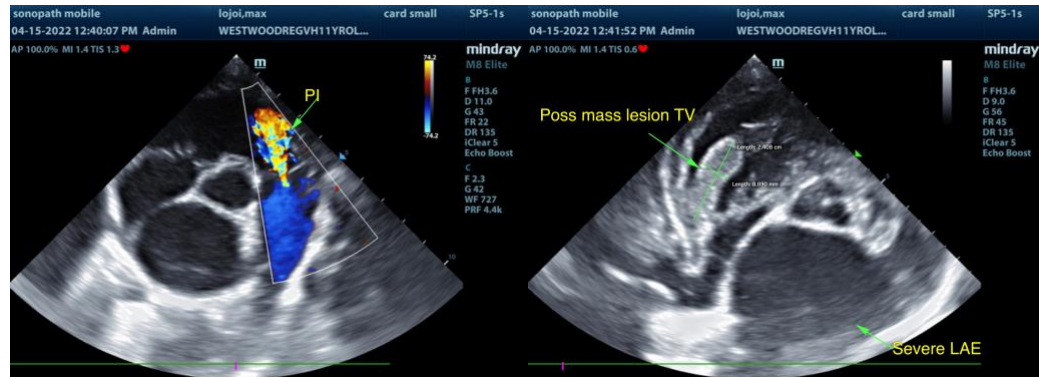
Dr. Cattiny

**INVOICE**

14791

**DATE**

4/15/22



The information and recommendations provided are based on the images presented by the referring veterinarian. 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