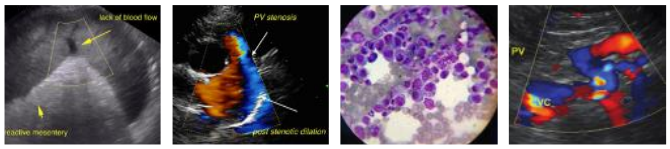
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Snoopy Pittenger

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

17 Years 10 Months

WEIGHT

11.6 Pounds

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Jenni Tudini, MRCVS

HOSPITAL NAME

East Aurora VH

REFERRING VET

Dr. Sara Huckabone

INVOICE

23477

DATE

7/18/23

PRESENTING CLINICAL SIGNS

New patient as clinic and a gallop rhythm was found during a routine p/e. Patient was diagnosed with hyperthyroidism at previous veterinarian and is currently taking Felimazole 2.5mg PO SID Medications/supplements - frontline plus for cats, nothing else, lysine on food when he is stressed, sometimes gets it daily Premedicated with Gabapentin 100mg 2 hrs prior to visit with Butorphanol 0.2mg/kg IV prior to scan

Abnormal PE/Chem/CBC/UA Results: Cardiovascular Notes: - Normal rate, gallop rhythm appreciated - No murmur appreciated CBC: - RBC 6.75 (7.12 - 11.46 M/µL) BIOCHEM: - Cardiopet proBNP (Feline) e 804 (0 - 100 pmol/L) All other parameters on a complete CBC/Biochem/T4 were WNL

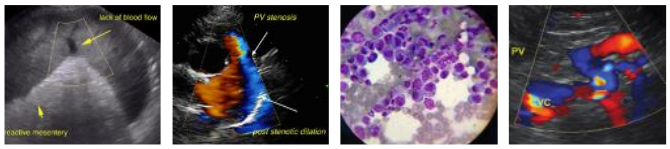
ULTRASONOGRAPHIC EXAMINATION OF THE HEART

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	--	NM	0.65	1.26	0.69	55	90
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	0.9	1.3	--		--	--	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 left atrium appeared to be subnormal in size owing to volume contraction with no evidence of “smoke” or thrombi. The cranial and caudal **mitral** valve leaflets appeared mildly thickened with some insufficiency noted on Doppler. The **left ventricle** presented excessive free wall and septal thicknesses with hypertrophic thicknesses compared to normal for this species. Mild left ventricular myocardial remodeling was noted. **Contractility** of the ventricular walls was considered excessive for this patient evidenced by the elevated fractional shortening measurement. The **left ventricular outflow** tract demonstrated turbulent laminar flow. Subjective assessment of the **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated linear morphology. The **right ventricle** was of normal size with normal chordae structure, myocardial echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter. No visible **pericardial** or free pleura fluid was noted. No echographically detectable evidence of infiltrative disease was visible. The **mediastinum** was free of masses in the visible window.

ULTRASONOGRAPHIC FINDINGS



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- Nonspecific left ventricular hypertrophy and myocardial remodeling- thyrotoxic cardiomyopathy is likely, however, underlying hypertension and primary hypertrophic cardiomyopathy can all be playing a role.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Effector organ disease, such as hyperthyroidism, renal failure and infectious agents should all be ruled out and managed. The left ventricular hypertrophy is not a functional issue at this time, however, the patient should be tested for systemic hypertension, as well as hyperthyroidism, if not already assessed and controlled. No specific therapy is recommended at this time.

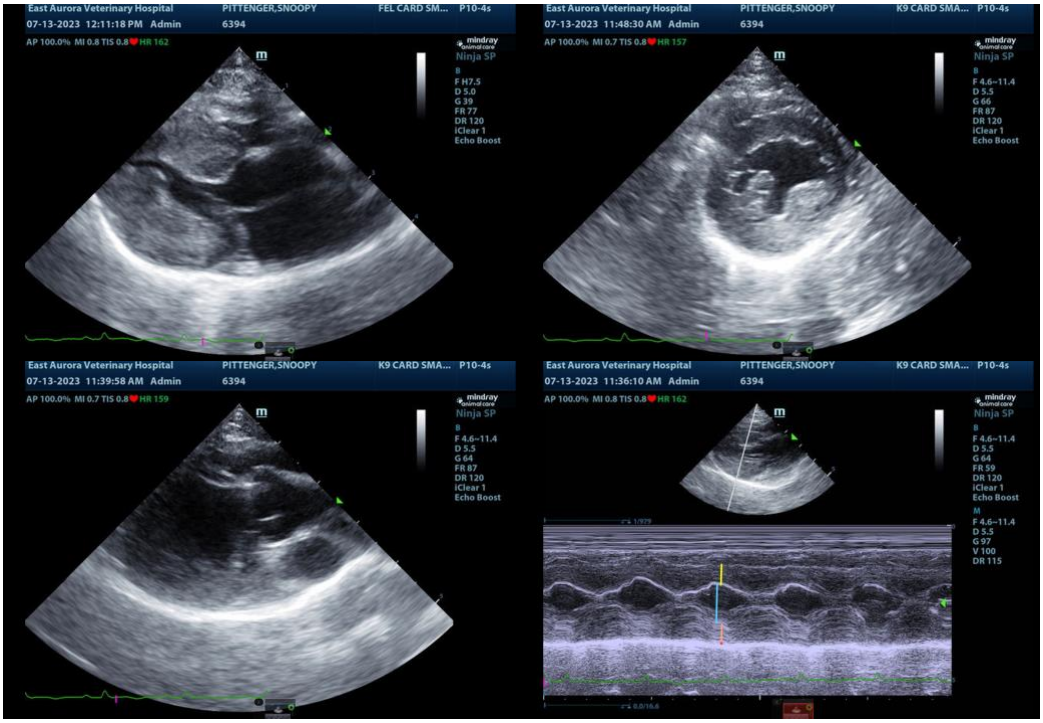
Bio markers such as NT-proBNP are screening tests for myocardial stress. A positive test (>100 pmol/liter) does not mean that cardiac disease is necessarily present.

BNP false +can occur in hyperthyroid, renal insufficiency, severe airway disease, systemic hypertension and potentially other systemic influences.

A negative result largely rules out clinically relevant myocardial disease but does not rule out occult cardiomyopathy.

In light of pleural effusion, diluting the fluid 1:1 and testing BNP on the fluid is useful to assess if the pleural effusion is cardiogenic in nature.

Ultrasound, however, is the gold standard as far as evaluating clinically significant and occult heart disease.



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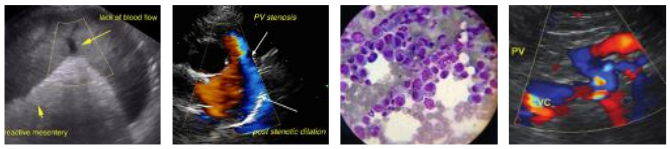

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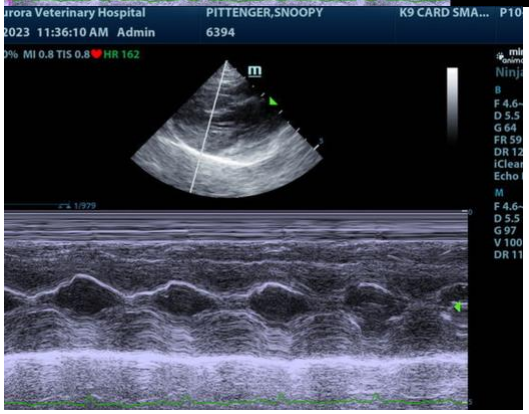

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com
info@SonoPath.com