SonoPath
Clinical Sonography & Telecytology
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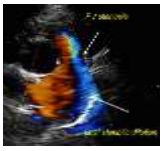
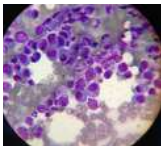
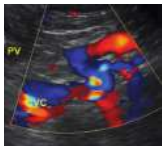

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Waffles Carter

SPECIES
Canine

BREED
Miniature Schnauzer

SEX
Female Spayed

AGE
6 Years, 9 Months

WEIGHT
18 lbs

INTERPRETED BY
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY
Meredith Swart

HOSPITAL NAME
Swart Veterinary Imaging

REFERRING VET
Meredith Swart

INVOICE
49717

DATE
1-21-22

PRESENTING CLINICAL SIGNS

Newer murmur (dx'ed within the last year). Patient is not having any clinical signs associated. Patient needs a dental cleaning and mass removal. Echo is requested pre-operatively.
Abnormal PE/Chem/CBC/UA Results: none reported

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

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			NM	1.33	48.4	83	0.2
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT** (kg)	**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	1.55	1.0		2.6	2.5	

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable insufficiency. The **left ventricle** presented thicknesses with linear contour and was not dilated nor restricted. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. **Contractility** of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions of the myocardium. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. **Tricuspid** valvular assessment demonstrated adequate linear morphology. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter (approx.1:1 pa/ao ratio). No visible **pericardial** or free pleura fluid was noted. No echographically detectable evidence of infiltrative disease was visible. The cranial **mediastinum and pericardial regions** were free of masses in the visible window

ULTRASONOGRAPHIC FINDINGS

- Mildly thickened mitral valve with eccentric mild mitral valve insufficiency.
- Normal left atrium.

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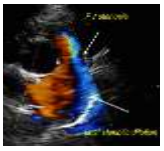
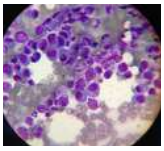
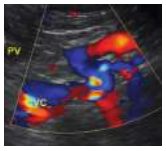

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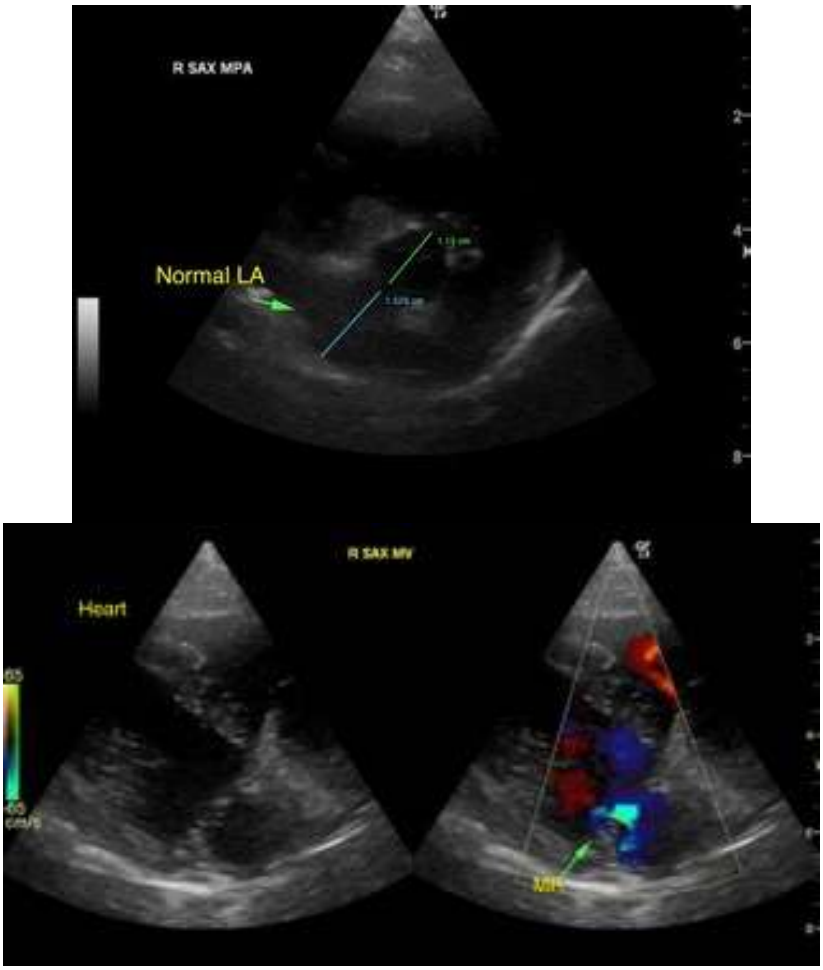
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is secondary to eccentric mitral valve insufficiency. The mildly thickened mitral valve is suggestive of early degenerative changes although potential for mild mitral valve dysplasia given the young age of the patient may also be possible. Regardless, the lack of left atrium enlargement indicates that the risk of complication secondary to mitral valve insufficiency is low at this time. No indication for cardiac medications. No anesthetic contraindications without concurrent clinical issues such as systolic dysfunction or evidence of clinical pulmonary hypertension. Conservative monitoring of the murmur is appropriate at this time; however, echocardiographic monitoring is advised for further prognosis.

Recheck echocardiogram suggested in 6 months, sooner if clinical signs suggestive of left sided heart disease arise.

Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists.



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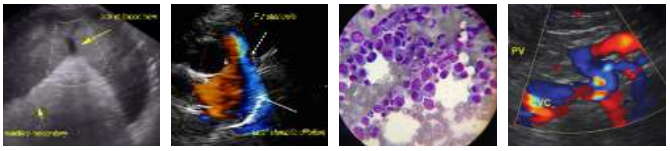

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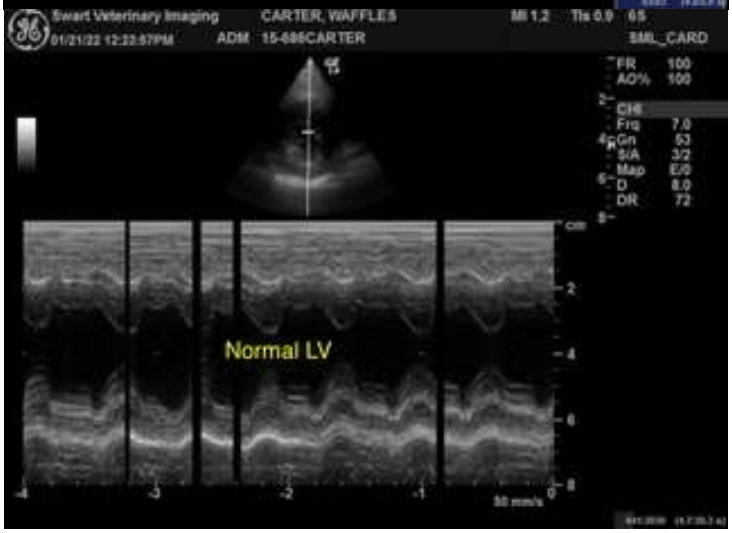

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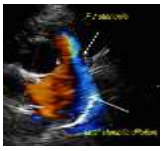
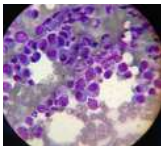
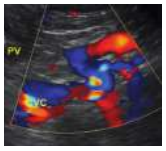

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com