



**PATIENT PRESENTING CLINICAL SIGNS**

Lux Johri MR, 5/6 murmur.  
Medication: Enalapril, Pimobenden, Lasix

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

**BREED**

Cavalier King Charles  
Spaniel

**SEX**

M/N

**AGE**

2013

**WEIGHT**

26.8

| CANINE                    | MR                   | TR                   | LA/AO               | LA/AO             | FS                              | EF                                    | EPSS                                  |
|---------------------------|----------------------|----------------------|---------------------|-------------------|---------------------------------|---------------------------------------|---------------------------------------|
| <b>CARDIAC PARAMETERS</b> | <b>VMAX</b><br>(m/s) | <b>VMAX</b><br>(m/s) | (Boon method)       | (Heart Base; Swe) | (%)                             | (%)                                   | (cm)                                  |
| <b>NORMAL PARAMETER</b>   | 4.5-5.5              | <2.7                 | 1.3                 | <1.3              | 28-40                           | 40-100                                | <0.6                                  |
| <b>PATIENT</b>            | 5.2                  | <2.0                 |                     | 3.1               | 41                              | 71                                    | 0.58                                  |
| CANINE                    | HR                   | AV                   | PV                  | BODY WEIGHT       | LA                              | LVIDd                                 | LVIDs                                 |
| <b>CARDIAC PARAMETERS</b> | (BPM)                | <b>VMAX</b><br>(m/s) | <b>MAX</b><br>(m/s) | (kg)              | 2D short axis Base view<br>(cm) | Avg; 2D and m-mode short axis<br>(cm) | Avg; 2D and m-mode short axis<br>(cm) |
| <b>NORMAL PARAMETER</b>   | 50-100               | 0.7-1.7              | 0.7-1.6             |                   |                                 |                                       |                                       |
| <b>PATIENT</b>            | 143                  | 1.6                  | 1.5                 |                   | 6.1                             | 5.9                                   |                                       |

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Rebekah Jakum, CVT  
ARDMS/RVT

**HOSPITAL NAME**

New Britain VC

**REFERRING VET**

Dr. Bandekar

**INVOICE**

16296

**DATE**

2/24/23

**Cardiac Presentation**

The echocardiogram in this patient demonstrated severely enlarged **left atrial** size based on 2 different LA measurement methods. Deviation of the interatrial septum towards the right atrium, consistent with increased left atrial pressure, was present. The cranial and caudal **mitral** valve leaflets presented moderate thickening consistent with endocardiosis with mild valvular prolapse. Doppler indicated measurable moderate eccentric insufficiency. The **left ventricle** presented normal thicknesses with maintained linear contour with moderate to marked increased left ventricle volume. 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 mild thickening with mild TR. 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. No evidence of tachycardia or arrhythmia was noted.



**PATIENT**      **ULTRASONOGRAPHIC FINDINGS**

Lux Johri      • Significant progressive chronic mitral valve disease with severe LA/LV enlargement consistent with left-heart volume overload

**SPECIES**      • Mild TR- no evidence of clinical pulmonary hypertension

Canine

**BREED**      **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Cavalier King Charles Spaniel      The echocardiogram compared to the previous study indicates significant progression with severe LA/LV enlargement and evidence of left heart volume overload.

**SEX**      No other clinical issues such as LV systolic dysfunction or evidence of clinical pulmonary hypertension. The degree of left chamber enlargement indicates that the current and future risk going forward of complications is severely elevated.

M/N

**AGE**      Continued Pimobendan, diuretic therapy, and if evidence of hypertension i.e., systemic BP >130, continued ACE Inhibitor medication is suggested. The addition of Spironolactone to diuretic protocol 1.0-2.0 mg/kg PO BID is suggested. Baseline monitoring of resting respiration rate, as well as thoracic radiographs, are recommended. Serial sonographic monitoring going forward is advised. Initial recheck is recommended in 6 months, sooner if clinical signs consistent with congestion i.e., elevated resting respiration rate, exercise intolerance, coughing, syncope, etc., are noted.

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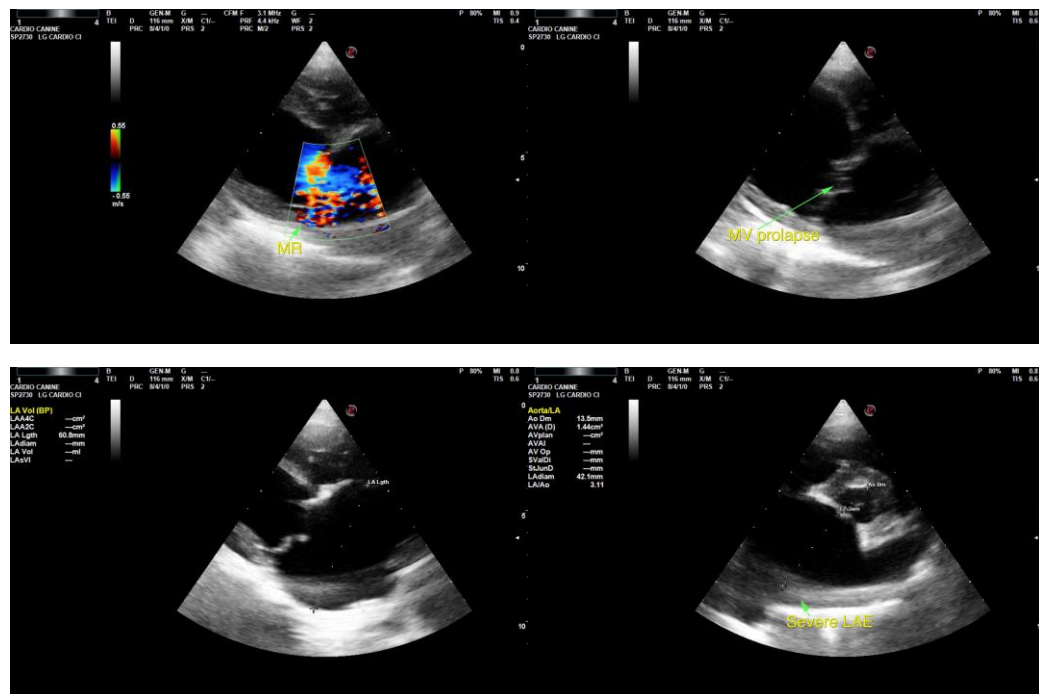
Dr. Bandekar

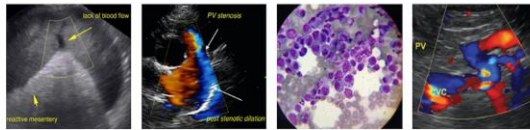
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**PATIENT**

Lux Johri

**SPECIES**

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Spaniel

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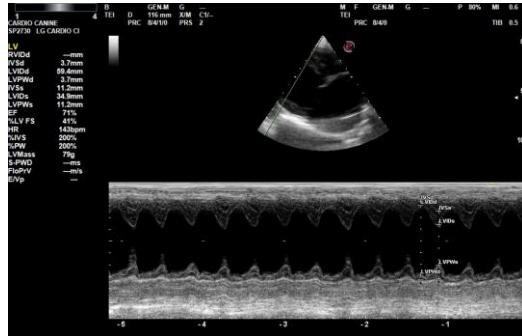
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**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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)**  
[mac.daniel@sonopath.com](mailto:mac.daniel@sonopath.com)