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Clinical Sonography & Telecytology
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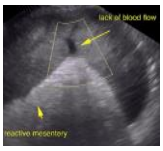
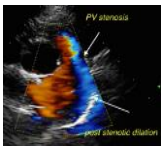
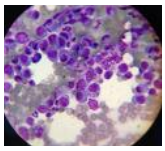
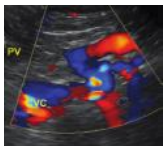

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1-800-838-4268 info@sonopath.com

PATIENT

Blackie Tufaro

SPECIES

Feline

BREED

DSH

SEX

MN

AGE

14 yr

WEIGHT

15.8 lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Shari Reffi CVT

HOSPITAL NAME

Newton Vet

REFERRING VET

Dr. Chabora

INVOICE

10792ag

DATE

06/13/2022

PRESENTING CLINICAL SIGNS

History: Pleural effusion. Current meds: Furosemide 2mg/kg q12h

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		224	0.4	1.88	0.4	26	54
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	1.58	1.4	1.5			0.72	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 normal left atrial size based on 3 separate LA measurement methods. No evidence of spontaneous contrast or smoke was noted. The cranial and caudal mitral valve leaflets presented normal linear structure and kinetics. No overt MR was present. The left ventricular septum and free wall revealed mild subnormal contractility and mildly increased left ventricular volume. Some echogenic remodeling of the septum and free wall was present. Mildly prominent to remodeled papillary muscles were present. This is most consistent with some level of myocardial fibrosis or potential age related change. 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. No overt TR was present. 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). Mild to moderate volume subjective anechoic pleural free fluid was present. No overt evidence of concurrent pericardial free fluid. No overt cardiac or pericardial tumors in the visible window.

ULTRASONOGRAPHIC FINDINGS

- Mild subjective increased LV enlargement exhibiting mild myocardial remodeling and LV hypocontractility.
- Normal LA
- Pleural effusion

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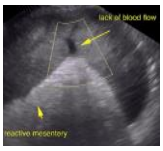

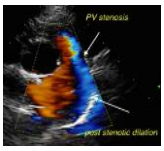

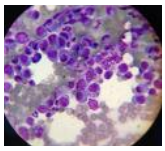
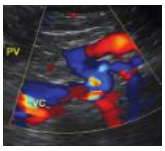

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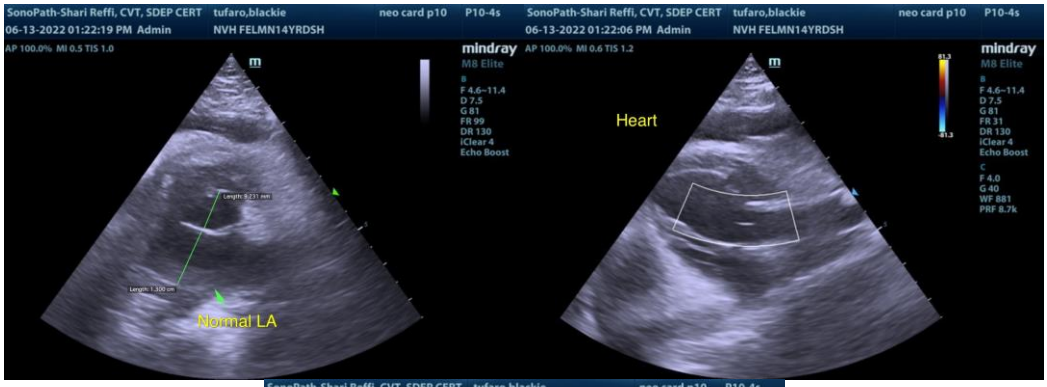
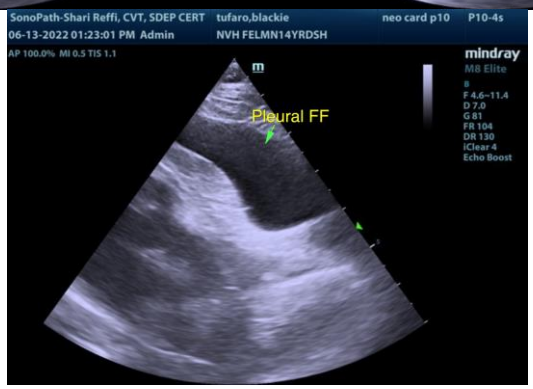
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The primary finding in this study is the subjective mild increased LV size, myocardial remodeling and mild LV systolic dysfunction. This may indicate some degree of suspected myocardial fibrosis and/or patient/age related variant with LV systolic or diastolic dysfunction. However, the lack of LA enlargement as well as overall lack of significant left or right heart chamber enlargement was not overtly consistent with cardiogenic pleural free fluid. This potential cannot be definitively excluded with potential exceptions to this interpretation including stress induced or iatrogenic event which at times may result in free fluid without evidence of LA enlargement. Ideally pleural effusion analysis, cytospin cytology +/- C/S if evidence of inflammatory cells is recommended for further assessment. Given the etiology of the pleural free fluid with some degree of cardiac changes, continued diuretic therapy assuming normal renal parameters and with continued monitoring of renal parameters as well as off label Pimobendan trial with assessment of response would be reasonable. Assessment of systemic BP if possible is recommend as well as ECG to assess for potential arrhythmogenic. Recheck echocardiogram suggested in 10-14 days, sooner if persistent/progressive pleural effusion is noted despite cardiac medications and pending effusion analysis.





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.

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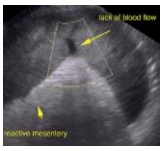

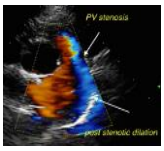

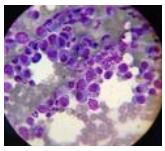
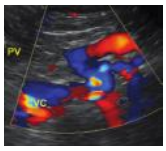

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Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

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

info@SonoPath.com