



**PATIENT PRESENTING CLINICAL SIGNS**

Max Mareira Vomiting, anorexia, coughing, HM-fluid filled abdomen  
Abnormal PE/Chem/CBC/UA Results: WBC 18k, Neutro 13.8, ALT 135, rest WNL.

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN**

Canine

**BREED**

French Poodle

**SEX**

Male

**AGE**

12

**WEIGHT**

25.5

**INTERPRETED BY**

Eric Lindquist, DMV

DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Jenn

**HOSPITAL NAME**

Rockaway AH

**REFERRING VET**

Dr. Ascot

**INVOICE**

44616

**DATE**

8/11/23

| 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                 | Up to 1.6               | 28-40                           | 40-100                                   | <0.6                                     |
| PATIENT                   | 5.6           |               | >2.5                | 2.16                    |                                 |  | 0.1                                      |
| 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             | BELOW                   | BELOW                           | BELOW                                    | BELOW                                    |
| PATIENT                   |               |               | 0.9                 |                         | 5.5                             | 4.9                                      |  |

**Cardiac Presentation**

The cardiac presentation revealed severe volume overload of the left atrium and left ventricle with mitral valve prolapse. Tricuspid insufficiency noted with septal prolapse. Mild right atrial enlargement also noted. Slight pericardial effusion and pulmonary edema lines noted, consistent with left-sided heart failure and wet lung.

**Urinary System**

The urinary bladder, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal.

The kidneys revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The left kidney measured 5.37 cm. The right kidney measured 5.37 cm.

**Adrenal Glands**

The adrenal glands were not visualized.



**PATIENT** *Spleen*

Max Mareira

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes were noted.

**SPECIES**

Canine

**BREED** *Liver*

French Poodle

The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

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Dilated hepatic veins present, consistent with passive congestion from right-sided failure.

**Gastrointestinal**

**WEIGHT**

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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.

**INTERPRETED BY**

Eric Lindquist, DMV

**Pancreas**

DABVP, Cert. IVUSS

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

**IMAGING PERFORMED BY**

Jenn

**Free Abdomen**

Large amount of ascites noted.

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**ULTRASONOGRAPHIC FINDINGS**

- Stage D1 valvular disease with left and right-sided heart failure
- Age related renal changes
- Large amount of ascites

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

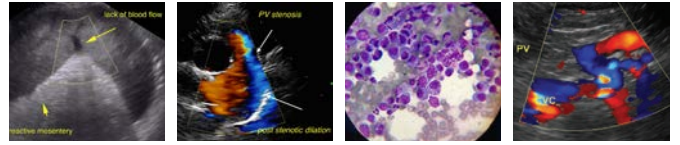
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This patient is at a very high risk for sudden death. Recommend cage rest, oxygen, quadrotherapy with Spironolactone at 1-2 mg/kg BID, Lasix at 3-5 mg/kg BID assuming renal values are not elevated and Pimobendan 0.3 mg/kg BID. Once the patient is eating, add ACE inhibitor therapy at 0.5 mg/kg SID progressing to BID. Recheck sonogram in 5-10 days. Blood pressures, EKG, and cough suppressants all indicated. Strict cage rest and oxygen therapy. This is a severe presentation consistent with Stage D1 valvular disease.

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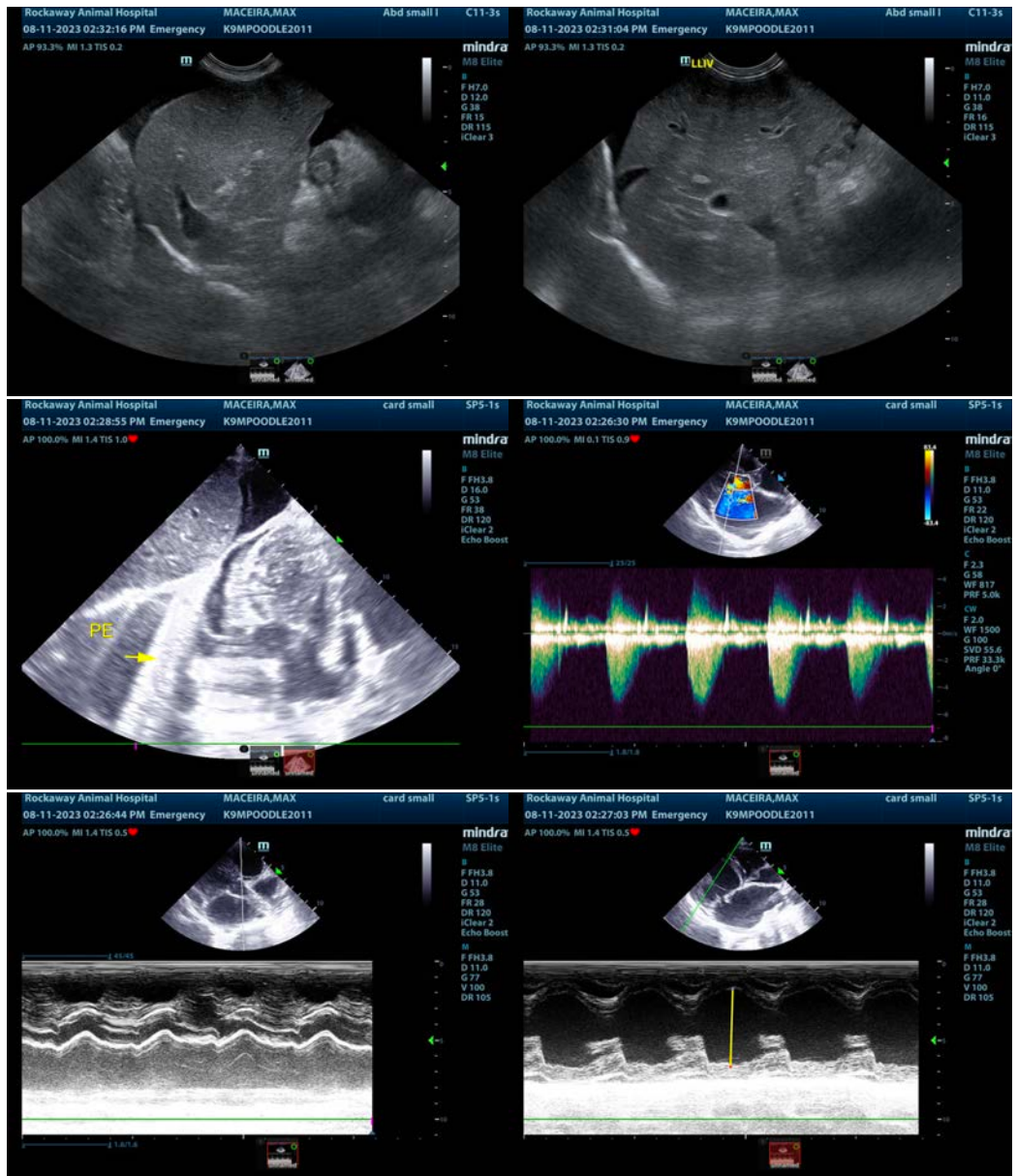
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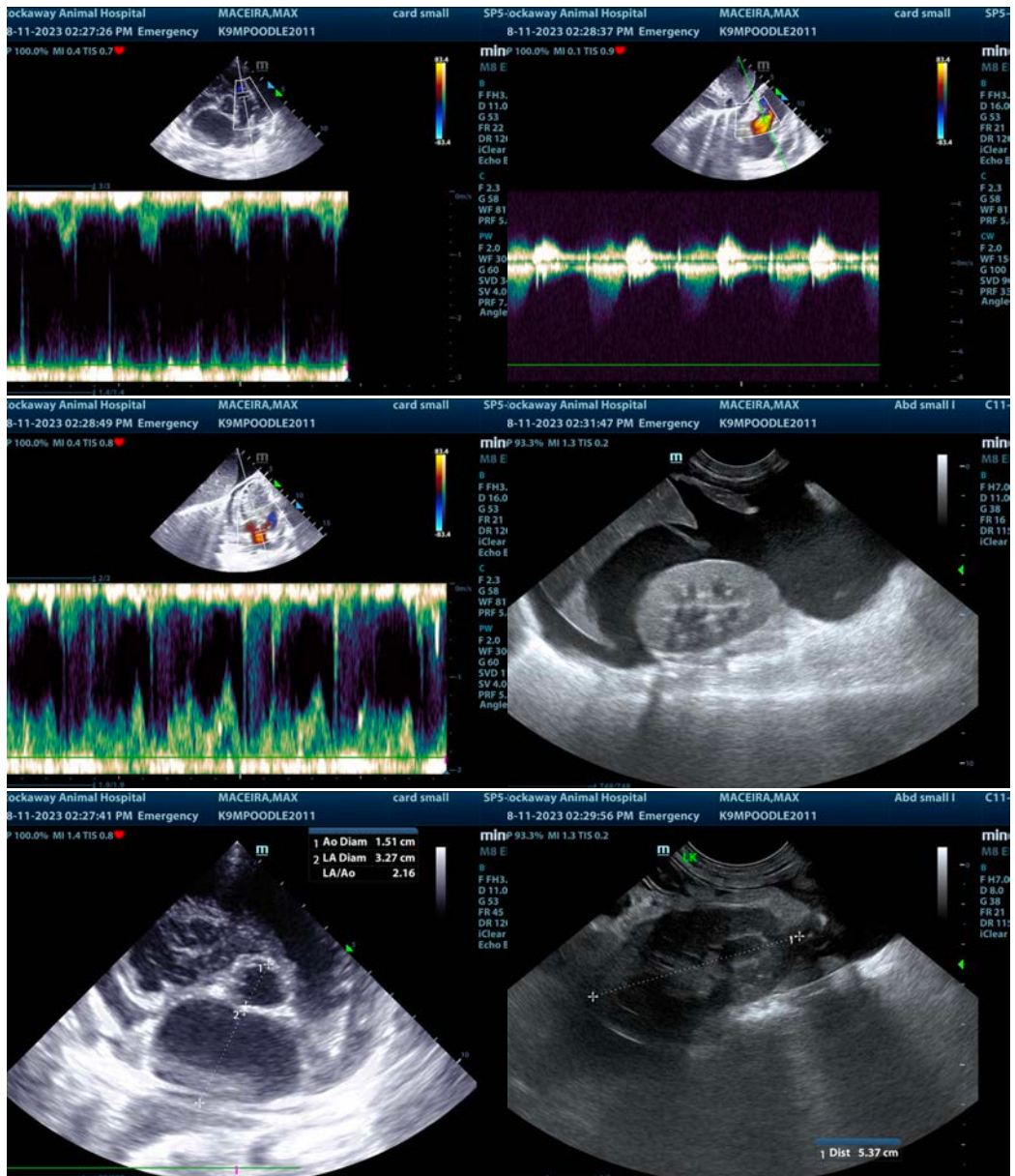
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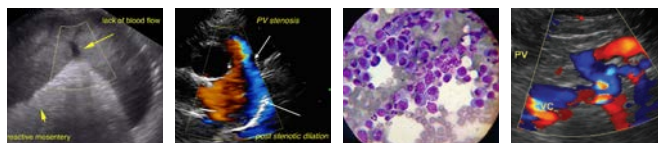
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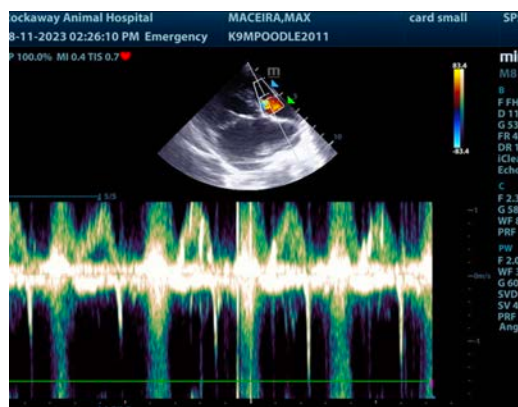
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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