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Clinical Sonography & Telecytology
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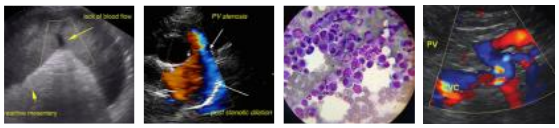


ANIMAL SOUNDS NW
MOBILE VETERINARY ULTRASOUND
IMAGING PERFORMED BY
AnimalSoundsNW.com 541-357-9423

PATIENT

Juno Moss

SPECIES

Canine

BREED

Boxer X

SEX

FS

AGE

7 years

WEIGHT

81.5 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

Albany AH

REFERRING VET

Dr. Spangler

INVOICE

15751

DATE

12/29/22

PRESENTING CLINICAL SIGNS

Grade 3/6 systolic heart murmur, loudest on left, femoral pulses strong and synchronous Painful irregular mass in area of right anal sac

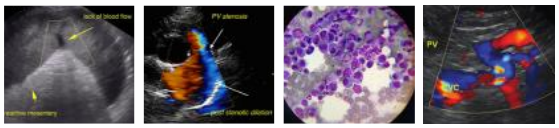
Abnormal PE/Chem/CBC/UA Results: Heart rate 120, respiratory rate panting Blood Pressure Measurements Will obtain day of echo and let sonographer when in for study Current Medications Trazodone 150mg, gabapentin 400mg for today's procedure Radiographic Findings N/A

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				1.4	46	79	0.18
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	1.4	1.4		4.0	3.5	

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. Normal measured LVOT velocity was present. 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** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity, and thickness. **Pulmonary outflow** tract assessment revealed normal valve structure, laminar flow, and diameter (approx.1:1



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pa/ao ratio). Normal measured RVOT velocity was present. 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. No evidence of arrhythmia was noted.

ULTRASONOGRAPHIC FINDINGS

- Normal echocardiogram

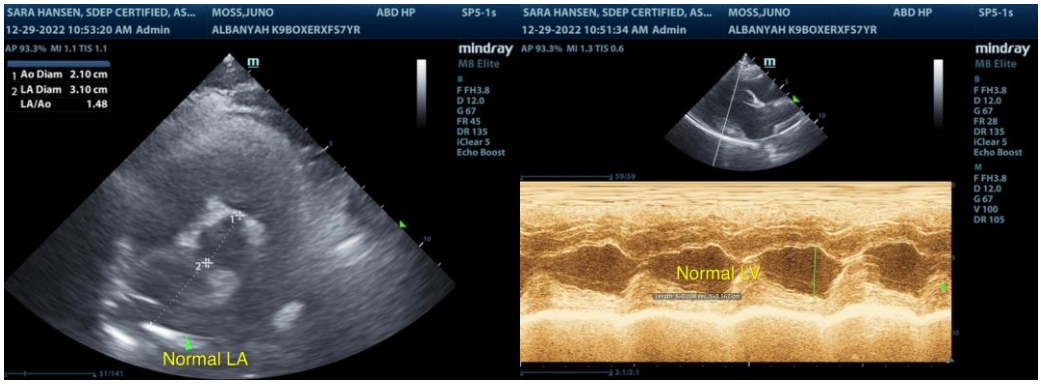
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overtly normal cardiac structure and function without evidence of clinical issues such as arrhythmia, given the breed, LV systolic dysfunction, left or right heart chamber enlargement, or evidence of clinical pulmonary hypertension.

A definitive cause of the murmur was not obvious. In the absence of volume changes such as dehydration or anemia, a benign physiologic or flow murmur could be considered, although the possibility of a small non-visualized flow abnormality or mild valvular insufficiency could be possible.

Regardless, the lack of left or right heart chamber enlargement and overall normal cardiac functionality indicates that the hemodynamic effects of the murmur are low. No indication for cardiac medications. No anesthetic contraindications. ECG assessment prior to surgery, as well as pending systemic blood pressure, is recommended. Conservative monitoring of the murmur at this stage would be appropriate. Recheck echocardiogram is suggested in 6-12 months, sooner if clinical signs arise or if murmur intensity increases.

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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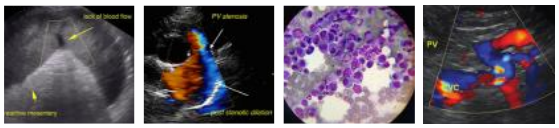

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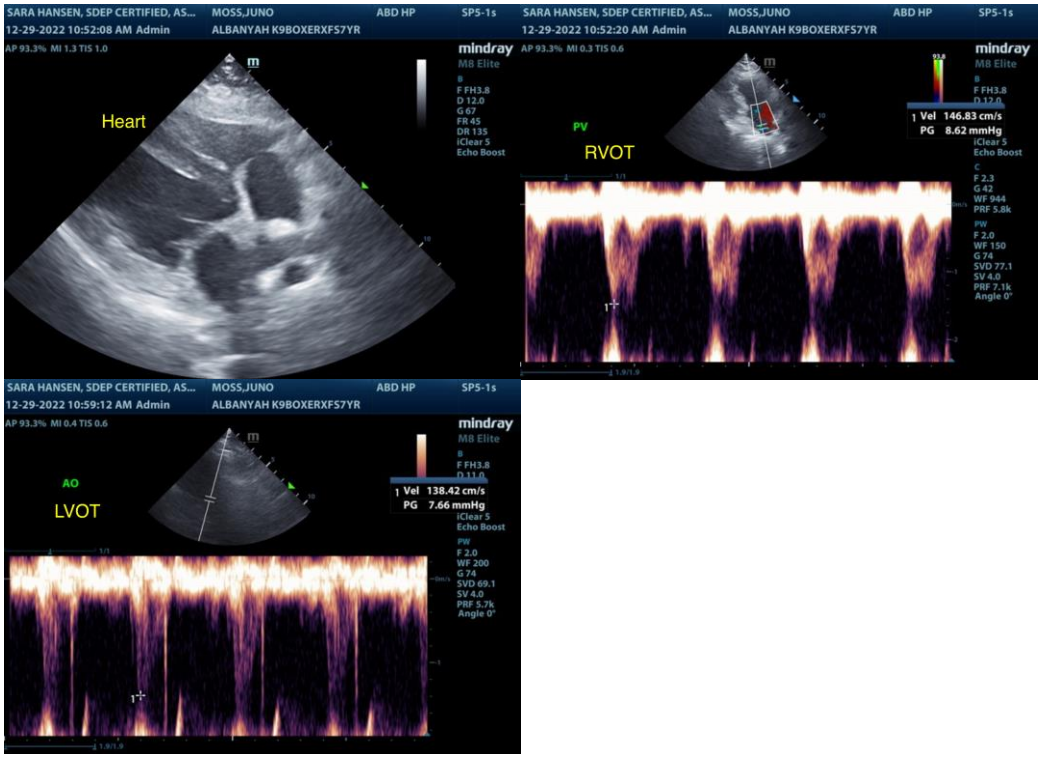

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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