



PATIENT

Gus Dwyer

SPECIES

Canine

BREED

English Bulldog X

SEX

Neutered Male

AGE

12 Years

WEIGHT

77.2 Pounds

INTERPRETED BY

Sara Brethel DVM,
DACVIM (Cardiology)

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

Santa Clara AH

REFERRING VET

Dr. Giddens

INVOICE

36258

DATE

3/16/26

PRESENTING CLINICAL SIGNS

Clinical Exam Findings:

- Presented for persistent cough with no pattern day or night, cough is random per owner. Slowing down at home but may be due to age.
- 3/6 heart murmur, louder on right side. Increased lung sounds bi-lat.

ABNORMAL Labwork Values: Bloodwork done in December 2025:

- CBC: WNL
- Chem: Glob 4.4
- UA: SG 1.040; Inactive sediment
- T4: 2.3

Blood Pressure:

- BP: 96/52 (73)

Is there a Heart Murmur? If so, please grade:

- Yes, 3/6 heart murmur, slightly louder on the right

Current Medications:

- Started early last week: Enalapril, Furosemide, Pimobendan and pet has had a decrease in coughing

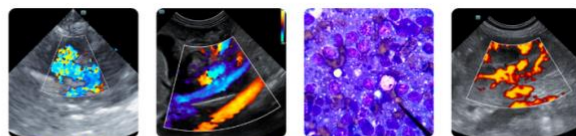
Radiographic Findings:

- X-rays taken last week= showed cardiomegaly with dorsal deviation of trachea and possible fluid on lungs. Re-checking xrays 2 weeks post starting meds (Enalapril, Furosemide, Pimobendan)

Notes to Specialist (if any):

- Was fluid seen on xrays taken last week? Concerns that cough could be from elevated trachea also, but pet is doing better on heart meds

ULTRASONOGRAPHIC EXAMINATION OF THE HEART



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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	5.53	--	NM	1.59	36.86	--	NM
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	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	1.69	1.06	35.1	6.2	5.1	3.22

Heart base mass: 2.8 cm x 3.2 cm

Cardiac Presentation

The mitral valve leaflets are normal with mild mitral regurgitation centrally directed. There is no prolapse of mitral valve leaflets. The left atrial size is increased. LV internal dimensions during diastole are increased and left ventricular systolic function is low normal to mildly reduced in the face of mitral regurgitation. There is mild right atrial enlargement with trivial evidence of tricuspid regurgitation. There is billowing in the tricuspid valve leaflets. There is no evidence of pulmonary hypertension on this evaluation. The right ventricle appears to have preserved systolic function subjectively. The aortic and pulmonic valves had normal morphology and the corresponding outflow velocities were within normal limits. There is no pulmonic insufficiency. There is trace aortic insufficiency. The aorta appears normal. The pulmonary artery and associated branches appear normal. There is no evidence of pleural effusion or pericardial effusion. There does appear to be a heart base mass present.

ULTRASONOGRAPHIC FINDINGS

- Heart base mass
- DCM phenotype
- Mitral regurgitation
- Left atrial enlargement
- Low/normal to reduced left ventricular systolic function
- Mild right atrial enlargement
- Billowing of tricuspid valve leaflets
- Aortic insufficiency

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is evidence of a dilated cardiomyopathy phenotype. Differentials include primary dilated cardiomyopathy (idiopathic), dietary related, infectious, or inflammatory. Sometimes, nontraditional



PATIENT	grain free diets can cause decreased pumping function of the heart. There are other diseases such as infectious causes (tick borne), inflammatory conditions, or diseases that affect the body that can also cause this type of appearance to the heart. Other diagnostics to consider include screening for infectious diseases, ensuring blood work is within normal limits, and considering an abdominal ultrasound if the breed is not a classic breed for DCM (ie: classic breeds: Doberman, Great Dane, Irish Wolfhounds).
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SPECIES	
Canine	
BREED	Cardiac medications such as pimobendan (0.27-0.32mg/kg PO q12) is recommended along with an ACE inhibitor (enalapril or benazepril 0.5mg/kg POq12-24). 2-3 weeks after starting ACE inhibition, repeat kidney values are recommended.
English Bulldog X	
SEX	Due to the potential for arrhythmias with DCM, a Holter monitor is recommended. If a Holter is unavailable, recommend evaluating the rate and rhythm with an electrocardiogram. Unfortunately, due to the nature of this disease, the patient is at risk of passing away suddenly.
Neutered Male	
AGE	Unfortunately, patients in congestive heart failure with DCM have a poor to guarded prognosis. The median survival times are roughly 6-9 months (with some patients doing better and other patients not doing as well).
12 Years	
WEIGHT	It recommended to consider switching to a grain-based commercial dog food diet made by Purina, Science Diet, or Royal Canin (if there is no history of a food allergy) since there is currently an association between cardiac changes (poor pumping function and dilation of the heart) and multiple grain free and limited ingredient diets. Current investigation is still underway and the definitive causative factor has not been identified. A grain source including corn or barley should be seen on the dog food label. Substitutes for common grain sources such as peas, lentils and even rice have been implicated in cardiac dysfunction. Any diet change should be gradual by adding small amounts to the current diet first and then increasing the ratio of the new food gradually over two weeks to avoid gastrointestinal upset.
77.2 Pounds	
INTERPRETED BY	
Sara Brethel DVM, DACVIM (Cardiology)	
IMAGING PERFORMED BY	The client should start monitoring respiratory rate and effort at home if not already doing so. The resting respiratory rate should be < 35-40 breathes/minute when the patient is resting or sleeping. If the breathing rates are increasing, then chest radiographs are recommended.
Sara Hansen	
HOSPITAL NAME	Cardiac supplementation can be considered for this patient. If the patient is eating well, recommend starting taurine (30mg/kg PO q12) and L-carnitine (50mg/kg q8) supplementation (brands: Now, Solgar, PetAg, Twinlabs). Fish oil supplementation can also be administered (EPA 40mg/kg + DHA 25mg/kg PO q24). Can consider staging these medications (ie: starting one and then a week later starting another) due to the potential for stomach upset.
Santa Clara AH	
REFERRING VET	
Dr. Giddens	A Holter monitor is also recommended for this patient. Due to the severity of the cardiac condition, I would consider a referral. You can also consider a referral if the clients wish to further evaluate the heart base mass. The heart base mass, given the location and breed, chemodectoma is the most common differential, however, other neoplastic processes can be ruled out.
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DATE	Given the patient's history, it does not appear that heart failure has occurred, and I would recommend discontinuing furosemide as long as the patient is breathing appropriately. The doses of the pimobendan and enalapril were not provided for review. Typically, I recommend 0.5 mg/kg of enalapril twice daily and the above pimobendan dose listed.
3/16/26	



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If not moving forward with referral or a Holter, recheck echo in 4-6 months, sooner if cardiovascular clinical signs are developing or the murmur is worsening in intensity.

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The patient should also be monitored closely for any signs of pericardial effusion and cardiac tamponade. If any ascites develops, evaluation for pericardial effusion is recommended, as this can be a life-threatening emergency.

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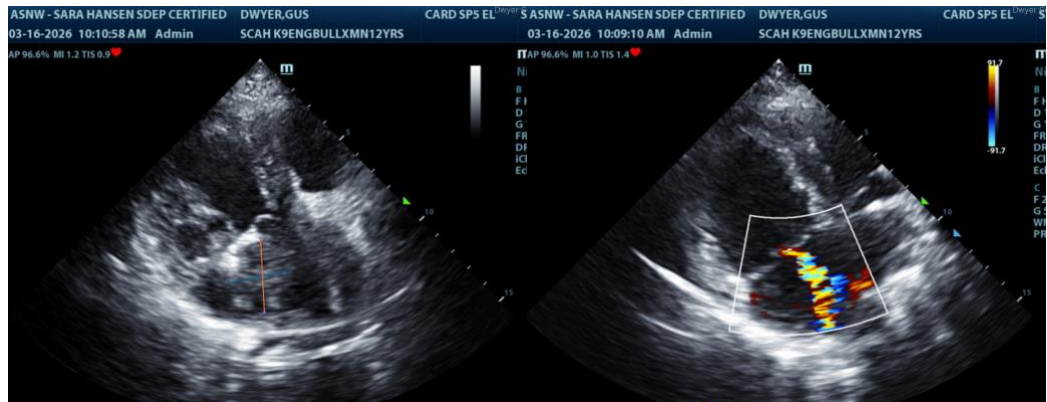
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Sara Brethel DVM, DACVIM (Cardiology)

info@SonoPath.com

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