



PATIENT

Stella Reneau

SPECIES

Canine

BREED

Papillon

SEX

Female Spayed

AGE

14.9 years

WEIGHT

5.4

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Sarah Green, DVM

HOSPITAL NAME

Healing Spirit Animal
Wellness

REFERRING VET

Dr. Green

INVOICE

22531

DATE

2/11/22

PRESENTING CLINICAL SIGNS

History: Presented due to hyporexia and weight loss. Tricavitary effusion on AUS. Fluid aspirated was straw colored, slightly hazy, TP=2.4 g/dL, poorly cellular. Grade IV left apical systolic murmur, -Abnormal PE/Chem/CBC/UA Results: CHEM: BUN=60 (97-25) mg/dL, Cr=1.3 (0.3-1.4) mg/dL, TP=4.8 (5.4-8.2) g/dL, globulin=1.8 (2.3-5.2) g/dL.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets with significant prolapse into the left atrial lumen. Severe eccentric mitral regurgitation with moderate to severe left atrial enlargement with auricular dilatation. Normal MR velocity. Normal LV diameter with adequate myocardial function. The tricuspid valve appears normal with trace tricuspid regurgitation. No significant right heart enlargement. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic outflow velocity with laminar flow. No obvious aortic or pulmonic insufficiency. Moderate volume pericardial effusion noted without evidence of tamponade. Moderate volume pleural effusion. 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	4.8	NM	NM	2.0	54	90	NM
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT	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	NM	0.96	5.4	2.3	2.6	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)
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>				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)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing severe mitral and trace tricuspid regurgitation. Moderate to severe left atrial enlargement indicates there may be elevated risk for spontaneous congestive heart failure. Of most concern is bicavitary effusion is confirmed. No additional abnormalities are seen in this study, such as pulmonary hypertension or systolic dysfunction.

The finding of effusion in a small breed dog is highly concerning. The most common rule outs for this would include a LA tear, right-sided heart failure, or an extra-cardiac cause such as a tumor



<p>PATIENT Stella Reneau</p>	<p>bleed or cancer. This case is confounding, as a LA tear is less likely with this degree of LA dilation (albeit possible). Additionally, this large volume of effusion is not typically seen with an LA tear. Right-sided CHF is also possible, although no significant pulmonary hypertension or right-sided disease is seen. Finally, a tumor or neoplastic process remains possible prior to further evaluation/sampling.</p>
<p>SPECIES Canine</p>	<p>This amount of effusion is considered unstable, and left-sided CHF is suspected as a concurrent or impending issue. Based upon the amount of effusion and patients' clinical signs, full cardiac support is recommended as below. Additionally, further diagnostics including a pericardiocentesis are recommended to help understand origin; (i.e., is the effusion hemorrhage or not), however this certainly carries risk. Ideally, consider referral to a Multispecialty center in this complicated case for further advanced evaluation.</p>
<p>BREED Papillon</p>	
<p>SEX Female Spayed</p>	<p>Pending reassessing clinical status once stable, any residual cough can be treated with hydrocodone if needed (hydrocodone, 0.22mg/kg q4-6h PRN) for any residual mechanical cough in the face of normal sleeping respiratory rates. The average survival time of canine patients with CHF is 8-9 months on medications, however they generally are able to maintain a good quality of life for that period.</p>
<p>AGE 14.9 years</p>	
<p>WEIGHT 5.4</p>	<p>Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for acute progression of the cough, labored breathing, exercise intolerance or collapse episodes in the future. Patient will always be at risk for recurrent CHF, development of arrhythmias/syncope, pulmonary hypertension and/or sudden death in the future. Close monitoring is advised.</p>
<p>INTERPRETED BY Maggie Machen Lamy, DVM, DACVIM (Cardiology)</p>	<p>PLAN Highly recommend referral to a Multispecialty center for advanced imaging, fluid sampling, etc in this unusual case. Hospitalization will likely also be recommended, depending on patients' status. If declined, a diagnostic pericardiocentesis can be attempted now or should the patient decline in the near future.</p>
<p>IMAGING PERFORMED BY Sarah Green, DVM</p>	<p>Oral medications are as follows: Furosemide 1-2mg/kg PO q12h; Pimobendan 0.3mg/kg PO q12h; spironolactone 1-2mg/kg PO q12h. If patient improves, reassess effusions in 3-5 days to determine response to diuretic therapy. If any decline in the interim, immediate hospitalization should be elected.</p>
<p>HOSPITAL NAME Healing Spirit Animal Wellness</p>	<p>Monitor renal values and BP in 10-14 days, then every 3-4 months lifelong on diuretics. If doing well at that time and BP>130mmHg, reinstitute Benazepril or Enalapril 0.5mg/kg PO q 12h.</p>
<p>REFERRING VET Dr. Green</p>	<p>Depending on how patient does, recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of associated clinical signs occurs in the interim.</p>
<p>INVOICE 22531</p>	
<p>DATE 2/11/22</p>	



PATIENT

Stella Reneau

SPECIES

Canine

BREED

Papillon

SEX

Female Spayed

AGE

14.9 years

WEIGHT

5.4

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Sarah Green, DVM

HOSPITAL NAME

Healing Spirit Animal
Wellness

REFERRING VET

Dr. Green

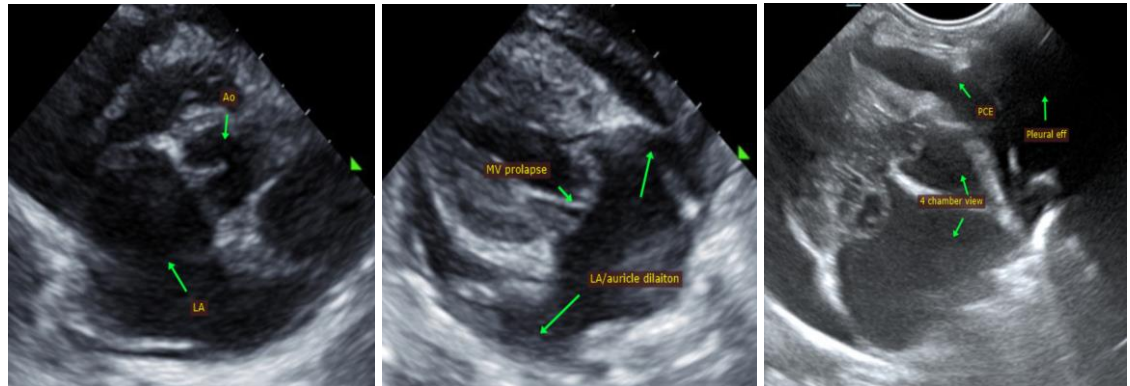
INVOICE

22531

DATE

2/11/22

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