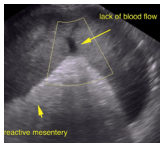
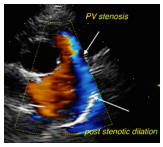
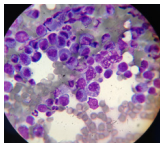
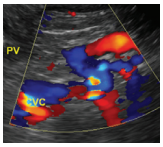
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™





SonoPath.com™
1-800-838-4268 info@sonopath.com

PATIENT
Private Ryan Riotto

SPECIES
Canine

BREED
Doberman Pinscher

SEX
Neutered Male

AGE
8 Years

WEIGHT
115 Pounds

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

IMAGING PERFORMED BY
Diane McFadden

HOSPITAL NAME
Animal Mansion

REFERRING VET
Dr. Parker

INVOICE
35213

DATE
1/31/22

PRESENTING CLINICAL SIGNS

presented initially for coughing; has progressed. furosemide 300mg IV given today, also torbugesic.
Abnormal PE/Chem/CBC/UA Results: pending

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

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	<1.6	28-40	40-100	<0.6
PATIENT	4.0	<2.0	NM	1.8	9	20	1.0
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	NM	1.1	0.9		6.3	5.8	

Cardiac Presentation

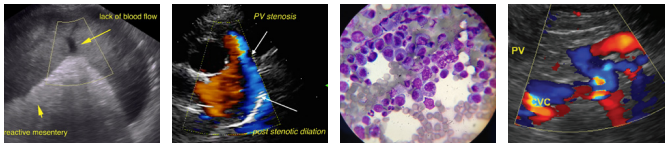
The echocardiogram for this patient presented excessive **left atrial size** expressed in 3 different LA measurement methods. Left atrial content was anechoic. No evidence of "smoke" or thrombotic activity was noted. The atrial septum was deviated owing to volume overload. The cranial and caudal **mitral** valve leaflets presented normal linear structure yet mild, primarily centralized insufficiency was noted. The **left ventricle** demonstrated excessive volume (LVIDd measurement below). Ventricular function was subnormal expressed by the fractional shortening measurement listed below. Myocardium appeared subjectively thin typical of DCM. 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** free fluid was present, with mild volume free **pleural** fluid noted. The cranial **mediastinum and pericardial regions** were free of masses in the visible window.

ULTRASONOGRAPHIC FINDINGS

- Dilated cardiomyopathy with severe LV systolic dysfunction
- Moderate LA enlargement

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The echocardiogram is consistent with DCM presentation with LV systolic failure as well as evidence of left heart volume overload. This may be primary in nature (breed associated DCM) or potentially secondary to taurine deficiency, systemic or endocrine disease such as hypothyroidism, myocarditis, or less likely infiltrative disease such as lymphoma. In a Doberman Pinscher, primary DCM is certainly a



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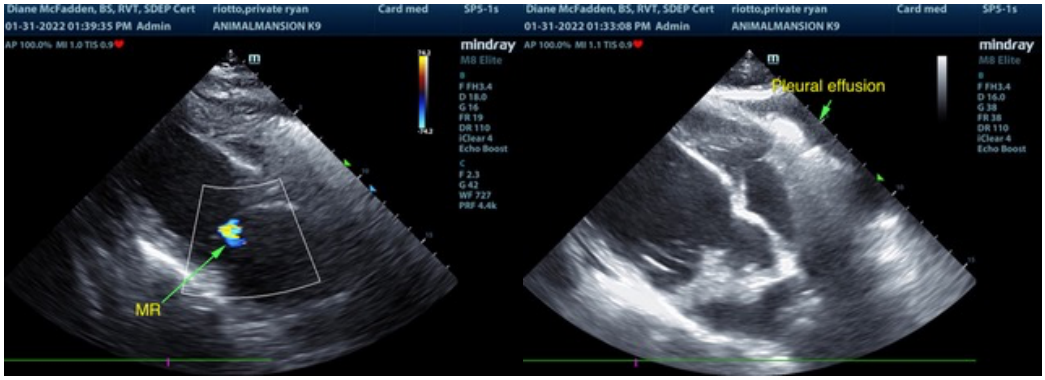
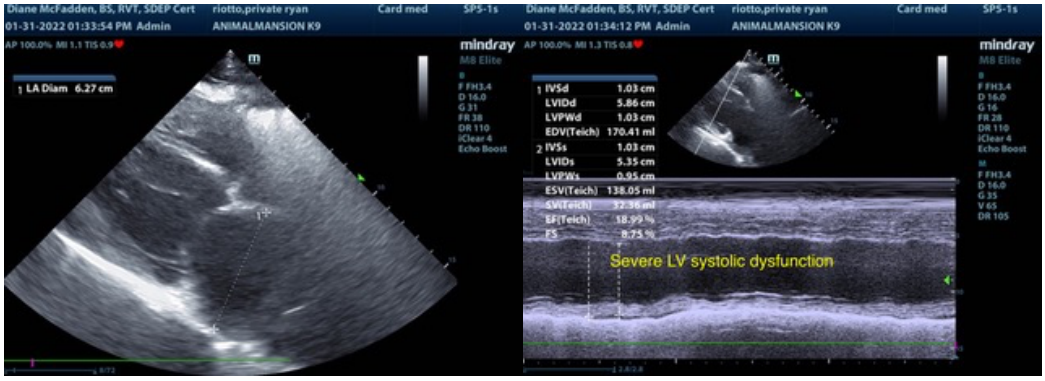
reasonable diagnosis. If clinically indicated, diet history, thyroid status, and troponin levels could be considered. However, prognosis at this stage is unchanged. Given these findings, the cause of pulmonary edema pattern on submitted radiograph as well as concurrent pleural free fluid is consistent with left-sided CHF. Consider hospitalization for supportive care until stabilized. Baseline ECG and blood pressure recommended. Pimobendan 0.3 mg/kg PO BID initially, Spironolactone/Lasix combination at 1-2 mg/kg PO BID +/- taurine supplementation recommended. If blood pressure is >130, ACE inhibitor at 0.5 mg/kg PO BID could be considered. Even if response to medications is good, this patient will always be at continued elevated risk for CHF, malignant arrhythmias, and/or potential for sudden death going forward. Recheck suggested in 3-4 months, sooner if continued clinical signs are present.





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