

PATIENT

Bizzy Umhoefer

SPECIES

Canine

BREED

Spaniel Mix

SEX

MN

AGE

15yr

WEIGHT

43lb

PRESENTING CLINICAL SIGNS

Hx of high cholesterol, increased ALP, increased GGT and triglycerides, mod. protein in urine. O states increased panting, possible trouble breathing, BNP very high 3,992. On Provable, Pimobendan, thyro-tabs and carprofen. Very weak hind end.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN AND HEART

| CANINE CARDIAC PARAMETERS | MR VMAX (m/s) | TR VMAX (m/s) | LA/AO M-mode | 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 | 6.0 | -- | -- | 1.6 | 45 | 78 | 0.2 |
| 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) |
| NORMAL PARAMETER | 50-100 | 0.7-1.7 | 0.7-1.6 | | | | |
| PATIENT | NM | 1.8 | 1.0 | 43lb | 5.2 | 4.7 | -- |

INTERPRETED BY

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

IMAGING PERFORMED BY

Rebecca Hamilton

HOSPITAL NAME

Loving Care Veterinary Hospital

REFERRING VET

Dr Steele

INVOICE 24533

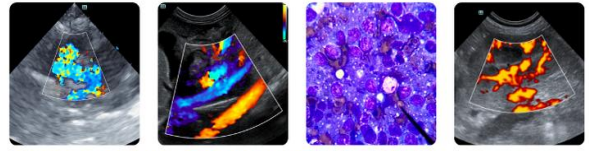
DATE 04/20/2026

Cardiac Presentation

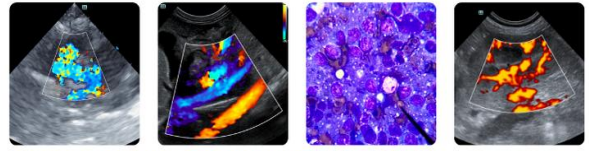
The echocardiogram in this patient demonstrated mild increased left atrial size based on 2 different LA measurement methods. The cranial and caudal mitral valve leaflets presented thickening consistent with endocardiosis. Doppler indicated measurable moderate eccentric insufficiency. Mild increased LV dimension. 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. 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 cardiac / pericardial tumors was visible.

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no evidence of 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.



| | |
|--|---|
| PATIENT | 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 moderate loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 6.3 cm in length. The right kidney measured 6.4 cm in length. |
| Bizzy Umhoefer | |
| SPECIES | |
| Canine | The area of the aortic trifurcation was free of pathology. The area of the residual prostate appeared normal and free of pathology. |
| BREED | Adrenal Glands |
| Spaniel Mix | The adrenal glands were not definitively visualized suspect secondary to isoechoic adrenal parenchyma compared to adjacent omentum. No definitive visualized adrenal pathology. |
| SEX | Spleen |
| MN | The spleen exhibited primarily finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Multifocal, well-defined, asymmetrical, hyperechoic nodules were present throughout the medial parenchyma. Concurrent areas of indistinctly margined hyperechoic perihilar parenchyma and suspect medial capsule fibrosis. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory or neoplastic changes were not noted. The echogenic nodules tend to trend benign and are most consistent with benign hyperplasia or myelolipomas. |
| AGE | |
| 15yr | |
| WEIGHT | Liver/Gallbladder |
| 43lb | Mild hepatomegaly with rounded symmetrical capsule contour. Non-homogenous variably increased hepatic parenchyma exhibiting discrete lobar hypoechoic parenchyma to indistinctly margined hepatic nodules was present; an example measured 1.6 cm in diameter. 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 non-organized debris. The cystic and common bile ducts were normal. |
| INTERPRETED BY | Gastrointestinal |
| R. McKenzie Daniel, DVM, DABVP (Canine and Feline) | The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained mild non-shadowing ingesta /chyme with no signs of obstruction or foreign material. 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. |
| IMAGING PERFORMED BY | Pancreas |
| Rebecca Hamilton | 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 was evident. |
| HOSPITAL NAME | Free Abdomen |
| Loving Care Veterinary Hospital | No omental masses, overt lymphadenopathy or peritoneal effusion was present. |
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ULTRASONOGRAPHIC FINDINGS

Primary

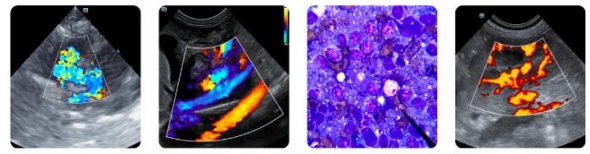
- Chronic mitral valve disease (ACVIM B2)
- Enlarged non-homogenous liver exhibiting discrete hypoechoic lobar parenchyma/ indistinct nodules- chronic vacuolar, inflammatory or cholestatic hepatopathy, indistinct areas of lobar nodular hyperplasia, hematopoiesis or other, hepatic neoplasia not excluded yet thought less likely
- Non-organized gallbladder debris (non-mucocele)
- Hyperechoic splenic nodules /medial splenic parenchyma with suspect medial capsule fibrosis - suggestive of benign criteria i.e. myelolipomas
- Bilateral chronic renal changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Potential for mild progressive increased LA / LV dimension compared to the previous study possible yet not significant. However, potential emerging clinical signs associated with left heart volume overload cannot be definitively excluded. Continued Pimobendan 0.3 mg/kg PO BID is recommended. Lowest effective dose diuretic Lasix 1-2 mg/kg trial with monitoring of resting RR and respiratory signs going forward is advised. Given provided radiographs, concurrent primary pulmonary disease is suspected. Definitive evidence of pericardial pulmonary nodule or mass was not obvious in the visible window. Omega-3 fatty acid supplementation and mild salt restriction may prove beneficial. Cardiac prognosis is guarded to highly variable and sonographic monitoring is advised with concurrent monitoring of clinical response to diuretic trial. Recheck echo suggested in 6 months, sooner if clinically indicated. Monitoring of renal parameters is indicated. Cardiac anesthetic risk is considered at least moderate. If required, the following protocol is suggested with judicious IV fluid administration.

Assuming normal clotting status hepatic parenchyma and accessible indistinct nodule FNA cytology could be considered for further clarification in conjunction with assessment of lab work and UA. Adrenal screening could be considered if clinical signs consistent with Cushing syndrome are present. Hepatosupportive medications and sonographic monitoring of the liver for evidence of progressive changes would be more conservative. Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered.

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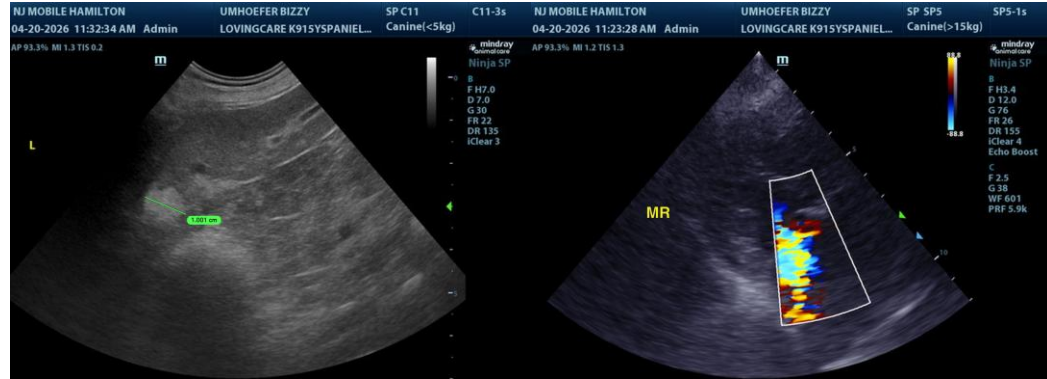
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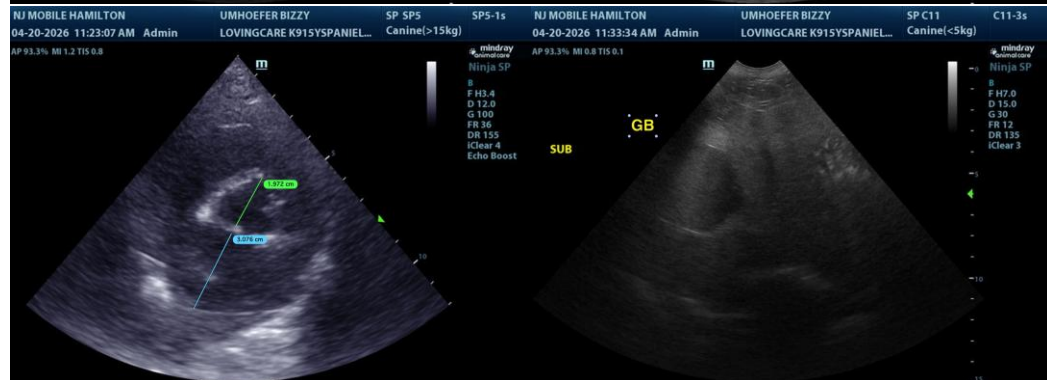
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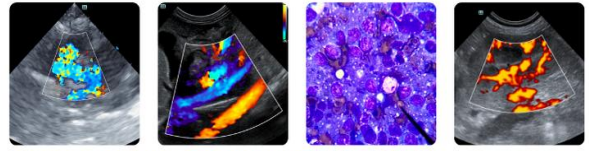
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

BREED

Spaniel Mix

R. McKenzie Daniel, DVM, DABVP (Canine/Feline Practice)
info@sonopath.com

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