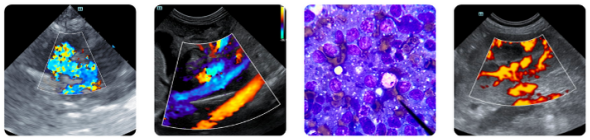

PATIENT

Shirley Angles Retreat Rescue

SPECIES

Canine

BREED

Golden Retriever Mix

SEX

Intact Female

AGE

1 year

WEIGHT

17.3 kgs

INTERPRETED BY

Bradley Harris, DVM, DACVECC, DACVIM (cardiology)

IMAGING PERFORMED BY

Renee Trionfetti, VMD

HOSPITAL NAME

Brandywine Valley Veterinary Hospital

REFERRING VET

Dr. Courtney Mooney

INVOICE

10710

DATE

11/7/2025

PRESENTING CLINICAL SIGNS

Echo to further evaluate a Rescued dog from a puppy mill breeding facility - grade 2-3 murmur - left sided. PQSS, no arrythmias appreciated. Normal BVS, normal RR/RE. Currently residing with a Rescue Organization.

Abnormal PE/Chem/CBC/UA Results: Blood Pressure: 239/117, 256/147, 253/107, 259/133 No BW or Rads at this time.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

CANINE CARDIAC PARAMETERS	BW	HR BPM	LAD 4 ch Long	RAD 4 ch Long	La/Ao Heart Base	LVIDd	LVIDs
NORMAL PARAMETER		50-100			<1.6		
PATIENT	17.3 kgs	100	3.92	2.7	1.23	3.87	2.43
CANINE CARDIAC PARAMETERS	**FS**	**EPSS**	**PV V MAX (m/s)**	**AV V Max (m/sec)**	**MR Vmax**	**TR Vmax**	**RPA distensibility (normal >30%)**
NORMAL PARAMETER	28-40	<0.6	0.7-1.6	0.7-1.7	4.5-5.5	< 2.7	
PATIENT	37	0.3	0.9	2.4	NM	NM	50%

Cardiac Presentation

The left atrium is normal in dimension. The left ventricle is normal in dimension with normal systolic function. The right atrium and ventricle are subjectively normal in dimension and systolic function. The anterior and posterior mitral valve leaflets are mildly thickened with no significant prolapse and trace regurgitation. The tricuspid valve leaflets are subjectively normal with no regurgitation and no evidence of pulmonary hypertension. The left ventricular outflow tract demonstrated turbulent flow with a mildly increased velocity and the visible aorta is unremarkable. The right ventricular outflow tract assessment revealed normal laminar flow, and appropriate diameter and distensibility. There is no evidence of semilunar valve insufficiency. There is no visible pericardial, pleural, or free peritoneal fluid noted. The cardiac chambers, pericardial and visible extra-cardiac regions were free of masses, spontaneous echo contrast, or thrombi.

ULTRASONOGRAPHIC FINDINGS

- These findings identify turbulent flow through the left ventricular outflow tract with no significant aortic regurgitation. This is most consistent with a dynamic left ventricular outflow tract obstruction, and is likely a functional/physiologic murmur. However, given the breed and the concurrent changes to the mitral valve with trace regurgitation, an equivocal subvalvular aortic stenosis (SAS) with very mild mitral valve dysplasia cannot be definitively ruled out.

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Regardless, due to the minimal changes there are unlikely to be significant long term hemodynamic effects.

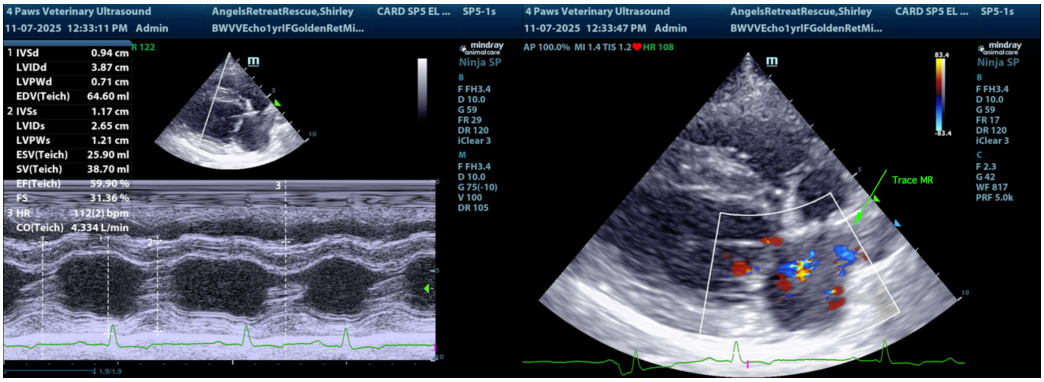
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Dogs with mild SAS are not at significant risk for heart failure and sudden death like those with severe disease. They are, however, still at risk for infection on the aortic valve (endocarditis). Therefore, antibiotics should be used in the event of any surgeries (including dentals), lacerations, bite wounds, etc. No specific recheck will be recommended, but a repeat echo is indicated in the murmur changes or clinical signs of heart disease develop. Given the presence of congenital heart disease, albeit mild, she represents a breeding liability, and should not be considered in any future breeding decisions. Given the mild nature of disease, coupled with the lack of any chamber dilation/dysfunction, we would have no objection to anesthesia for her spay.

Anesthesia considerations:
If anesthesia is necessary, then alpha-2 agonists, ketamine, high dose acepromazine, and Telazol should be avoided. If an ACE inhibitor (enalapril, benazepril) or spironolactone is being given, it should not be administered on the morning of general anesthesia. Other cardiac medications should be administered per the normal dosing schedule. Fluid therapy during anesthesia should be considered at a conservative rate (e.g., 5 ml/kg/hour) if possible (i.e., if not hypotensive). A shorter anesthetic duration will reduce the risk of complications. Pre-oxygenation is advised. Premedication with an opioid (i.e., butorphanol, hydromorphone, oxymorphone) with or without a benzodiazepine is generally the safest protocol. An induction agent such as Propofol, alfaxalone, or diazepam/etomidate can be used to effect. Maintenance of anesthesia with isoflurane or sevoflurane is reasonable.

Diet:
A high-quality food from Hills, Royal Canin, Science Diet, Eukanuba, Iams, or Purina that is highly palatable with adequate protein and calories for maintaining optimal body condition is reasonable.

Activity:
Moderate physical activity (meandering walks, exploring the back yard, playing with toys inside, getting excited when family gets home, etc.) is encouraged, but periods of strenuous aerobic activity (jogging, strenuous outdoor ball play, prolonged play at the dog park, etc.) should be avoided, especially during periods of high heat (> 80 F) and humidity. Dogs with heart disease tend to tolerate cool and cold temperatures much better than high temperatures. Avoid sudden increases in activity (e.g. 2 block walks during the week but 2 mile walks followed by 30 minutes at the dog park on the weekends) as this may be difficult for the cardiovascular system to deal with.



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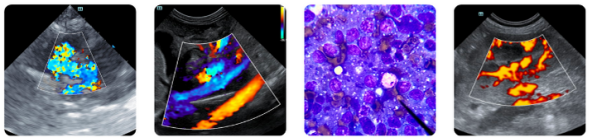

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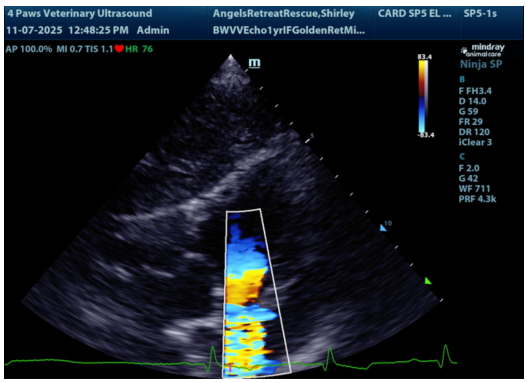

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Bradley Harris, DVM, DACVECC, DACVIM (cardiology)

info@SonoPath.com