



PATIENT

Tucker Otjen

SPECIES

Canine

BREED

Golden Retriever

SEX

Neutered Male

AGE

6 Years

WEIGHT

40.7 kg

INTERPRETED BY

Sara Brethel DVM,
DACVIM (Cardiology)

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

Wilvet Salem

REFERRING VET

Dr. Hovenden

INVOICE

12229

DATE

11/12/25

PRESENTING CLINICAL SIGNS

Within the pleural space, a mild amount of homogenous soft tissue opaque material (fluid) is present, causing multiple pleural fissure lines, mild retraction of the lung lobe margins, and partial border effacement to the cardiovascular structures. The caudal vena cava appears moderately dilated on the right lateral view. The pulmonary parenchyma is mildly generalized increased in opacity. Bicavitary effusion. Mild generalized broncho interstitial lung pattern. Suspected dilation of the caudal vena cava. Differential diagnosis for bicavitary effusion includes neoplastic/paraneoplastic process or right-sided congestive heart failure (even in the presence of a normal-sized cardiac silhouette, mild amounts of acute pericardial effusion may cause rapid cardiac tamponade). Consider further differentials such as coagulopathy, hypoproteinemia, or inflammatory disease/SIRS less likely but not excluded. Sonographic guided sampling of the peritoneal and pleural effusion for further analysis could be considered. (contrast CT or abdominal ultrasound, as radiographs will be likely of limited assessment due to the presence of peritoneal effusion) could be considered. Differentials for the broncho interstitial pattern include age-related degenerative changes of the pulmonary parenchyma or mild chronic bronchitis. There are no overt radiographic signs suggestive for pulmonary masses.

Abnormal PE/Chem/CBC/UA Results: ABNORMAL Labwork Values Brief AUS: large amount of free fluid, possible abnormal appearance of the spleen. CBC: HCT 46%(N), WBC 23.214(H), Neu 17.94(H), Mono 2.32(H), PLT 108(L - clumping detected) Chem: SDMA 16(H), Na+ 141(L), K+ 6.2(H), Na+/K+ 23, Cl 102(L), TP 4.7(L), ALB 2.3(N), Glob 2.4(L)

Current Medications Cerenia 1mg/kg

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

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	5.83	--	1.03	1.12	25		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	--	1.31	1.28	40.7	4.08	3.4	2.55

Cardiac Presentation

The mitral valve leaflets appear mildly thickened and there is trivial mitral regurgitation eccentrically directed. There is no prolapse of the mitral valve leaflets. The left atrial size is normal. Left ventricular



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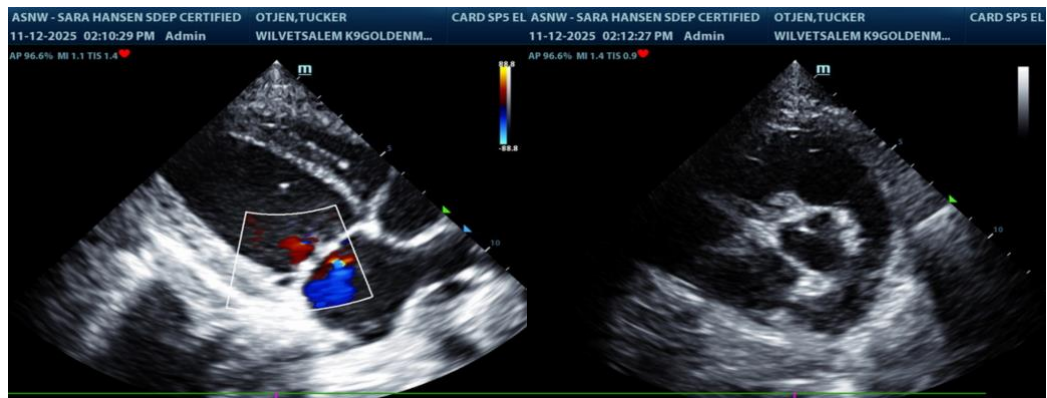
systolic and diastolic function is within normal limits. There is normal right atrial size without evidence of tricuspid regurgitation. There is no prolapse of the tricuspid valve leaflets and no evidence of pulmonary hypertension on today's evaluation. The right ventricle subjectively appears normal in structure and function. The aortic and pulmonic valves have normal morphology and the corresponding outflow velocities are within normal limits. There is no evidence of pulmonic or aortic insufficiency. The aorta appears normal. The pulmonary artery and associated branches appear normal. There is scant pleural effusion with no pericardial effusion or intracardiac masses. There is evidence of peritoneal effusion.

ULTRASONOGRAPHIC FINDINGS

- Mild mitral valve thickening.
- Trivial mitral regurgitation.
- Pleural effusion.
- Peritoneal effusion.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The effusion does not appear to be cardiac in nature. The right and left atria are within normal limits. While there is mild thickening of the mitral valve and trivial mitral regurgitation, this is not the cause of the patient's current clinical problem. Differentials for the mitral regurgitation include degenerative valve disease, however, other conditions such as infective endocarditis cannot be ruled out. Discrete vegetative lesion is not identified on the images provided. If there is high suspicion given the patient's clinical signs and sample of the effusion, recommend obtaining blood cultures and starting therapy with broad spectrum antibiotics such as Clavamox and Baytril. Depending on the severity of the patient's condition, consider a referral for stabilization and continued investigation. Ideally, fluid analysis and cytology would be performed on the pleural and peritoneal effusion if a sample can be obtained. If the patient develops a murmur, a recheck echo should be done sooner, however, otherwise a recheck echo in 6 months is recommended just to monitor the mitral valve and the mitral regurgitation.





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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)

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