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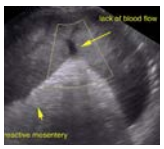
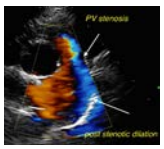
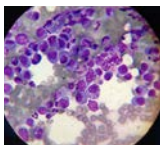
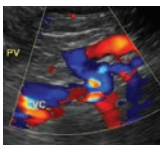

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1-800-838-4268 info@sonopath.com

PATIENT
Abigail Cassella

SPECIES
Canine

BREED
English Retriever

SEX
Female

AGE
7 Months

WEIGHT
42 Pounds

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

IMAGING PERFORMED BY
Shari Reffi, CVT

HOSPITAL NAME
Morris Hills VC

REFERRING VET
Dr. Hirshenson

INVOICE
33529

DATE
12/17/21

PRESENTING CLINICAL SIGNS

Presented for OVH-noted cardiac murmur. Cardiopet Pro BNP 739-all other bw normal. No current meds.
Abnormal PE/Chem/CBC/UA Results: Cardiopet Pro BNP 739, BW WNL otherwise, u/s nr.

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			1.25	1.31	41.3	73.7	0.25
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				
PATIENT	131	1.7	3.7		3.1	3.0	

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. The cranial and caudal **mitral** valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. 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. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. The **right ventricle** exhibited normal overall size with mild evidence of right ventricular free wall hypertrophy. Normal overall myocardial echogenicity. **Pulmonary outflow** tract assessment revealed subjective abnormal valve structure with potential for valvular fusion. Systolic turbulent flow post pulmonic valve with normal overall pulmonary artery diameter (approx.1:1 pa/ao ratio). Color doppler assessment also revealed concurrent pulmonic insufficiency. Measured pulmonary valve insufficiency velocity of 1.7 m/sec. No visible **pericardial** or free pleura fluid was noted. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window.

ULTRASONOGRAPHIC FINDINGS

- Pulmonic stenosis with concurrent mild pulmonic valve insufficiency
- Subjective emerging to mild right ventricular hypertrophy

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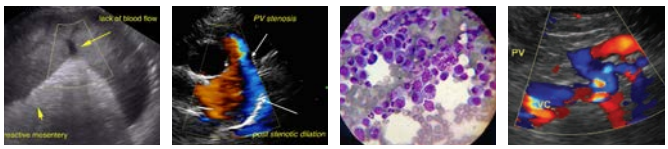

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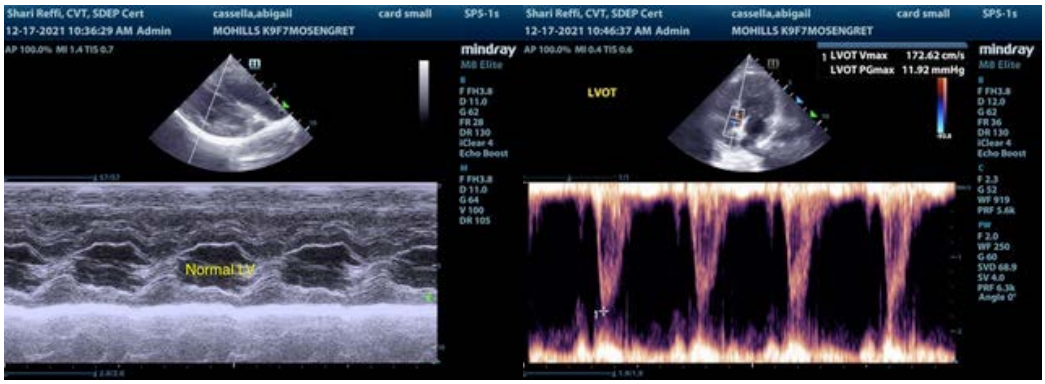
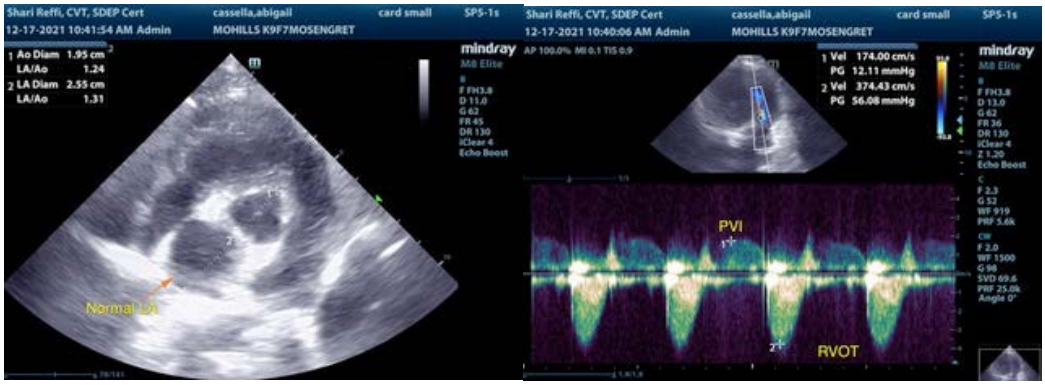
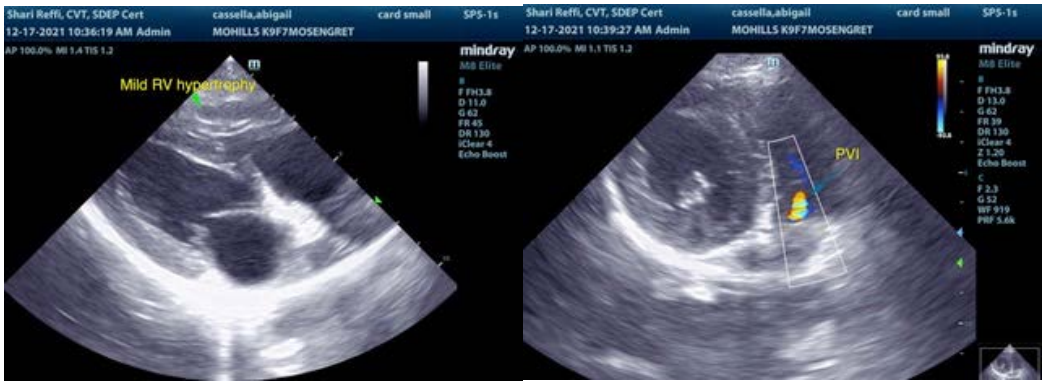
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is consistent with moderate pulmonic stenosis based on measured RVOT velocity. Subtle evidence of right ventricular hypertrophy was noted, yet overall the right heart appears to be compensated. No other clinical issues such as systolic dysfunction, shunt such as PDA, or evidence of clinical pulmonary hypertension were noted. Prognosis may be considered variable, yet given the estimated pressure gradient (approximately 54 mmHg), and without evidence of significant cardiac changes, prognosis at this stage may potentially be considered good. However, serial sonographic monitoring for evidence of progressive right heart changes is recommended. Atenolol 1 mg/kg PO BID is warranted. Recheck echocardiogram in 6-12 months to assess for progressive right heart changes. Consultation with a cardiologist or anesthesiologist is suggested prior to anesthesia.







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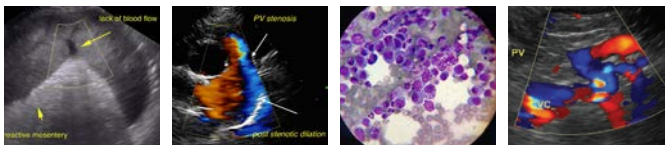

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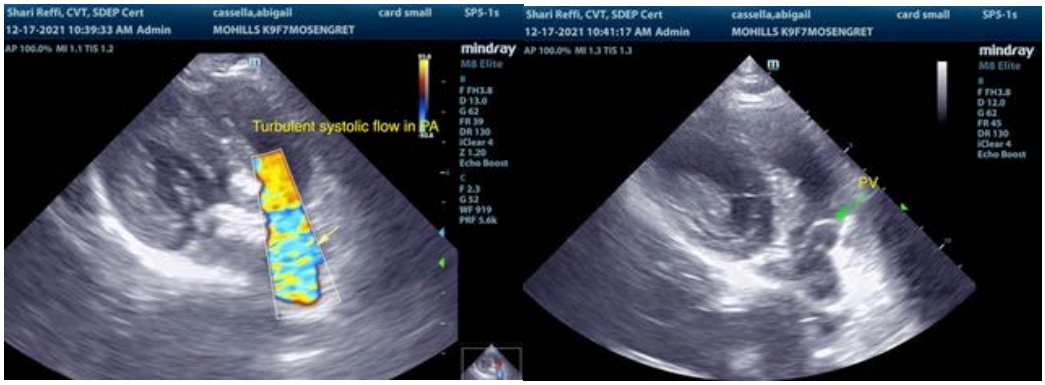

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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