



## PATIENT PRESENTING CLINICAL SIGNS

Penny Lester

History: Echo is pre-operative for bleeding oral tumor to be performed tomorrow. History of low grade murmur. No clinical signs. Pre-op ECG showed sinus tachycardia. No pathological arrhythmias seen. Left axis deviation was seen which is reported to be normal variation or due to left heart enlargement. Abnormal PE/Chem/CBC/UA Results: none reported

## SPECIES

Canine

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART

## BREED

Boxer

## SEX

Spayed Female

## AGE

8 Years

## WEIGHT

32 kg

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	<1.3	28-40	40-100	<0.6
PATIENT	--	--	NM	1.4	45	80	0.24
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	NM	1.5	1.1	--	3.8	3.5	--

## 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

21346

## DATE

3/1/12

## 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** 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 pa/ao ratio). 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

- Normal echocardiogram

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS



**PATIENT**

Penny Lester

No evidence of structural or functional cardiomyopathy, including no evidence of arrhythmogenic disease given the breed. No anesthetic contraindications. A definitive cause of the low-grade murmur was not obvious. Regardless, the hemodynamic effects from the murmur are low given no evidence of left or right heart chamber enlargement or overt evidence of stenotic disease. Conservative monitoring of the murmur at this stage would be appropriate. Recheck echocardiogram is suggested in 12 months or sooner if murmur intensity increases, evidence of arrhythmia or if clinical signs suggestive of cardiac disease arise. The following anesthetic protocol may be considered.

**SPECIES**

Canine

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.

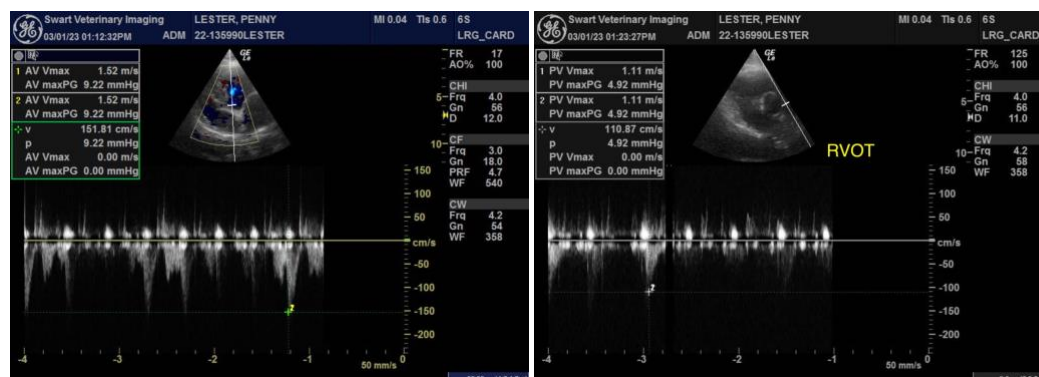
**BREED**

Boxer

<https://www.antechdiagnostics.com/cadet-braf>

**SEX**

Spayed Female



**AGE**

8 Years

**WEIGHT**

32 kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Meredith Swart

**HOSPITAL NAME**

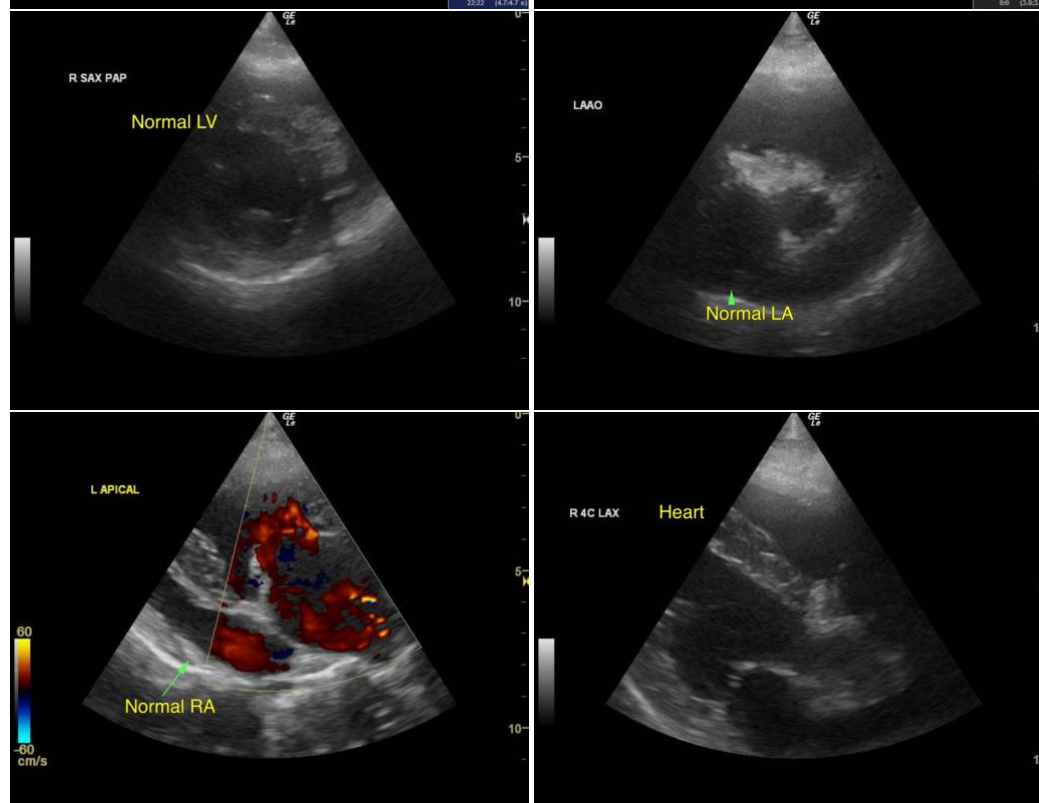
Swart Veterinary Imaging

**REFERRING VET**

Meredith Swart

**INVOICE**

21346



**DATE**

3/1/12

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.



**PATIENT**

Penny Lester

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.

**SPECIES**

Canine

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

**BREED**

Boxer

**SEX**

Spayed Female

**AGE**

8 Years

**WEIGHT**

32 kg

**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**

21346

**DATE**

3/1/12