



**PATIENT PRESENTING CLINICAL SIGNS**

Lucy Maniscalco History: Enlarged heart in rad.

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

Canine

**BREED**

Scottish Terrier

**SEX**

Spayed female

**AGE**

14 years

**WEIGHT**

23.4 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Jessica Miller, RDMS

**HOSPITAL NAME**

Lake Hopatcong AH

**REFERRING VET**

Dr. Batta

**INVOICE**

39529

**DATE**

9/21/22

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable insufficiency that was centralized. The **left ventricle** presented normal 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. Aortic insufficiency was noted. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. **Tricuspid** valvular assessment demonstrated adequate linear morphology. 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). A large amount of **pleural effusion** was noted. There were areas of lung consolidation noted.

| 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                   | 5.5           | 3.0           | 1.15                | 1.2                     | 43                                | 76   | 0.1  |
| 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             | BELOW                   | BELOW                             | BELOW                                      | BELOW                                      |
| PATIENT                   |               |               | 0.87                | 23.4 lbs                |                                   | 2.88                                       |  |

**ULTRASONOGRAPHIC FINDINGS**

Stage B1 valvular disease without volume overload.

Non-cardiogenic pleural effusion.

Compensated mitral and tricuspid insufficiency.

Lung consolidation, which suggests a neoplastic process. Other differentials include lung consolidation, necrosis, lung lobe torsion, pneumonitis/pneumonia and pleuritis.



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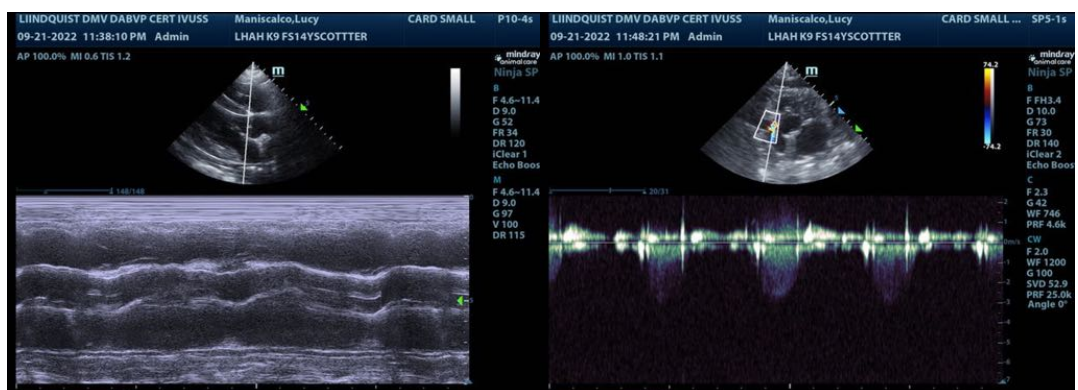
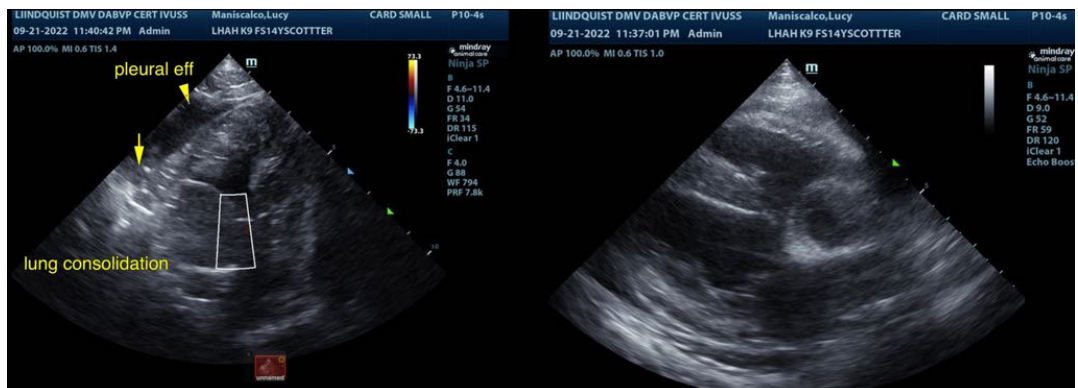
**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

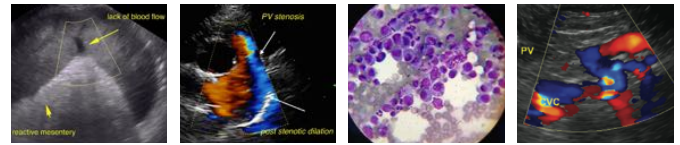
CT examination and pleurocentesis are recommended. The heart has normal volume and is not clinically playing a role in this patient. Compensated mitral and tricuspid insufficiency are present. The thoracic pleural effusion is likely owing to obstructive neoplastic process involving the lungs possibly deriving from the abdomen. Ideally an abdominal sonogram and chest CT would be warranted with pleurocentesis and/or FNA of any lung consolidation that may be acoustically available.

**ABOUT SONOPATH CT SERVICES:**

**SonoPath CT Services** are offered at the [Blairstown Animal Hospital](#). Blairstown animal hospital is just a 30-minute drive west on route 80 from the route 80/287 interchange/Parsippany, New Jersey. More information can be found at

<https://sonopath.com/resources/sonopaths-teleconsultation-services-and-sdep-certification/sonopath-ct-services>





**PATIENT**

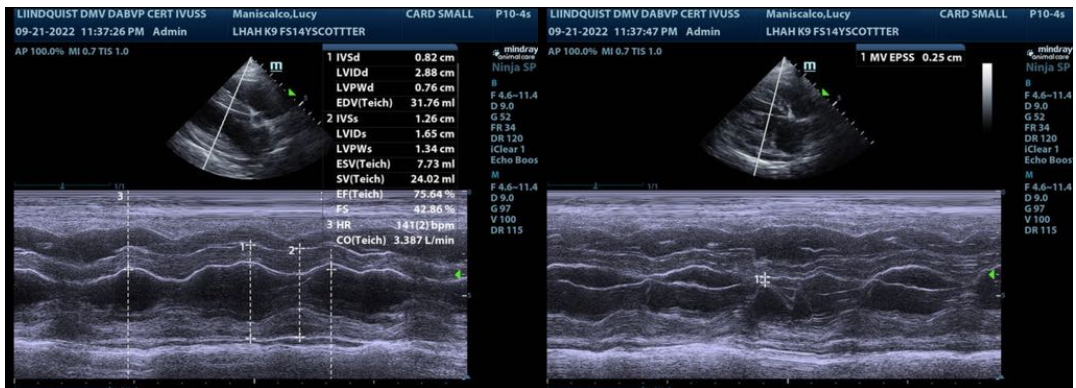
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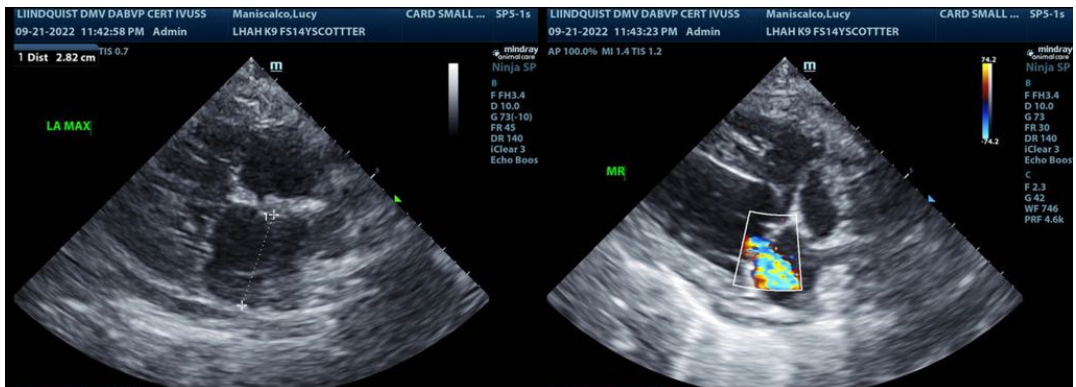
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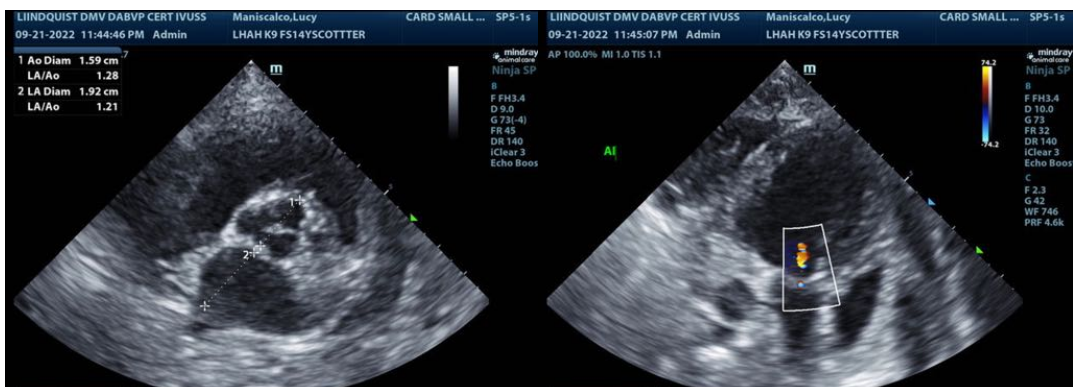
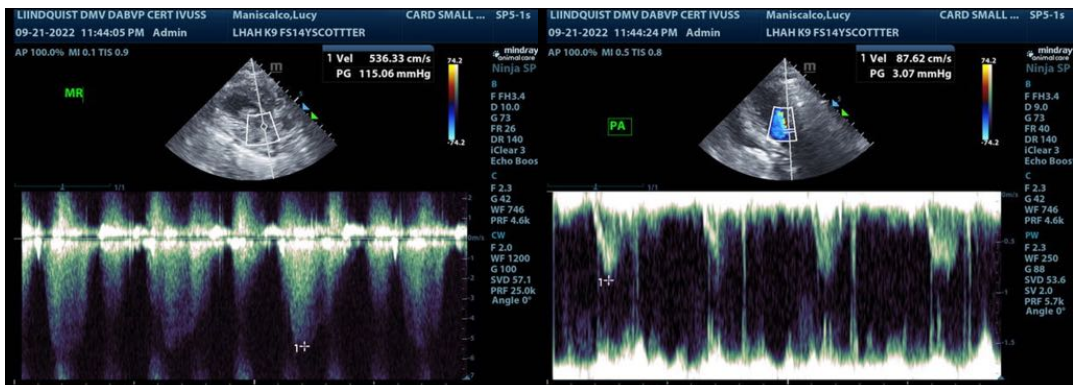
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

**SPECIES**

Canine

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

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