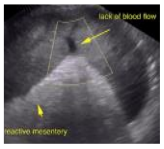
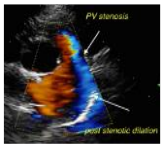
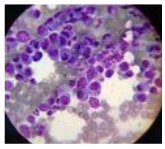
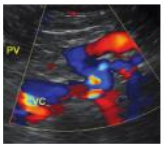
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™





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

PATIENT
George Michael Nordstrom

SPECIES
Feline

BREED
DSH

SEX
MN

AGE
4 years

WEIGHT
11.5 lbs.

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

IMAGING PERFORMED BY
Jenna Walsh, CVT

HOSPITAL NAME
West Eugene AH

REFERRING VET
Dr. Sundholm

INVOICE
16585

DATE
4/12/23

PRESENTING CLINICAL SIGNS

George Michael presented to our clinic on 4/5/23 for a 3 month history of labored breathing. Thoracic radiographs revealed severe pleural effusion and he was transferred to the ER for further care. A thoracocentesis was performed 4/7/23 and 250mL serosanguineous fluid was removed. CHF was suspected based on further testing. George Michael is tachypneic with increased respiratory effort today urrent Medications Rx Clopidogrel 75mg tabs #3.5 Sig: 1/4 tab PO q24hr Rx Furosemide 12.5mg tablets #28 Sig: 1 tab PO q12hr Rx Pimobendan 1.25mg tabs #28 Sig: 1 tab PO q12hr Radiographic Findings Three-view thoracic rads after thoracocentesis: Mild to moderate amount of pleural effusion. Cardiomegaly. Pulmonary edema in cranial lung fields with air bronchograms.

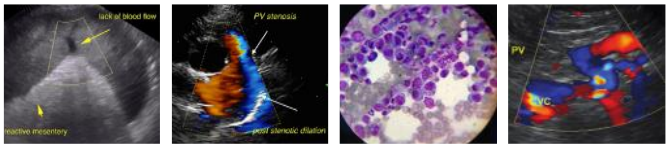
Abnormal PE/Chem/CBC/UA Results: SNAP BnP test: 1444.8 pmol/L FeLV/FIV neg/neg CBC/Chem: HCT 24%; ALT 250

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

FELINE CARDIAC PARAMETERS	**BODY WEIGHT** (kg)	**HR** (BPM)	**IVSd** (cm)	**LVIDd** (cm)	**LVWd** (cm)	**FS** (%)	**EF** (%)
NORMAL PARAMETER	------	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT		180	0.5	1.5	0.5	40	70
FELINE CARDIAC PARAMETERS	**LA/AO** (Boon)	**LA/AO HEART BASE** (Sisson)	**LA** 2D 4-chamber long axis AS to FW (Sisson) (cm)		**LVOT VEL.** (m/s)	**RVOT VEL.** (m/s)	**IVRT** (m/)
NORMAL PARAMETER	<1.5	0.88-1.79	0.7-1.7		<1.6	<1.3	40-60
PATIENT	2.8	2.8	2.3		1.0	0.6	NM
Adapted from June Boon,Veterinary Echocardiography,1998 Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705							

Cardiac Presentation

The echocardiogram in this patient demonstrated enlarged **left atrial** size based on 3 separate LA measurements. Evidence of spontaneous contrast to disorganized thrombus was noted in the left atrium. The cranial and caudal **mitral** valve leaflets presented mild thickening with mild centralized to eccentric MR on Doppler. The **left ventricular** septum and free wall revealed normal thicknesses, adequate contractility and normal left ventricular volume, yet hyperechoic endocardium and echogenic remodeling of the septum and free wall were noted consistent with **myocardial fibrosis**. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed increased size and normal content. No evidence of masses was noted or chamber overload. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinetics. Trace TR was present on Doppler. The **right ventricle** was enlarged in size with normal 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



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pericardial free fluid was noted. Mild to moderate volume anechoic free pleural fluid was present. No overt evidence of extracardiac pathology or cardiac tumors was noted in the visible window.

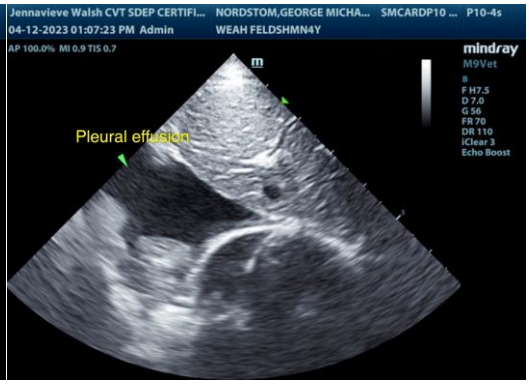
ULTRASONOGRAPHIC FINDINGS

- Unclassified cardiomyopathy
- Biatrial enlargement with evidence of LA spontaneous contrast / disorganized thrombus
- Pleural effusion
- Mild MR/TR

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cardiac classification is most consistent with unclassified cardiomyopathy, given biatrial enlargement in the face of normal LV wall thickness. However, restrictive or burnout / end stage hypertrophic cardiomyopathy can have this appearance. Regardless of categorical classification, the degree of atrial dilation is consistent with congestive heart failure. Given the presence of LA spontaneous contrast and disorganized thrombus, this patient is at a significantly increased risk for aortic thromboembolism.

The long-term prognosis is likely poor. However, continued current cardiac medication protocol with monitoring for evidence of recurrent CHF, development of malignant arrhythmias, as well as aortic thromboembolism, is recommended. Recheck echocardiogram is recommended in 4-6 months, sooner if clinically indicated.



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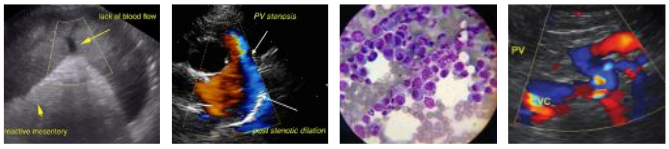

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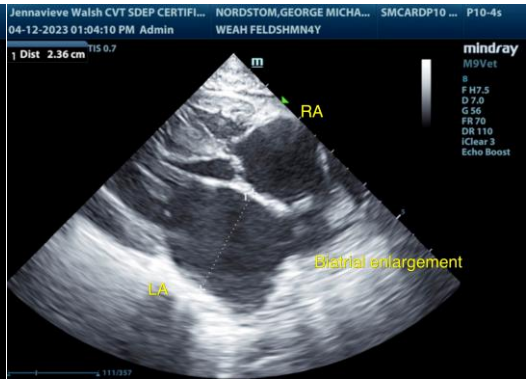

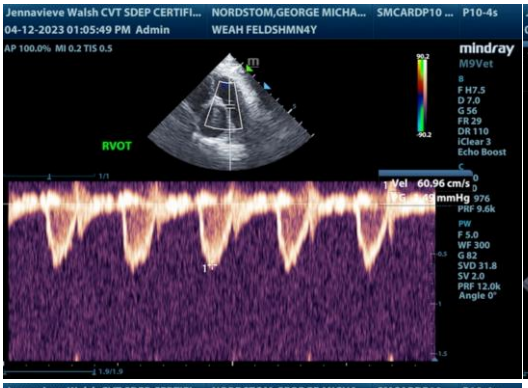

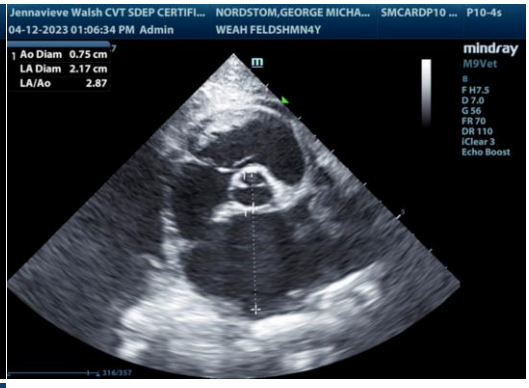

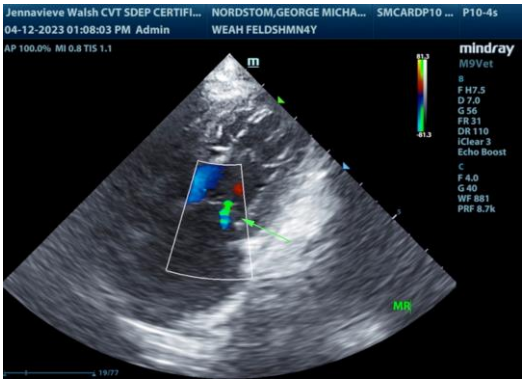

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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