



**PATIENT** **PRESENTING CLINICAL SIGNS**  
 Mia Friea cyamatic, resp distress, hx of trach collapse rads wnl  
 Abnormal PE/Chem/CBC/UA Results: chol>450 nue-12.25 glu-127

**SPECIES** **ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN AND HEART**  
 Canine

| BREED     | CANINE CARDIAC PARAMETERS | MR VMAX (m/s) | TR VMAX (m/s) | LA/AO M-mode | LA/AO (Heart Base; Swe) | FS (%)               | EF (%)                                   | EPSS (cm)                                |
|-----------|---------------------------|---------------|---------------|--------------|-------------------------|----------------------|--|--|
| Chihuahua | NORMAL PARAMETER          | 4.5-5.5       | <2.7          | 1.3          | Up to 1.6               | 28-40                | 40-100                                   | <0.6                                     |
|           | PATIENT                   | --            | --            | --           | 1.3                     | 42                   | 70                                       | 0.3                                      |
| SEX       | CANINE CARDIAC PARAMETERS | HR (BPM)      | AV VMAX (m/s) | PV MAX (m/s) | BODY WEIGHT             | LAD LA MAX 4 Chamber | LVIDd Avg; 2D and m-mode short axis (cm) | LVIDs Avg; 2D and m-mode short axis (cm) |
| FS        |                           |               |               |              |                         |                      |  |  |
| AGE       |                           |               |               |              |                         |                      |  |  |
| 15yr      |                           |               |               |              |                         |                      |  |  |
| WEIGHT    | NORMAL PARAMETER          | 50-100        | 0.7-1.7       | 0.7-1.6      |                         |                      |  |  |
| 11lb      | PATIENT                   | NM            | 1.1           | 1.3          | 11lb                    | 2.1                  | 2.0                                      | --                                       |

**Cardiac Presentation**

The echocardiogram in this patient demonstrated normal left atrial size based on 2 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal mitral valve leaflets presented vegetative thickening consistent with mild degenerative changes/endocardiosis. 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 mild thickening with mild TR on Doppler. 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. No evidence of arrhythmia.

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no evidence of

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 (Canine and Feline)

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**HOSPITAL NAME**  
 Newton VH

**REFERRING VET**  
 Dr Chan

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 05/21/2026



**PATIENT**

Mia Friea

urine/lumen sediment, mineral, or calculi. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

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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 3.7 cm in length. The right kidney measured 3.5 cm in length.

**BREED**

Chihuahua

The area of the aortic trifurcation was free of pathology.

**Adrenal Glands**

The bilateral adrenal glands were normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 0.5 cm width in the caudal pole. The right adrenal gland measured 0.41 cm width in the caudal pole.

**SEX**

FS

**Spleen**

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

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**Liver/Gallbladder**

Generalized hepatomegaly with symmetrical, mildly rounded contour. Non-homogenous increased hepatic parenchymal echogenicity exhibiting multiple subtle non-homogenous hypoechoic intraparenchymal nodules. An example measured 1.7 cm in diameter. Concurrent thinly walled ventrocaudal hepatic cyst measuring 1.7 cm in diameter was present. Normal vascular volume. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with thin walls and mild to moderate congealed non-organized debris. The cystic and common bile ducts were normal.

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**Gastrointestinal**

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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.

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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 mechanical/metabolic ileus, obstruction or foreign material.

Normal visible colon wall layers were present with apparent formed feces in lumen.

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**Pancreas**

The area of the pancreas was sonographically normal.

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**Free Abdomen**

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**PATIENT** No omental masses, overt lymphadenopathy or peritoneal effusion was present.

Mia Friea **ULTRASONOGRAPHIC FINDINGS**

**Primary**

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Chihuahua

- Overall normal cardiac structure /function
- Mild degenerative mitral valve
- Mild tricuspid insufficiency, normal RA / RV / pulmonary artery
- Enlarged non-homogenous subtle nodular non-congested liver with intraparenchymal cysts
- Congealed gallbladder debris (non-mucocele)
- Chronic renal changes
- Normal / mild age related adrenal glands

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

No evidence of structural /functional cardiomyopathy with compensated mitral valve insufficiency in conjunction with mild tricuspid insufficiency suspected. Regardless of classification the lack of cardiac chamber enlargement, LV systolic dysfunction, overt clinical pulmonary hypertension in conjunction with no evidence of hepatic congestion indicate that the respiratory signs of this patient are non-cardiogenic in origin. No indication for cardiac medication. Primary lower airway disease is probable. Continued respiratory support and empirical therapy for non-specific lower airway disease with considerations including infectious, inflammatory, neoplastic airway disease or other is recommended.

Chronic vacuolar, cholestatic or inflammatory hepatopathy, subtle areas of hepatic nodular hyperplasia, hematopoiesis, fibrosis, occult hepatic neoplasia (thought less likely) all potentials. Further assessment may include assuming normal clotting status, hepatic FNA cytology using 25ga needle. Monitoring of hepatic enzymes and hepatosupportive medications are recommended.

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Based on no evidence of structural /functional cardiomyopathy, anesthetic risk is considered mild. If required, the following protocol is suggested. Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists.

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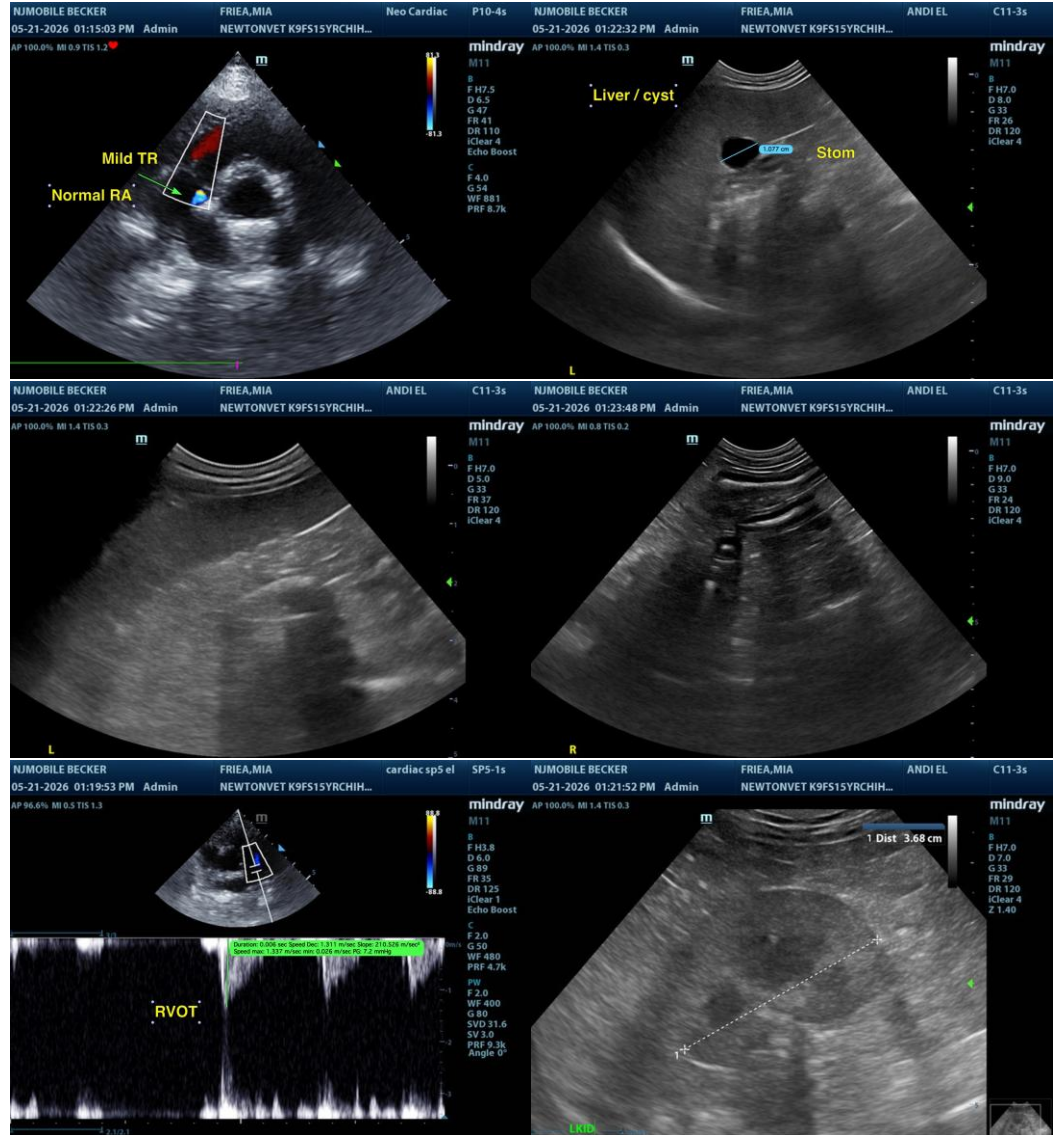
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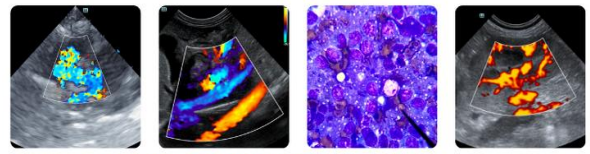
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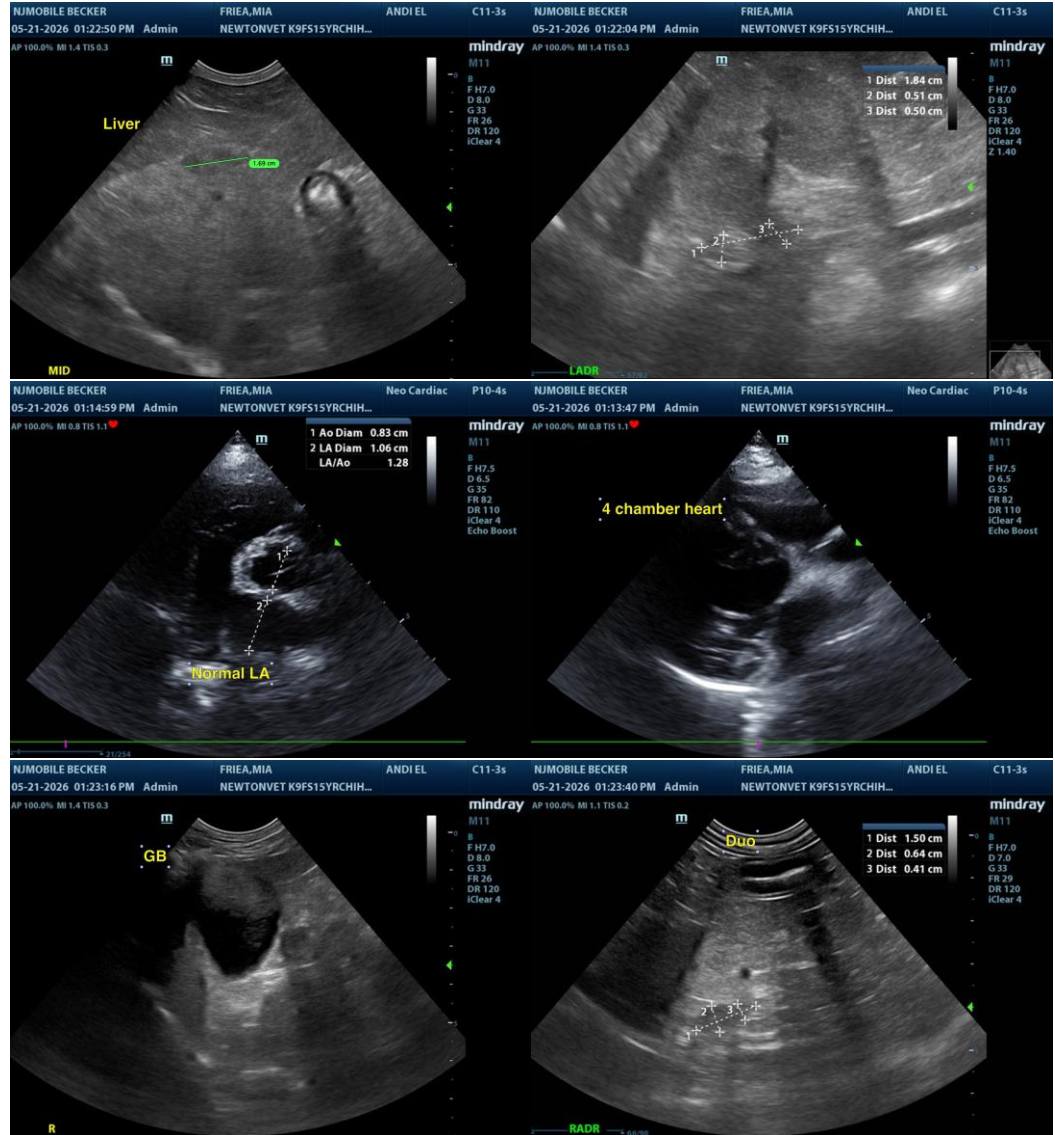
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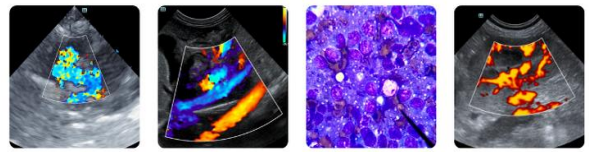
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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