



PATIENT

Gizmo Johnson

SPECIES

Canine

BREED

Chihuahua

SEX

Male Neutered

AGE

13 years

WEIGHT

8.9lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Karin Hinkle, DVM

HOSPITAL NAME

Yellow Dog Imaging

REFERRING VET

Dr. Karin Hinkle

INVOICE

47779

DATE

5/6/26

PRESENTING CLINICAL SIGNS

History: Presented due to collapsing episodes that began 5 weeks ago. CXR showed pleural effusion, no CHF. 45ml of straw-colored fluid was removed from the left hemithorax. Sedated with Torb.
-Abnormal PE/Chem/CBC/UA Results: PE today: showed labored breathing and tachypnea; HR 190, RR 40. Grade 6/6 left apical PMI (only slightly more pronounced than the right side) heart murmur. Labs (4/29/2026) showed a mild non-regenerative anemia 36% (37.3-61.7) and leukocytosis 17,370-mild neutrophilia, basophilia-manual pending, thrombocytosis 738,000, ALT 192 (10-125), remaining chemistries WNL including albumin 3.3.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The mitral valve is diffusely thickened with mild prolapse into the left atrial lumen. There is moderate eccentric mitral regurgitation present. The MR velocity is normal. Moderate left atrial enlargement. Borderline left ventricular dilation. Left ventricular systolic function is adequate. There is normal systolic flow velocity across the aortic valve. The aortic valve appears trileaflet with normal mobility. The main pulmonary artery is mildly dilated. Moderate right atrial and ventricular enlargement. The tricuspid valve is thickened with septal prolapse and severe tricuspid regurgitation. Velocity consistent with moderate to severe pulmonary hypertension. Mild pulmonic and no aortic insufficiency. Pockets of pleural effusion. No pericardial or cardiac masses are seen. Ascites seen on subcostal views.

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	5.3	4.3	1.9	1.8	59	92	NM
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	160	0.8	0.6	4.1	1.8	2.9	1.2
*Normal chamber parameters expressed as a mean value (SD)				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)
*Note: All measurements based upon multi-modal images and methods. An average value is reported.				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)

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



PATIENT

Gizmo Johnson

SPECIES

Canine

BREED

Chihuahua

SEX

Male Neutered

AGE

13 years

WEIGHT

8.9lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Karin Hinkle, DVM

HOSPITAL NAME

Yellow Dog Imaging

REFERRING VET

Dr. Karin Hinkle

INVOICE

47779

DATE

5/6/26

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing moderate mitral and severe tricuspid regurgitation is identified. Moderate left atrial dilation indicates the risk for spontaneous left-sided congestive heart failure is relatively low. More importantly, there is significant pulmonary hypertension based upon the TR velocity and appearance of the right heart. This puts the patient at risk for right-sided congestion, and/or syncope.

Given these findings, the effusions are most likely cardiogenic in origin and warrants full lifelong cardiac supportive medications including diuretics as below.

The underlying genesis of PAH is poorly understood in cases other than heartworm infestation, though it occurs with increased frequency in a variety of forms of chronic lung disease and in patients with idiopathic pulmonary fibrosis. Without a chronic cough history, the cause remains open. A heartworm test should always be considered.

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for development of a worsening cough, labored breathing, exercise intolerance or worsening collapse episodes. Monitoring of sleeping breathing rates is recommended as the best way to screen for progression to CHF at home.

Unfortunately, there is high risk for spontaneous CHF, worsening cough and/or malignant arrhythmias and sudden death in the future. The prognosis with this degree of disease is poor, with most dogs able to maintain a good QOL on medications for an average of 8-12 months.

Elective anesthesia is not advised.

PLAN

Initiate Spironolactone 1-2mg/kg PO q12h. Institute Sildenafil 1-2mg/kg PO 8h. Initiate Lasix 1-2mg/kg PO q12h. Initiate Pimobendan 0.25-0.3mg/kg PO q12h. Abdominocentesis as needed for discomfort, inappetence or respiratory changes.

Recheck renal values and BP in 1-2 weeks, then every 3-4 months on diuretic therapy. If BP is >130mmHg and patient is doing well at home, institute ACEI 0.5mg/kg PO q12h (if hypotensive do not utilize).

A recheck echocardiogram is recommended in 4-6 months to screen for progression, sooner if clinical signs arise.



PATIENT

Gizmo Johnson

SPECIES

Canine

BREED

Chihuahua

SEX

Male Neutered

AGE

13 years

WEIGHT

8.9lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Karin Hinkle, DVM

HOSPITAL NAME

Yellow Dog Imaging

REFERRING VET

Dr. Karin Hinkle

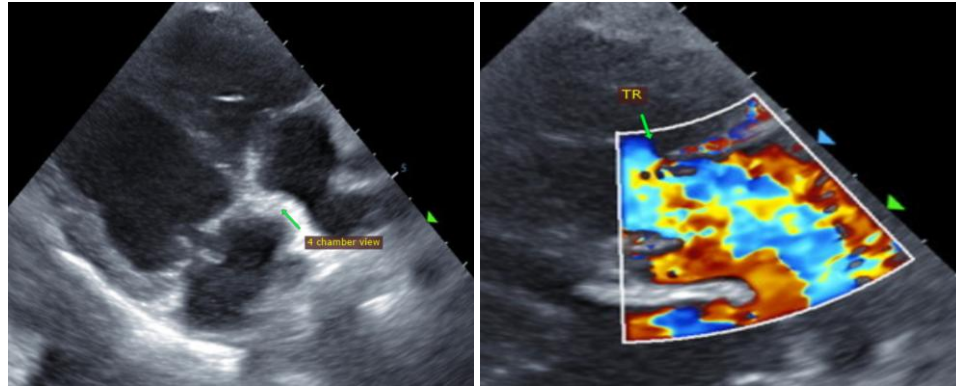
INVOICE

47779

DATE

5/6/26

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