



PATIENT

Gus Perna

SPECIES

Canine

BREED

Goldendoodle

SEX

Neutered Male

AGE

9 Years 5 Months

WEIGHT

80.6 pounds

INTERPRETED BY

Eric Lindquist, DMV,
DABVP(CFM), Cert.
IVUSS

IMAGING PERFORMED BY

Dr. Jenni Tudini,
MRCVS, SDEP Cert
(ABD)

HOSPITAL NAME

East Aurora Veterinary
Hospital

REFERRING VET

Dr. Noah Seward

INVOICE

13772

DATE

02/13/26

PRESENTING CLINICAL SIGNS

- Patient planned to have a dental prophylaxis and on pre-op bloodwork patient was noted to have an elevated Pro-BNP and so echo being performed prior to GA

Abnormal PE/Chem/CBC/UA Results: Cardiovascular Notes: - P was very nervous and breathing heavy, which made auscultation difficult. From what I could appreciate: - Normal rate and rhythm auscultated. - A possible, soft murmur could be appreciated. - Femoral pulses were WNLs. (Exam unremarkable on day of scan) - CBC: WNL - Biochem: WNL - ProBNP: 1447 (0-900) - 4Dx: NEG x 4 - Fecal: NPS

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (M-Mode)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
PATIENT	--	--	NM	1.1	35	--	0.5
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (lbs)	LAD LA MAX 4 Chamber	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	1.9	0.90	80.6	4.1	3.7	--

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. The anterior leaflet of the **mitral valve** was mildly thickened with trivial centralized mitral insufficiency. The **left ventricle** presented normal thicknesses with linear contour and was not dilated nor restricted. 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 normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonary outflow** tract assessment revealed normal valve structure, laminar flow, and diameter (approx.1:1 pa/ao ratio). No visible **pericardial** or free pleura fluid was noted. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window.



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ULTRASONOGRAPHIC FINDINGS

- Stage B1 valvular disease.
- Minor mitral insufficiency.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No contraindication for anesthetic procedures if necessary. No evidence of functional disease.

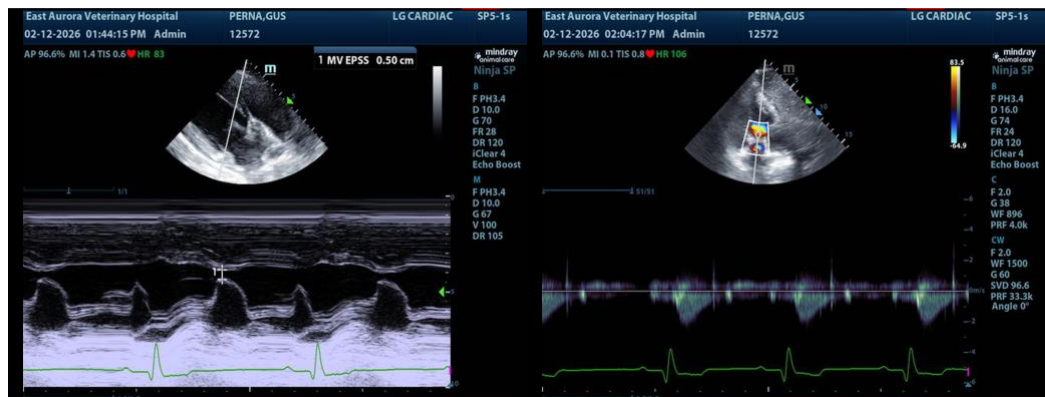
Bio markers such as NT-proBNP are screening tests for myocardial stress. A positive test (>100 pmol/liter) does not mean that cardiac disease is necessarily present.

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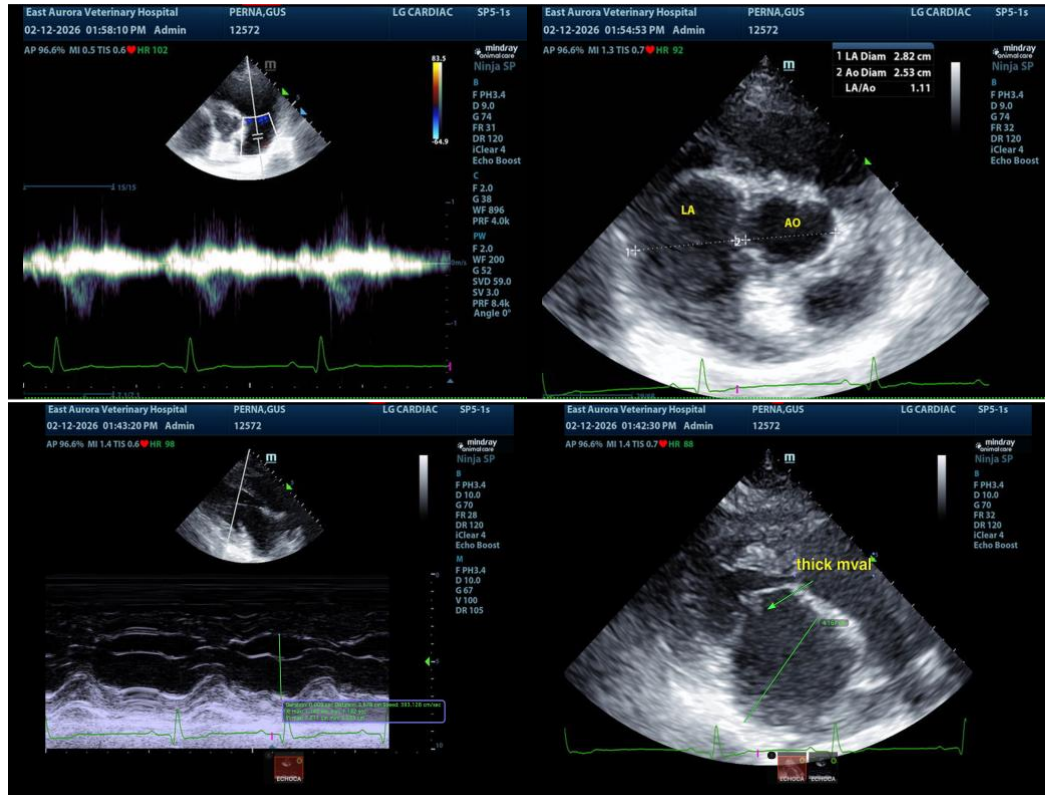
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP(CFM), Cert. IVUSS,

CEO, Owner, Founder -- SonoPath.com

info@SonoPath.com