



PATIENT PRESENTING CLINICAL SIGNS

Scarlett Fink

History:

SPECIES

Canine

- HX chronic bronchitis/rhinitis. Elev. liver values (unable to test for cushings) Had to give Dex tablets.
- Meds- Dex tablets every 3 days, hydrocodone, albuterol inhaler, proin, tylan, denamarin.

BREED

Dachshund

Abnormal PE/Chem/CBC/UA Results: AST-85 ALT-518 ALP-137 GGT-40

SEX

Female Spayed

AGE

14y 5m

WEIGHT

10 lbs

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

| 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 | -- | -- | -- | 1.1 | 35 | 65 | 0.2 |
| CANINE CARDIAC PARAMETERS | HR (BPM) | AV VMAX (m/s) | PV MAX (m/s) | BODY WEIGHT (kg) | 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 | 1.4 | 0.65 | -- | 2.4 | 2.4 | -- |

INTERPRETED BY

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

IMAGING PERFORMED BY

Kerri Becker

Cardiac Presentation

HOSPITAL NAME

Marsh AH

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The echocardiogram in this patient demonstrated normal **left atrial** size based on 2 different LA measurement methods. The cranial and caudal **mitral** valve leaflets presented mild thickening consistent with mild endocardiosis. Doppler indicated mild 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. 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.



PATIENT

Urinary System

Scarlett Fink

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 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 were noted. Small, sessile based lesion caudal dorsal urinary bladder wall potentially in the area of the ureteral papilla without evidence of papilla obstruction measuring ~0.56 cm in diameter.

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The area of the aortic trifurcation was free of pathology.

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Normal size and margination was 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. Areas of medullary mineral was present. The left kidney measured 3.5 cm in length. The right kidney measured 3.6 cm in length.

AGE

14y 5m

Adrenal Glands

The left adrenal gland was normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 0.56 cm width in the caudal pole. A nonhomogeneous / mildly hyperechoic, indistinctly marginated nodule was present in the cranial right adrenal gland with / without mild associated symmetrical capsule expansion. The nodule did not exhibit signs of mineralization or vascular invasion. The nodule measured 0.8 cm in diameter. Caudal right adrenal pole width measured 0.75 cm.

WEIGHT

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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

The liver was mildly enlarged in size with normal vascular volume. The liver parenchyma was mild / moderate nonuniform and hypoechoic to the spleen with a mild/ moderate coarse echotexture and subjective mild to benign parenchymal remodeling. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non distended in size with moderate, non-organized, echogenic, nonmineralized biliary sludge. The cystic duct and common bile ducts were normal without evidence of dilation.

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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 contained moderate, variably echogenic, non-shadowing ingesta consistent with food echogenicity and likely post prandial presentation.

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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 ileus, obstruction or foreign material.

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



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Pancreas

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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.

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Free Abdomen

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Dachshund

No overt lymphadenopathy or peritoneal effusion was present.

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ULTRASONOGRAPHIC FINDINGS

- Static mitral valve disease (B1)
- Small caudal dorsal urinary bladder wall lesion – focal cystitis, polyp, emerging tumor possible
- Chronic renal changes with medullary mineral
- Static right adrenal nodule with mild right adrenomegaly
- Hepatopathy
- Non-organized gallbladder debris (non-mucocele)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No indication for cardiac medication with static to stable mitral valve insufficiency. Sonographic reassessment recommended in 6-12 months, sooner if clinically indicated. Vacuolar obstructive, cholestatic or inflammatory hepatopathy, hyperplasia, mild fibrosis possible with hepatic neoplastic criteria considered less likely. Adrenal disease contribution to the hepatopathy cannot be excluded. The right adrenal nodule is likely consistent with benign criteria, i.e. hyperplasia or adenoma given lack of progression compared to the previous study. Monitoring of systemic BP for evidence of hypertension as well as sonographic monitoring of the right adrenal gland for evidence of progressive enlargement would be an appropriate combination. Denamarin and Ursodiol if tolerated, may prove beneficial. Screening BRAF assay and sonographic monitoring of the urinary bladder lesion for evidence of progression is recommended.

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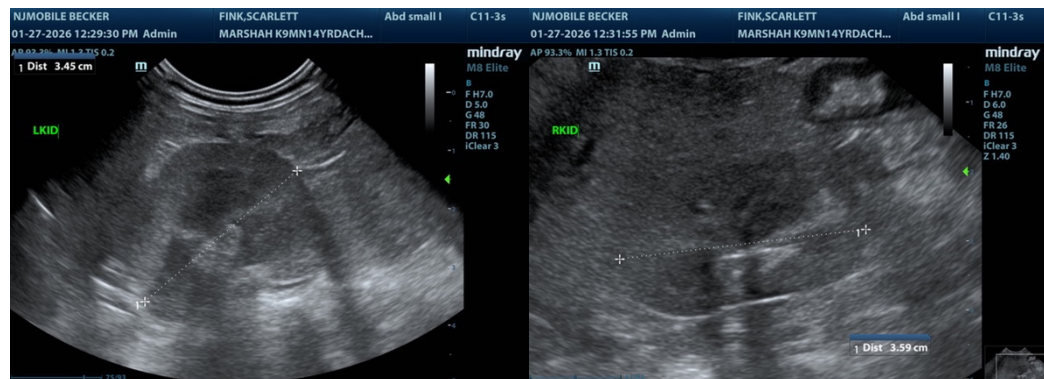
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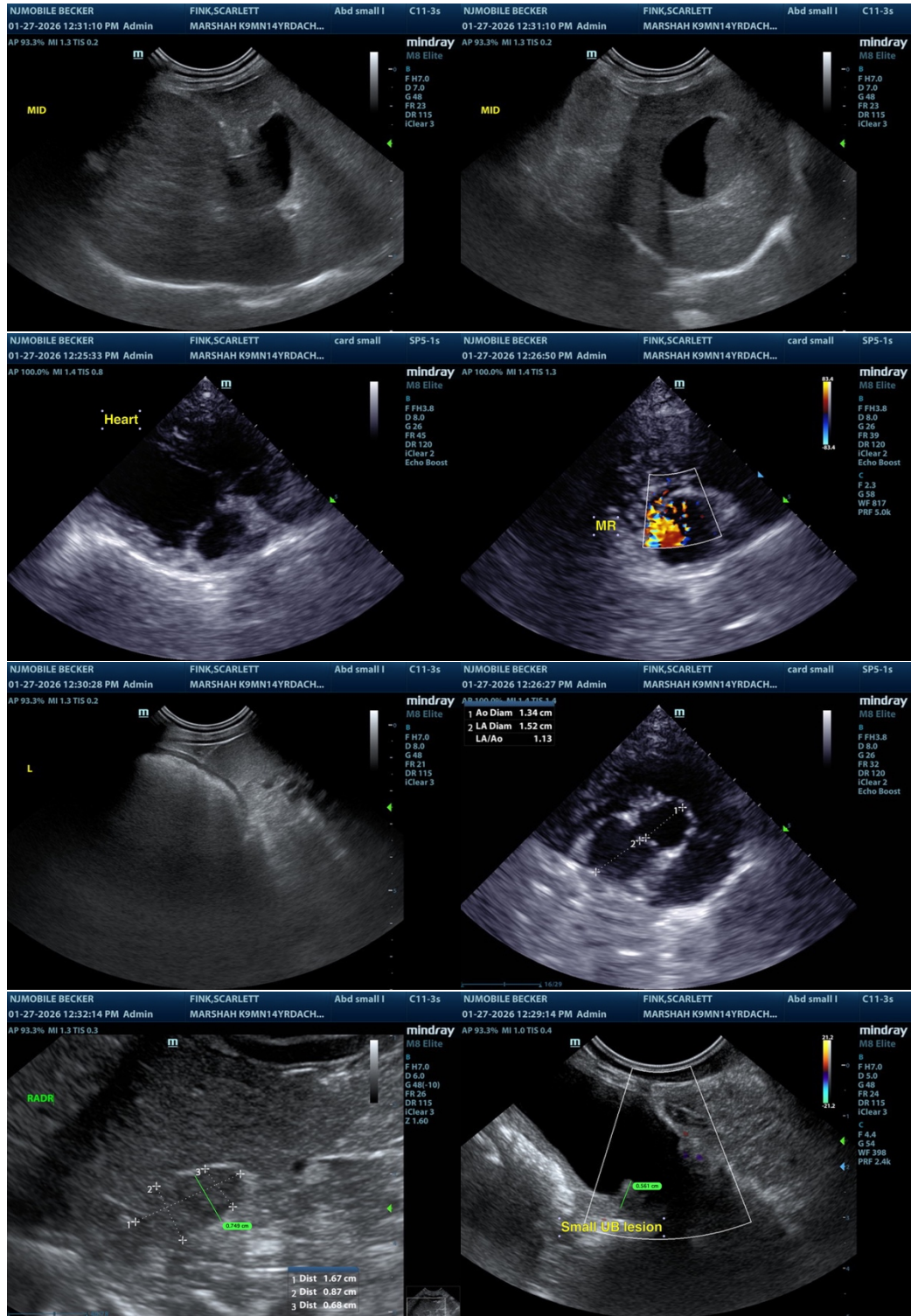
Dr. Armani

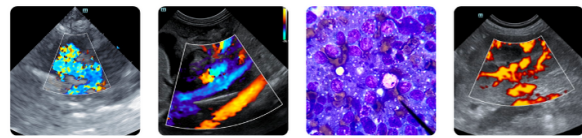
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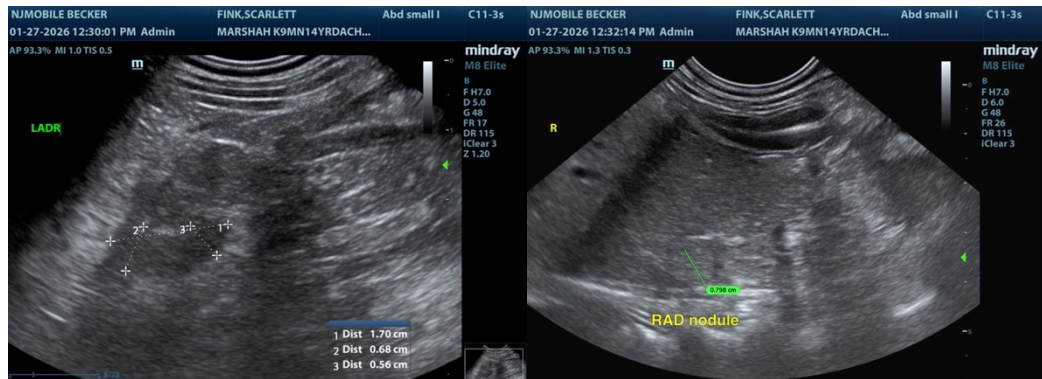
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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