

PATIENT

Burt Holmes

SPECIES

Canine

BREED

Pug

SEX

Male Neutered

AGE

11 years

WEIGHT

16lbs

INTERPRETED BY

Maggie Machen Lamy,
 DVM, DACVIM
 (Cardiology)

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

West Hills Animal Hospital

REFERRING VET

Dr. Cole

INVOICE

45641

DATE

11/4/25

PRESENTING CLINICAL SIGNS

History: Recheck echo. Increasing BNP: most recently 1862. No murmur. BP: 125, 130, 125mmHg. Sedated with Torb and Gabapentin.
 -Pertinent previous echo findings (8/2024 SB): Mild AI; remainder NSF. No cause for the BNP elevation.

ELECTROCARDIOGRAPHIC FINDINGS

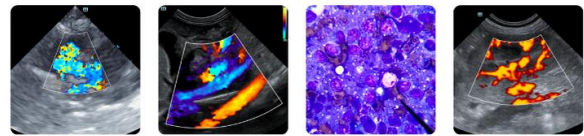
A six lead ECG is available at 12.5mm/s; 20mm/mV. The average heart rate is 100bpm. The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P wave morphology is positive with a normal dimension. Normal PR. The QRS morphology is positive with normal dimension. MEA is normal. No ectopic beats, pauses or dysrhythmias observed.
 ECG diagnosis: Normal sinus rhythm with respiratory variation.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild thickening of the mitral valve leaflets with no prolapse into the left atrial lumen. No mitral regurgitation with no left atrial dilation. Normal LV diameter with adequate myocardial function. The tricuspid valve appears normal with no significant tricuspid regurgitation. Normal right atrial and ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. Trace aortic and no pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

CARDIAC CHART

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	NA	NA	1.3	1.3	36	67	0.3
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LA 2D short axis Base view (cm)	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	BELOW	BELOW	BELOW	BELOW
PATIENT	NM	1.6	1.0	7.3	1.7	2.9	1.9
*Normal chamber parameters expressed as a mean value				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
BODY WEIGHT DEPENDENT PARAMETERS				5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
Adapted from June Boon, Veterinary Echocardiography, 1998 Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435 Hansson et al, Vet Rad and Ultrasound 2002 Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995				10	1.50 (3.8)	3.27 (3.5)	2.06 (3.1)
				15	1.83 (2.0)	3.71 (2.4)	2.43 (2.1)
				20	2.02 (1.9)	4.14 (2.2)	2.80 (2.0)
				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
				35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
				40	2.62 (5.2)	5.48 (6.1)	3.96 (5.4)
				50	2.88 (7.1)	6.07 (8.3)	4.46 (7.4)



PATIENT

Burt Holmes

SPECIES

Canine

BREED

Pug

SEX

Male Neutered

AGE

11 years

WEIGHT

16lbs

INTERPRETED BY

Maggie Machen Lamy,
 DVM, DACVIM
 (Cardiology)

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

West Hills Animal
 Hospital

REFERRING VET

Dr. Cole

INVOICE

45641

DATE

11/4/25

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Persistently normal findings. A small aortic insufficiency persist, as was noted previously. In light of a normal BP assessment, simple monitoring is advised. No significant valvular regurgitation is noted, and flow through the great vessels is normal. No obvious concurrent issues such as pulmonary hypertension are suspected. The ECG is also normal with a respiratory sinus arrhythmia.

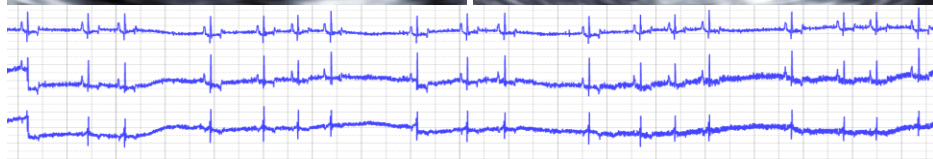
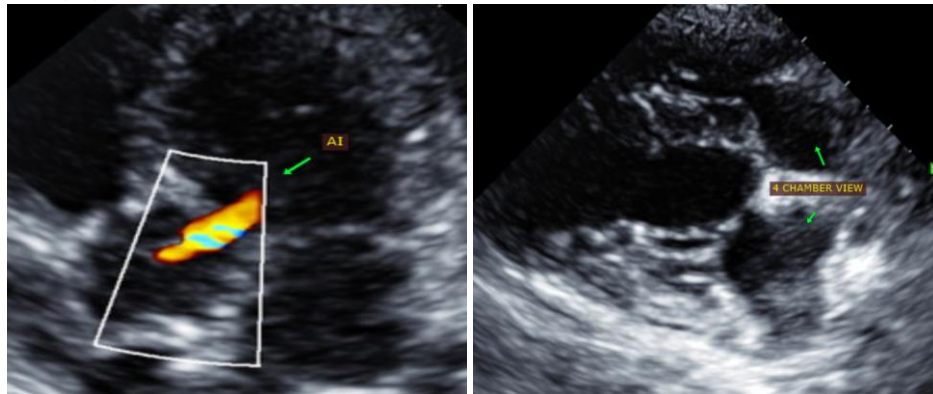
As was discussed in the prior report, other causes for BNP elevation should be considered, such as significant arrhythmias, hyperthyroidism, systemic hypertension or renal disease. If no obvious cause is identified, reassessing this patient in 6-12 months is recommended to ensure early disease was not missed.

No cardiac medications are indicated at this time, and the prognosis is open. Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

No cardiac contraindication for general anesthesia.

A recheck is recommended in 6-12 months to ensure no progressive issues are identified, sooner should a murmur or any clinical signs of cardiac compromise be noted in the interim.

IMAGES



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. This report was generated using transcription software, and minor dictation errors may be present. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

Maggie Machen Lamy, DVM
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
 info@sonopath.com