PATIENT

Mac Mills

SPECIES

Canine

BREED

Border Collie

SEX

NM

AGE

10 years

WEIGHT

52.9 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Rebecca Hamilton

HOSPITAL NAME

Chester AH

REFERRING VET

Dr. Migliaccio

INVOICE

10582

DATE

1/27/26

PRESENTING CLINICAL SIGNS

History:

- New murmur Right sided, grade 2/6
- poss. mid abd. mass
- inc. resp. rate at home
- Meds: GAG, NSAID

Abnormal PE/Chem/CBC/UA Results: ALT 149

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	5.4	~2.0	-	1.47	35	65	0.4
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT** (lbs)	**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	111	1.6	1.0	52.9	5.1	4.2	-

Cardiac Presentation

The echocardiogram in this patient demonstrated borderline increased **left atrial** size based on 2 different LA measurement methods, most notable in LA2D measurement. The cranial and caudal **mitral** valve leaflets presented thickening consistent with endocardiosis with no evidence of valvular prolapse. Doppler indicated measurable centralized to eccentric MR (MR velocity 5.4 m/s). 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 (measured TR velocity ~2.0 m/s). The **right**

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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, and cystourethral junction exhibited normal thickness and tone. Primarily anechoic urine was present in the lumen. Mild, nondependent, particulate sediment was present without evidence of calculus formation. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic mural changes were noted.

The residual prostate appeared normal and free of pathology.

No evidence of pathology in the area of the aortic trifurcation.

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 6.4 cm in length. The right kidney measured 6.1 cm in length.

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.67 cm width at the caudal pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.58 cm width at the caudal pole.

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.

Liver/ Gallbladder

The liver presented as mildly 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 containing primarily anechoic content with mild, nonorganized gallbladder debris. The cystic and common bile ducts were normal.

Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty without evidence of retained ingesta, fluid, 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 ileus, obstruction, or foreign material.

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

Pancreas

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.

Free Abdomen

No evidence of peritoneal effusion was present. Intermittent, mildly prominent, midabdomen mesenteric lymph nodes were present. The lymph nodes were essentially isoechoic to adjacent omentum without evidence of peripheral inflammation and maintaining a normal width: length ratio (<0.5).

ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease (ACVIM B1-emerging B2)
- Mild TV insufficiency - no evidence of clinical pulmonary hypertension
- Benign hepatomegaly
- Nonorganized gallbladder debris (non mucocele)
- Normal spleen
- Mild age-related renal changes
- Mild urine sediment
- Intermittent mild mid-abdomen mesenteric lymphadenopathy - not consistent with neoplastic / metastatic criteria

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is no evidence of significant structural / functional cardiomyopathy or evidence of congestion as an obvious contributing factor to the reported increased respiration rate. Given borderline increased LA dimension, Pimobendan 0.3 mg/kg BID is warranted at this stage. There is no indication for additional cardiac medications. Sonographic monitoring is recommended for further prognosis. Recheck echocardiogram is suggested in 6 months, sooner if clinically indicated. Current Cardiac anesthetic risk is considered mild.

There is no evidence of intrabdominal masses or overt neoplastic criteria. Assuming normal clotting status, hepatic FNA cytology could be considered primarily to assess for evidence of inflammation, given mild elevated ALT. Hepatosupportive medications may prove beneficial.

The urinary bladder sediment may suggest cellular / crystalline debris or mucus. Cystocentesis for UA +/- C/S if evidence of inflammatory cells is recommended.

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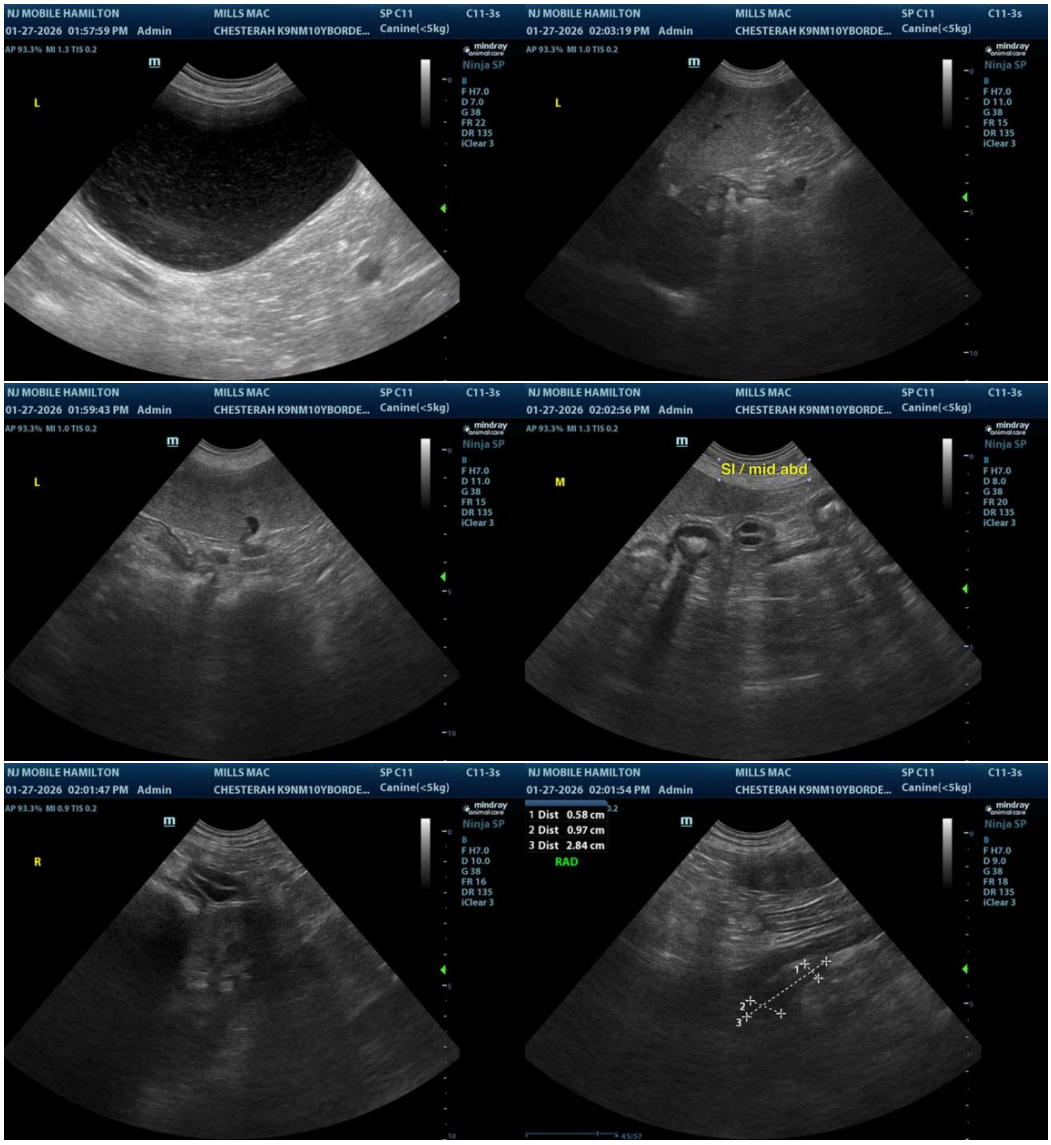
Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists.



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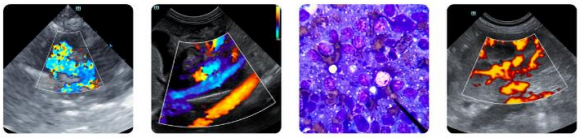

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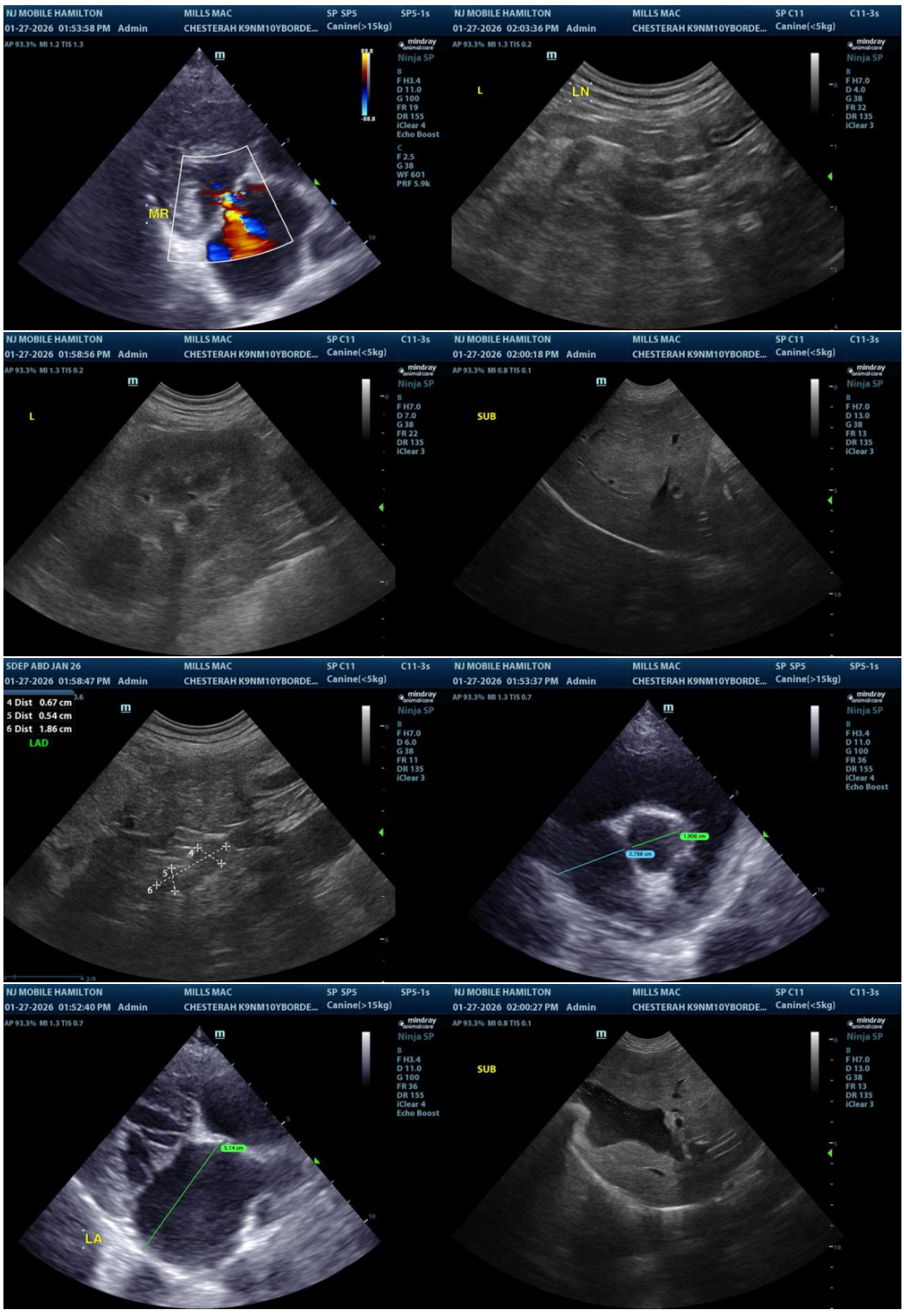

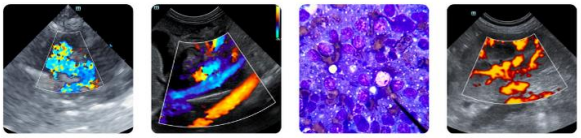

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)
info@sonopath.com