



**PATIENT**

Lucy DeLima

**PRESENTING CLINICAL SIGNS**

Anorexic lethargic PD muffled heart sounds  
Abnormal PE/Chem/CBC/UA Results: Mild elevation ALT BUN and Creat

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN**

**BREED**

Wolf Hound

**SEX**

Spayed Female

**AGE**

8 Years

**WEIGHT**

35 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                 | <1.6                    | 28-40                           | 40-100                                   | <0.6                                     |
| PATIENT                   |               |               | NM                  | 0.9                     | --                              | --                                       | NM                                       |
| 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                   | --            | --            | --                  |                         | 1.3                             | --                                       |  |

**Cardiac Presentation**

The cardiac presentation revealed moderate pericardial effusion with collapse of the right auricle. The 4 chamber internal volumes were subnormal in size. No overt masses noted. However, echogenic debris was noted within the pericardium.

**Urinary System**

The **bladder** in this patient was mildly thickened with slight echogenic mural changes. A minimal amount of urine was present. No calculi or masses were noted. Slight micropolypoid changes were noted. This is a frequent finding in older animals and may be linked to a history of chronic urinary tract infection or active urinary tract infection. Urinalysis would be recommended with culture if any evidence of inflammatory sediment is present. The region of the trigone and visible pelvic urethra were normal.

The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The right kidney measured 5.13 cm. The left kidney measured 7.07 cm.

**Adrenal Glands**

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The right adrenal gland measured 0.56 cm at the cranial pole and 0.58 cm at the caudal pole. The left adrenal gland measured 0.5 cm.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Belan

**HOSPITAL NAME**

McKnight 24/7

**REFERRING VET**

Dr. Gruffydd

**INVOICE**

25808

**DATE**

9/26/21



**PATIENT** *Spleen*

Lucy DeLima The **spleen** was enlarged with scalloping contour and isoechoic, nodular changes. The spleen measured up to 1.57 cm.

**SPECIES** *Liver*

Canine The **liver** revealed mild increased portal markings. Hepatic veins were dilated. Passive congestion pattern with secondary ascites. The gallbladder was thickened and edematous.

**BREED** *Gastrointestinal*

Wolf Hound Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

**SEX**

Spayed Female *Pancreas*

**AGE**

8 Years

Multifocal hypoechoic lymph nodes were enlarged in this patient with a 1.4 cm undifferentiated, hypoechoic lesion near the left pancreatic limb. This may be pancreatic or overlying lymph node. Larger lymph nodes measured up to 1.0 cm. Reactive mesentery noted around the abdominal lymph nodes. Areas of pancreatic edema were noted with surrounding free fluid. The left limb of the pancreas measure dup to 1.17 cm.

**WEIGHT**

35 kg

**ULTRASONOGRAPHIC FINDINGS**

- Pericardial effusion and tamponade with secondary passive congestion liver pattern
- Multifocal abdominal lymphadenopathy
- Heterogeneous spleen

**INTERPRETED BY**

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DABVP, Cert. IVUSS

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Recommend FNA of the spleen, liver, pericardiocentesis (both from a diagnostic and therapeutic standpoint) with cytospin, culture and cytology of the pericardial effusion. Multifocal round cell neoplasia is a strong potential with pericardial involvement. Other forms of neoplasia possible. Idiopathic pericardial effusion with coincidental abdominal lymphadenopathy and pericarditis all possible. The primary issue in this patient is cardiogenic. IV fluid support warranted to enhance internal vascular volume.

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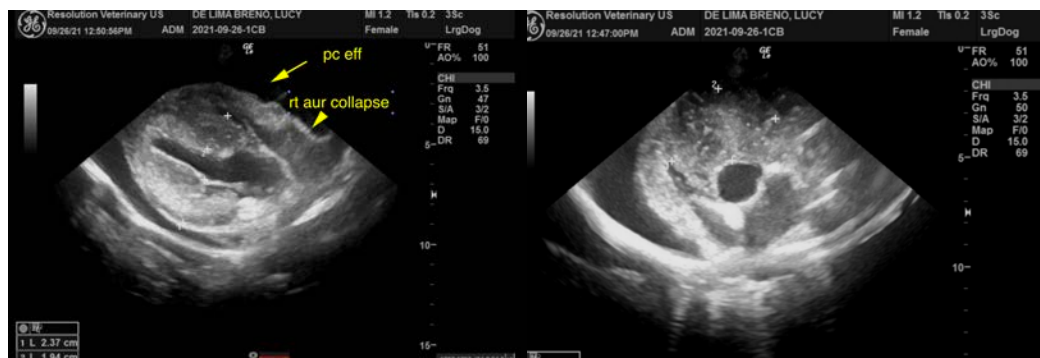
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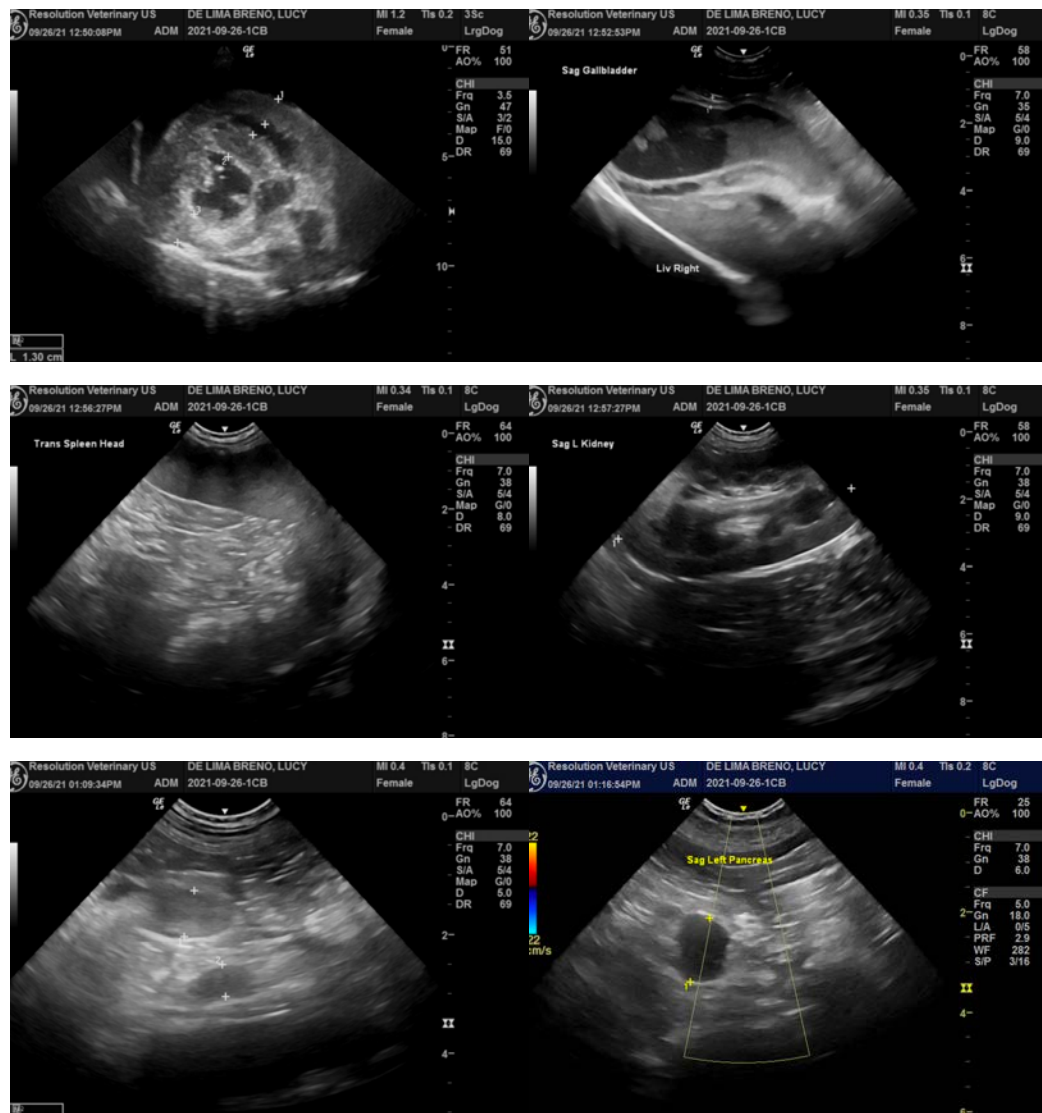
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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  
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