


**PRESENTING CLINICAL SIGNS**

**DATE** History: Coughing for the past month. Initially improved with furosemide (12.5 mg BID), but now not helping. Grade IV/VI murmur. Tachypneic.

3/10/22

**ECHOCARDIOGRAPHIC FINDINGS**

Multiple 2D, M-mode, and Doppler video loops and still images are submitted for review

**PERFORMED BY**

Dr. Meredith Swart

**INTERPRETED BY**

Keith Blass, DVM,  
MS, DACVIM  
(Cardiology)

There is moderate left atrial dilation. The mitral valve leaflets are thickened and exhibit systolic prolapse. There is Doppler evidence of mitral regurgitation present. There is moderate left ventricular dilation. Left ventricular systolic function is hyperdynamic. The aorta and aortic valve are normal. Right atrial and right ventricular dimensions are normal. The tricuspid valve leaflets are mildly thickened, and there is Doppler evidence of mitral regurgitation present. TR velocity is consistent with the presence of at least mild pulmonary hypertension, though the weak Doppler signal indicates that the true velocity appears to be underestimated. The pulmonary artery and pulmonic valve appear normal, though trace pulmonic insufficiency is present. No shunting lesions are visualized. No pericardial effusion or cardiac masses are seen.

**PATIENT**

Lucy Gibson

LA - 41.9 mm  
LVIDd - 42.0 mm  
LVIDs - 18.9 mm  
FS - 56.4%  
RA - 27.4 mm  
LVOT - 1.13 m/s  
RVOT - 1.29 m/s  
TR - >3.20 m/s

**SPECIES**

Canine

**ASSESSMENT/RECOMMENDATIONS**
**BREED**

Beagle

Degenerative mitral and tricuspid valve disease  
Pulmonary hypertension

**SEX**

FS

**AGE**

16 y

This examination demonstrates regurgitation of blood across Lucy's mitral and tricuspid valves resulting from degenerative valve disease. Lucy's tricuspid valve disease is mild, and appears to be well-compensated at this time. Her mitral valve disease is more advanced, as Lucy has moderate secondary dilation of both her left atrium and left ventricle, though her left ventricular systolic function is well-preserved. Given the presence of moderate left atrial dilation, it's possible that mainstem bronchial compression could be contributing to Lucy's cough, and I am concerned that her tachypnea could be due to the development of left-sided congestive heart failure (though I'm not aware of whether pulmonary edema is appreciated in Lucy's radiographs).

**WEIGHT**

27.4 lb

Lucy's tricuspid regurgitation velocity is consistent with the presence of at least mild pulmonary hypertension, though it's possible that her disease could be more significant, as the weak Doppler signal used to measure her TR velocity could potentially be underestimating the true velocity. Patients with pulmonary hypertension can experience clinical signs, such as exercise intolerance and syncope, therefore, careful monitoring for these signs is recommended.

**HOSPITAL NAME**

Swart Veterinary  
Imaging

I recommend starting Lucy on pimobendan (5 mg am, 2.5 mg pm), as this medication should help to slow the progression of her mitral valve disease. If radiographs indicate the presence of pulmonary edema, an increase in Lucy's furosemide dose to 25 mg BID would be warranted, as would therapy with enalapril (5 mg BID). As only mild pulmonary hypertension could be confirmed in this exam, no therapy is recommended for this disease at this time. A cough suppressant, such as hydrocodone, may be given if Lucy's cough persists.

**REFERRING VET**

Dr. Swart

Recheck radiographs and a renal/electrolyte profile are recommended in 1 week if Lucy's furosemide dose is increased/enalapril is started. A recheck echocardiogram is recommended in 6



months.

DATE

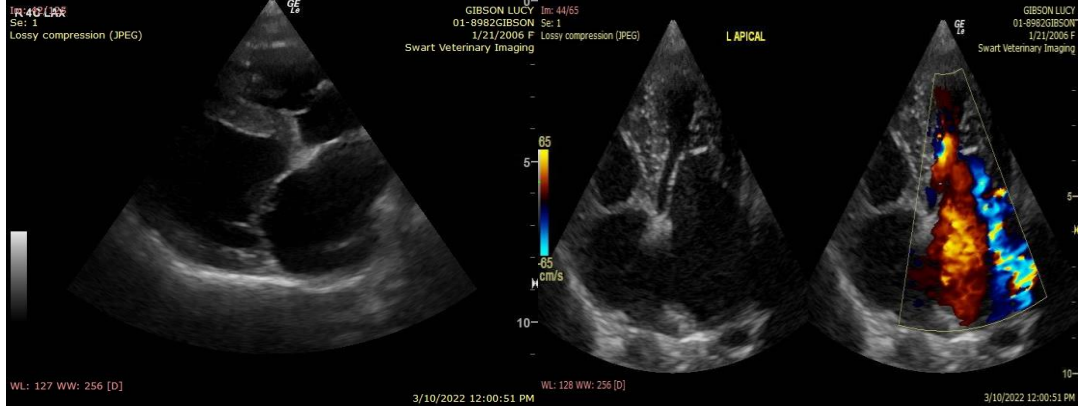
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PATIENT

Lucy Gibson

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. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

SPECIES

Canine

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 631-804-5754

BREED

Beagle

SEX

FS

AGE

16 y

WEIGHT

27.4 lb

HOSPITAL NAME

Swart Veterinary  
 Imaging

REFERRING VET

Dr. Swart