



**PATIENT PRESENTING CLINICAL SIGNS**

Asil Cagar History: Patient presented for v/d. Rads revealed cardiomegaly, distended pulmonary vasculature caudal lung fields (radiographs attached for reference).  
 Abnormal PE/Chem/CBC/UA Results: ALT 182

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

**BREED**

German Shepherd

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. B lines were noted in the peripheral lung fields. These were non-cardiogenic.

**SEX**

Male

**AGE**

1 year

**WEIGHT**

70 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
 DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Shari Reffi, CVT

**HOSPITAL NAME**

Newton VH

**REFERRING VET**

Dr. Barron

| 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                | 1.26                    | 36                              | 66                                       | NM                                       |
| CANINE CARDIAC PARAMETERS | HR (BPM)      | AV VMAX (m/s) | PV MAX (m/s)        | BODY WEIGHT             | 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                   | 124           | 1.61          | 1.54                | 70 lbs                  | 3.57 max                        | 4.55                                     |  |

**INVOICE**

96669

**ULTRASONOGRAPHIC FINDINGS**

Alveolar pattern, non-cardiogenic.

**DATE**

3/9/22

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The heart is normal in this patient. Primary causes of respiratory disease such as pneumonitis,



**PATIENT**

thromboembolic disease should be considered. Primary respiratory protocol is warranted. There is a potential for aspiration pneumonia. Bronchodilators and bronchodilators are all indicated. There was no evidence of pulmonary hypertension at this point.

Asil Cagar

**SPECIES**

Canine

**BREED**

German Shepherd

**SEX**

Male

**AGE**

1 year

**WEIGHT**

70 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Shari Reffi, CVT

**HOSPITAL NAME**

Newton VH

**REFERRING VET**

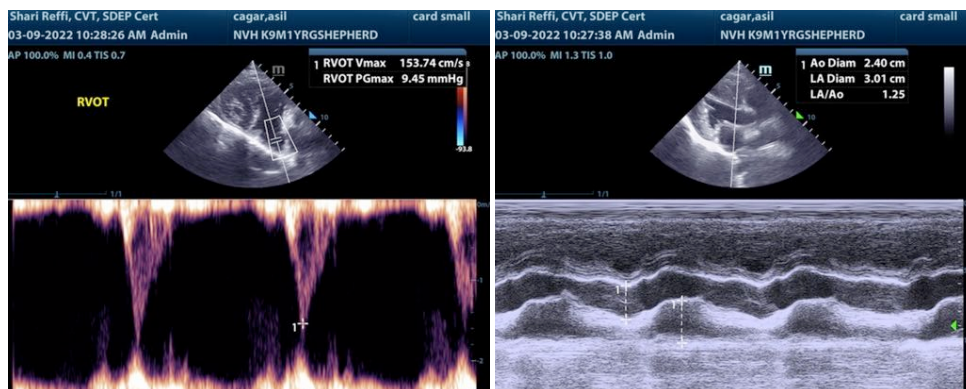
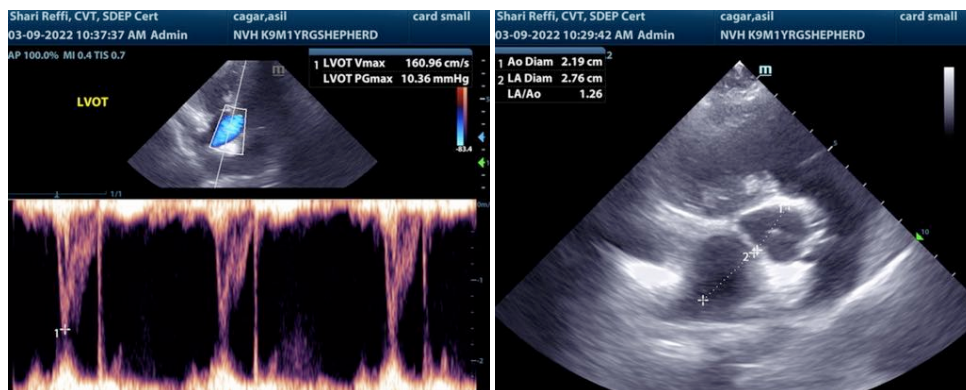
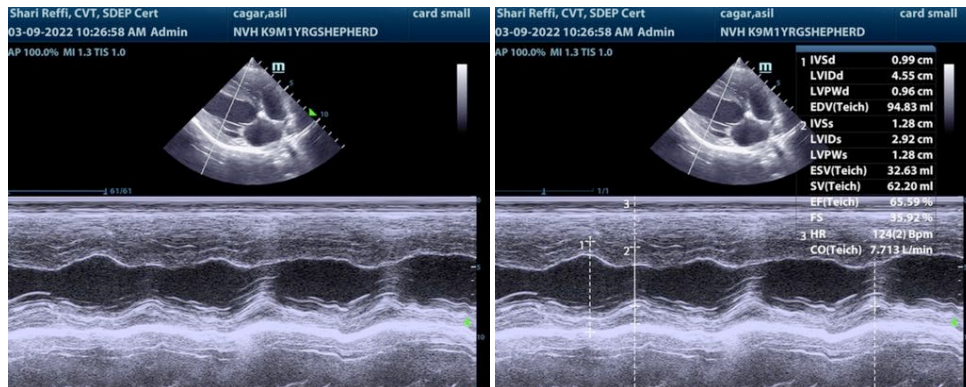
Dr. Barron

**INVOICE**

96669

**DATE**

3/9/22





**PATIENT**

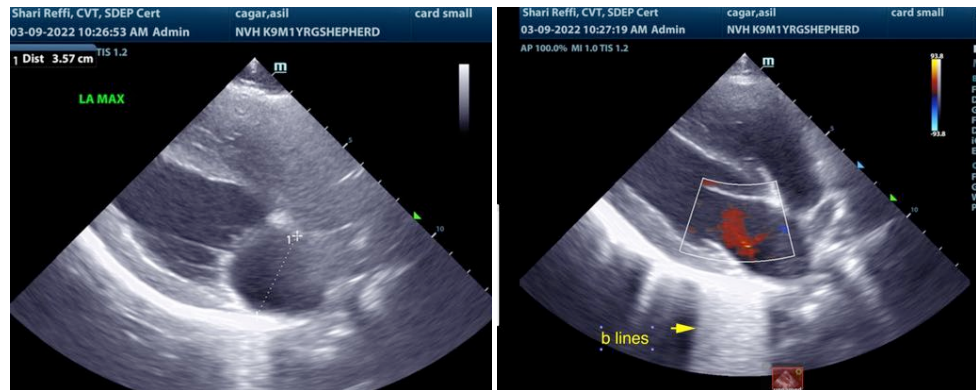
Asil Cagar

**SPECIES**

Canine

**BREED**

German Shepherd



**SEX**

Male

**AGE**

1 year

**WEIGHT**

70 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING  
PERFORMED BY**

Shari Reffi, CVT

**HOSPITAL NAME**

Newton VH

**REFERRING VET**

Dr. Barron

**INVOICE**

96669

**DATE**

3/9/22

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.

**Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com**  
Info@SonoPath.com