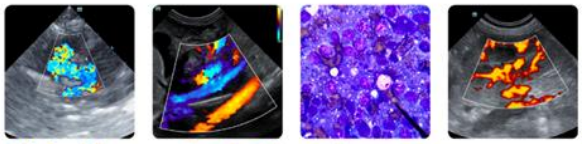


PATIENT

Kimberly Maddox

SPECIES

Canine

BREED

Bernedoodle

SEX

FI

AGE

12wk

WEIGHT

9.1lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Harold Mike Beard

HOSPITAL NAME

Animal Care Veterinary Center

REFERRING VET

Harold Mike Beard

INVOICE
24886

DATE
05/20/2026

PRESENTING CLINICAL SIGNS

Puppy from the breeder that had a heart murmur, so they donated it to a rescue organization. RDVM asculted a palpable continuous murmur best heard on left side near sternum.

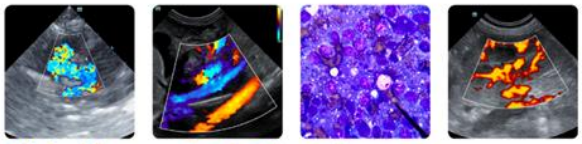
Abnormal PE/Chem/CBC/UA Results: Smaller than normal bernidoodle. Xrays reveal generalized cardiomegaly and some pulmonary edema.

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	--	--	--	1.8	38	70	0.7
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT**	**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	--	--	9.1lb	4.0	4.4	--

Cardiac Presentation

The echocardiogram in this patient demonstrated moderate to significant increased left atrial size based on 2 separate methods of LA evaluation. The cranial and caudal mitral valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. Doppler assessment of the mitral valve was not utilized. The left ventricle presented normal to subjective mild decreased wall thickness with maintained linear contour and moderate to significant increased LV internal dimension. 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 subjective normal structural integrity. Color Doppler assessment of the left ventricular outflow tract was not utilized. Normal measured LVOT velocity. 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. Color Doppler assessment of the tricuspid valve was not utilized. The right ventricle was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. Pulmonary outflow tract assessment revealed overtly normal valve structure and diameter (approx.1:1 pa/ao ratio). Color Doppler assessment of the pulmonic outflow tract was not utilized. Spectral Doppler revealed turbulent to chaotic blood flow pattern in the area of the pulmonary artery. No visible pericardial or free pleural fluid was noted. The cranial mediastinum



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and pericardial and extra-cardiac regions were free of masses in the visible window. NO obvious arrythmia.

ULTRASONOGRAPHIC FINDINGS

Primary

- Moderate to significant LA/LV enlargement with adequate LV systolic function.
- Subjective turbulent to chaotic blood flow on spectral Doppler area of the pulmonary artery.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Although full Doppler assessment of the left and right ventricular outflow tract as well as atrial ventricular valves was not utilized, the degree of LA /LV enlargement is consistent with probable left to right shunt. When combined with subjective turbulent to chaotic blood flow pattern on spectral Doppler, an area of the pulmonary artery suggests probable PDA. An alternative shunt or non-obvious congenital abnormality cannot be definitively excluded. The degree of LA /LV enlargement indicates that the current and future risk of complication and congestion is significantly elevated and may correlate with reported radiographic evidence of pulmonary edema.

Pimobendan 0.3 mg/kg PO BID and lowest effective dose of Lasix 1-2 mg/kg PO BID with serial monitoring of systemic BP for evidence of hypertension is recommended if clinical signs consistent with congestion, i.e. radiographic pulmonary edema, elevated resting RR, exercise intolerance etc., is warranted. Immediate referral to local cardiologist for further clarification and assessment for potential interventional procedure is strongly suggested.

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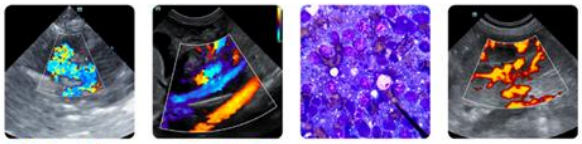

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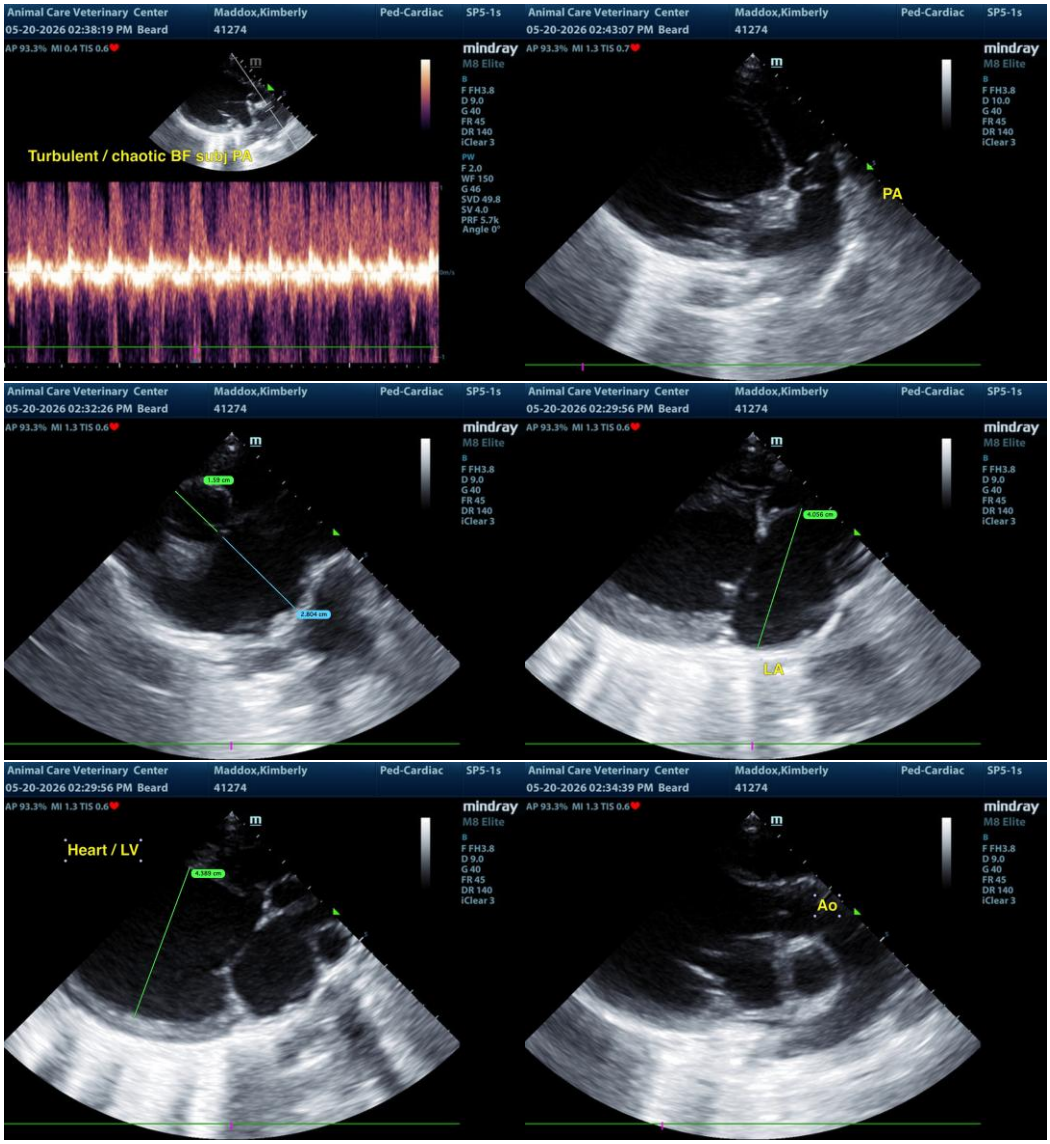

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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