



## PATIENT

Bella De Senzo

## SPECIES

Canine

## BREED

Great Pyranees

## SEX

FS

## AGE

14

## WEIGHT

68.0

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Jeanine French

## HOSPITAL NAME

Fredon AH

## REFERRING VET

Dr. Linda Grau

## INVOICE

13304

## DATE

2/11/22

## PRESENTING CLINICAL SIGNS

10 pound weight loss. Inappetence, Seizure like activity recently, exercise induced. Mid abdominal mass felt on palpation and confirmed on radiograph. Cardiac enlargement on radiographs

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

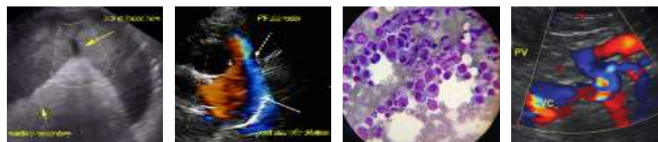
| CANINE CARDIAC PARAMETERS | MR VMAX (m/s) | TR VMAX (m/s) | LA/AO (Boon method) | LA/AO (Heart Base; Swe) | FS (%)                          | EF (%)                                   | EPSS (cm)                                |
|---------------------------|---------------|---------------|---------------------|-------------------------|---------------------------------|--|--|
| NORMAL PARAMETER          | 4.5-5.5       | <2.7          | 1.3                 | <1.6                    | 28-40                           | 40-100                                   | <0.6                                     |
| PATIENT                   | 4.2           |               |                     | 1.85                    | 36.7                            | 67.9                                     | 0.25                                     |
| 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                   | > 180         |               | 0.8                 |                         | 6.2                             | 3.8                                      |  |

## Cardiac Presentation

The echocardiogram in this patient demonstrated moderately enlarged **left atrial** size based on 3 different LA measurement methods. Mild deviation of the interatrial septum towards the right atrium suggestive of mild elevated left atrial pressure was present. The cranial and caudal **mitral** valve leaflets presented subtle vegetative thickening consistent suggestive of mild endocardiosis. Doppler indicated measurable primarily eccentric insufficiency. 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 or chamber overload. **Tricuspid** valvular assessment demonstrated adequate linear morphology. Minor TR was present. 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. Consistent tachyarrhythmia was present.



|  |   |
|--|---|
| <b>PATIENT</b>   | <b><i>Urinary System</i></b>  |
| Bella De Senzo   | The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 4.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.  |
| <b>SPECIES</b>   |   |
| Canine   |   |
| <b>BREED</b>   | The area of the aortic trifurcation was free of pathology.  |
| Great Pyranees   | Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 6.0 cm in length. The right kidney measured 6.0 cm in length.  |
| <b>SEX</b>   |   |
| FS   |   |
| <b>AGE</b>   | <b><i>Adrenal Glands</i></b>  |
| 14   | The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 2.6 cm length x 0.52 cm width at the caudal pole. The right adrenal gland was not definitively visualized.   |
| <b>WEIGHT</b>  | <b><i>Spleen</i></b>  |
| 68.0   | The visualized spleen exhibited normal to possible subnormal size, given the breed, with maintained symmetrical capsule contour. Generalized mild parenchyma heterogeneity was present. The potential for mild splenic volume contraction is possible.  |
| <b>INTERPRETED BY</b>                                    | <b><i>Liver/ Gallbladder</i></b>  |
| R. McKenzie Daniel,<br>DVM, DABVP<br>(Canine and Feline) | The liver presented enlarged in size. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with primarily anechoic luminal content. The cystic and common bile ducts were normal. |
| <b>IMAGING PERFORMED BY</b>                              | <b><i>Gastrointestinal</i></b>  |
| Jeanine French   | The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material.   |
| <b>HOSPITAL NAME</b>                                     | The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material.   |
| Fredon AH  | The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material.   |
| <b>REFERRING VET</b>                                     | <b><i>Pancreas</i></b>  |
| Dr. Linda Grau   | The parenchyma of the left limb, body, and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease were evident.  |
| <b>INVOICE</b>   |   |
| 13304  | Normal visible colon wall layers were present with apparent formed feces in lumen.  |
| <b>DATE</b>  |   |
| 2/11/22  |   |



**PATIENT**

***Free Abdomen***

Bella De Senzo

Large, mid to caudal mass exhibiting nonhomogeneous to focally hyperechoic parenchyma measuring approximately 10.0 cm in diameter was present. Associated regional hyperechoic mesentery was noted around the mass along with mild volume peritoneal free fluid. The mass was not overtly connected to the spleen and did not appear to involve either the left or right kidney or liver.

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**ULTRASONOGRAPHIC FINDINGS**

- Moderate LA enlargement, normal LV volume and systolic function
- Consistent to significant tachyarrhythmia
- Eccentric MR
- Unspecified mid to caudal abdominal mass with associated regional peritonitis / peritoneal free fluid
- Mild chronic renal changes
- Mild nonspecific hepatomegaly

**INTERPRETED BY**

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

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The most striking echocardiographic finding is the consistent to significant tachyarrhythmia. This may be secondary to primary cardiac disease i.e., atrial fibrillation, although secondary tachycardia owing to intra-abdominal or systemic disease, tachycardia induced cardiomyopathy, or other may be possible. The hemodynamic effects associated with consistent tachycardia may be resulting in secondary left atrium enlargement although increased hemodynamic effects secondary to mitral valve regurgitation as a complicating factor for the left atrium enlargement is also possible.

**IMAGING PERFORMED BY**

Jeanine French

Hospitalization with ECG assessment and arrhythmia stabilization or conversion is recommended. ECG cardiology consultation, if possible, is suggested. Arrhythmia conversion is recommended prior to any potential anesthesia.

**HOSPITAL NAME**

Fredon AH

The abdominal mass, although nonspecific, is likely consistent with neoplastic criteria such as undifferentiated sarcoma or other. A definitive origin of the mass was not overtly evident. The mass exhibited similar echogenicity to the discernable spleen, yet a definitive connection or origin to the spleen was not apparent. Splenic, nonspecific omental or potential GI origin are all possible. The potential for nonobvious intra-abdominal or cardiac metastasis cannot be excluded.

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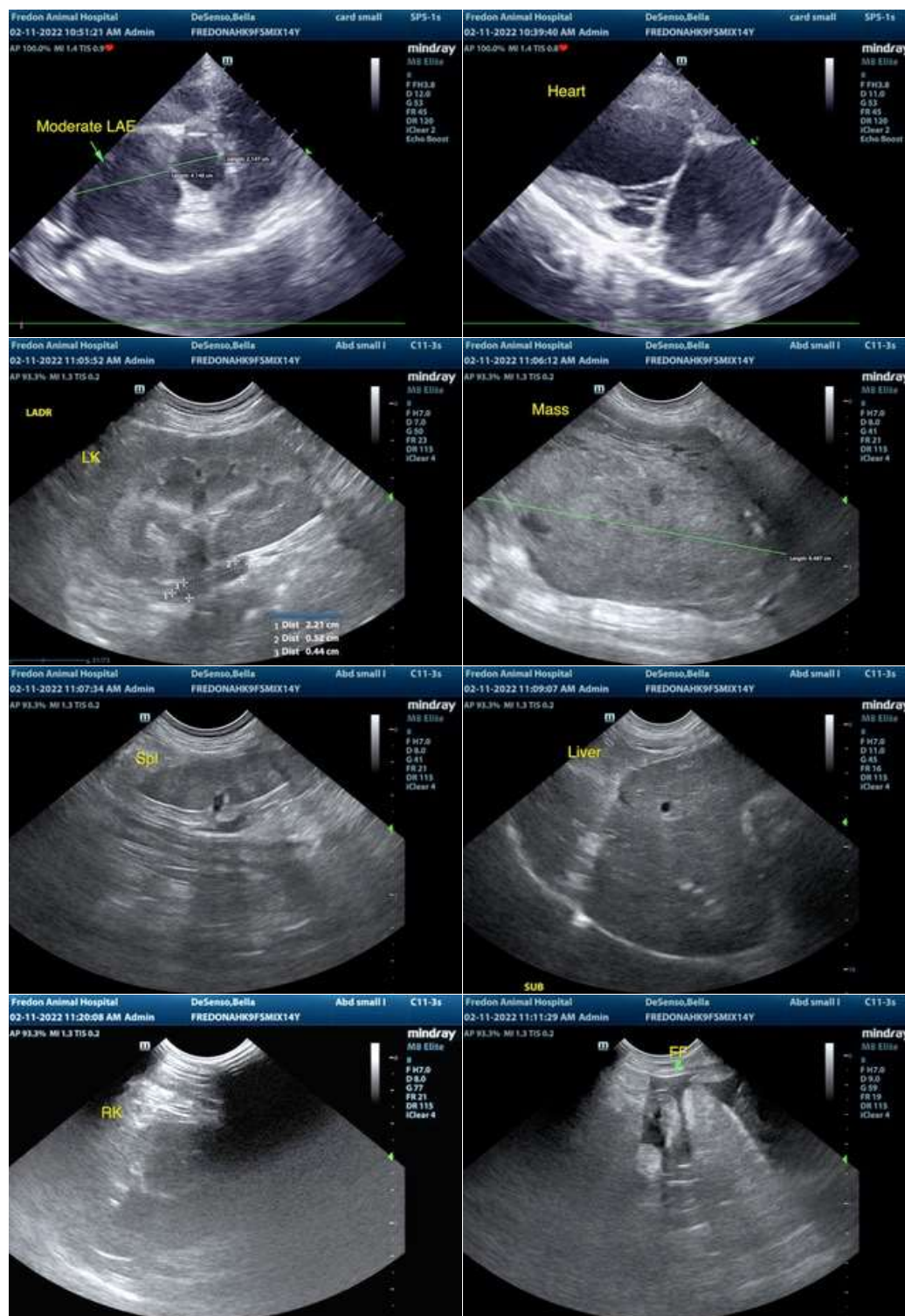
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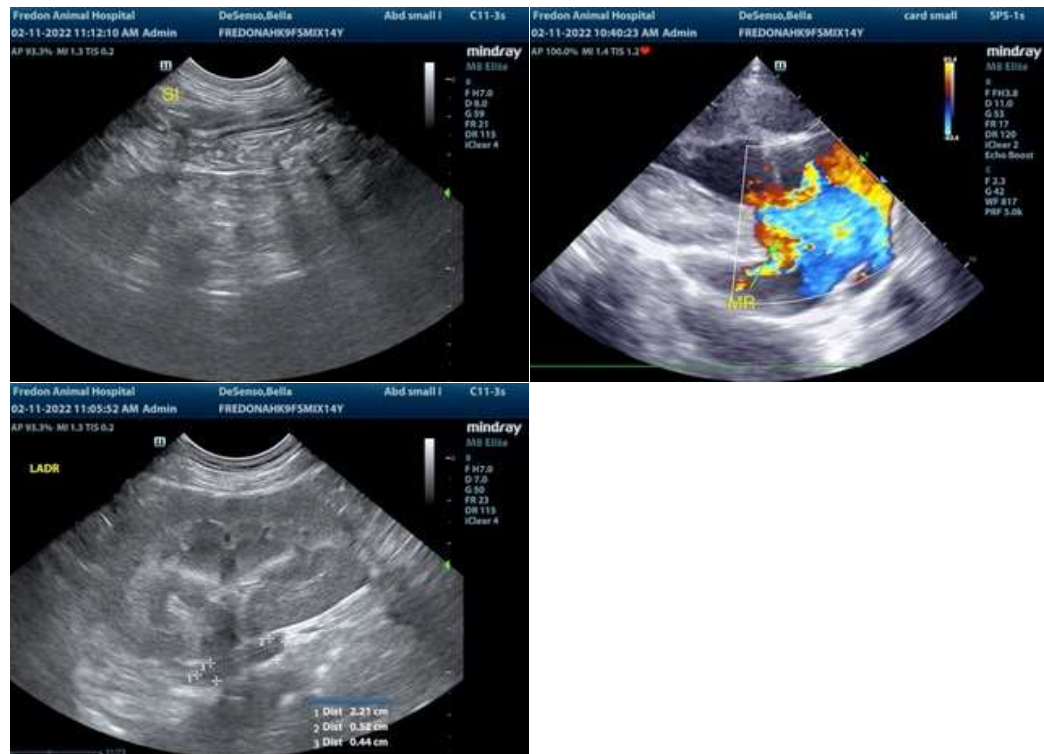
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**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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.

**R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)**  
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