PATIENT

Verna Caben

SPECIES

Canine

BREED

Pomeranian

SEX

FS

AGE

12 years 4 months

WEIGHT

8.7 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Rebecca Hamilton

HOSPITAL NAME

All Animal Vererinary Services NY

REFERRING VET

Dr. Acworth

INVOICE

10923

DATE

5/27/26

PRESENTING CLINICAL SIGNS

Recent treatment at emergency hospital for pancreatitis.

Grade 5/6 murmur. Meds: Enalapril 2.5 mg tab 1/2 tab PO SID
Abnormal PE/Chem/CBC/UA Results: Creatine 0.4, Amylase 2.039, Lipase 5.869

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	5.3	2.7 MAX	-	1.3	55	87	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	1.5	0.7	8.7 lbs.	2.8	2.5	-

Cardiac Presentation

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 thickening consistent with endocardiosis. Doppler revealed moderate to significant eccentric MR (MR velocity 5.3 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 tricuspid insufficiency on Doppler (2.7 m/s MAX). 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 3.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or

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sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

The area of the iliac trifurcation was free of pathology.

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 3.7 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 0.39 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 0.35 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 exhibited subjective mild hepatomegaly. Normal hepatic vascular volume was present. Mild nonhomogeneous remodeled hepatic parenchyma was present with a mild coarse echotexture. 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 contained echogenic, nonshadowing ingesta without 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 ileus, obstruction, or foreign material. Segmental mild hyperechoic intestinal mucosal speckling was noted.

Normal visible colon wall layers were present with soft fecal matter and generalized mild colon distention.

Pancreas

The pancreas was normal in size with mild capsule asymmetry and mild nonhomogeneous hyperechoic pancreatic parenchyma with mildly prominent right limb pancreatic duct. These changes may suggest chronic inflammation, fibrosis, or saponification if previous history of pancreatitis. No overt signs of pancreatic neoplasia.

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Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease (ACVIM B1)
- Tricuspid insufficiency – no overt clinical pulmonary hypertension
- Mild chronic renal changes
- Mild chronic pancreatitis / fibrosis
- Mildly enlarged nonhomogeneous liver
- Nonorganized gallbladder debris (non mucocele)
- Nonspecific mild intestinal mucosal speckling with nonshadowing gastric ingesta
- Mild diffuse distended colon with soft fecal matter

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is chronic degenerative valvular changes with secondary eccentric mitral valve insufficiency. The lack of left atrial enlargement implies that the risk of complications secondary to mitral valve insufficiency is low at this time and, without current clinical signs, indicates that medical therapy is not required. Prognosis is considered variable and sonographic monitoring is recommended. Recheck echocardiogram is suggested in 6-12 months, sooner if clinical signs arise.

Given no reported gastrointestinal signs, the gastroenterocolic finding are nonspecific with potential incidental or age-related intestinal mucosal speckling. This may also be associated with nonspecific enteritis in conjunction with soft fecal matter in colon. Gastrointestinal support and consideration for screening GI panel to include PLI/TLI/Cobalamin/Folate to correlate with the pancreas and assess for underlying intestinal disease is suggested if gastrointestinal signs are non-reported or arise. Hepatosupportive medications are indicated if evidence of hepatopathy or cholestasis with overall benign hepatomegaly and hepatic parenchymal presentation.

Anesthetic risk is considered mild: due to mild left atrial enlargement as noted on images presented, along with heart murmur.

1. However, judicious fluid administration is advised with careful RR/RE monitoring to screen for fluid overload.

Monitoring of blood pressure, SpO2, CO2, and auscultation of heart and lungs during anesthesia should be done during every procedure.

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.

New Jersey Mobile
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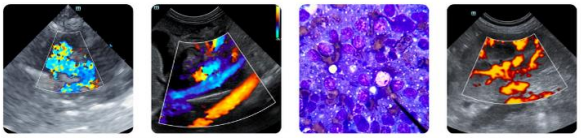

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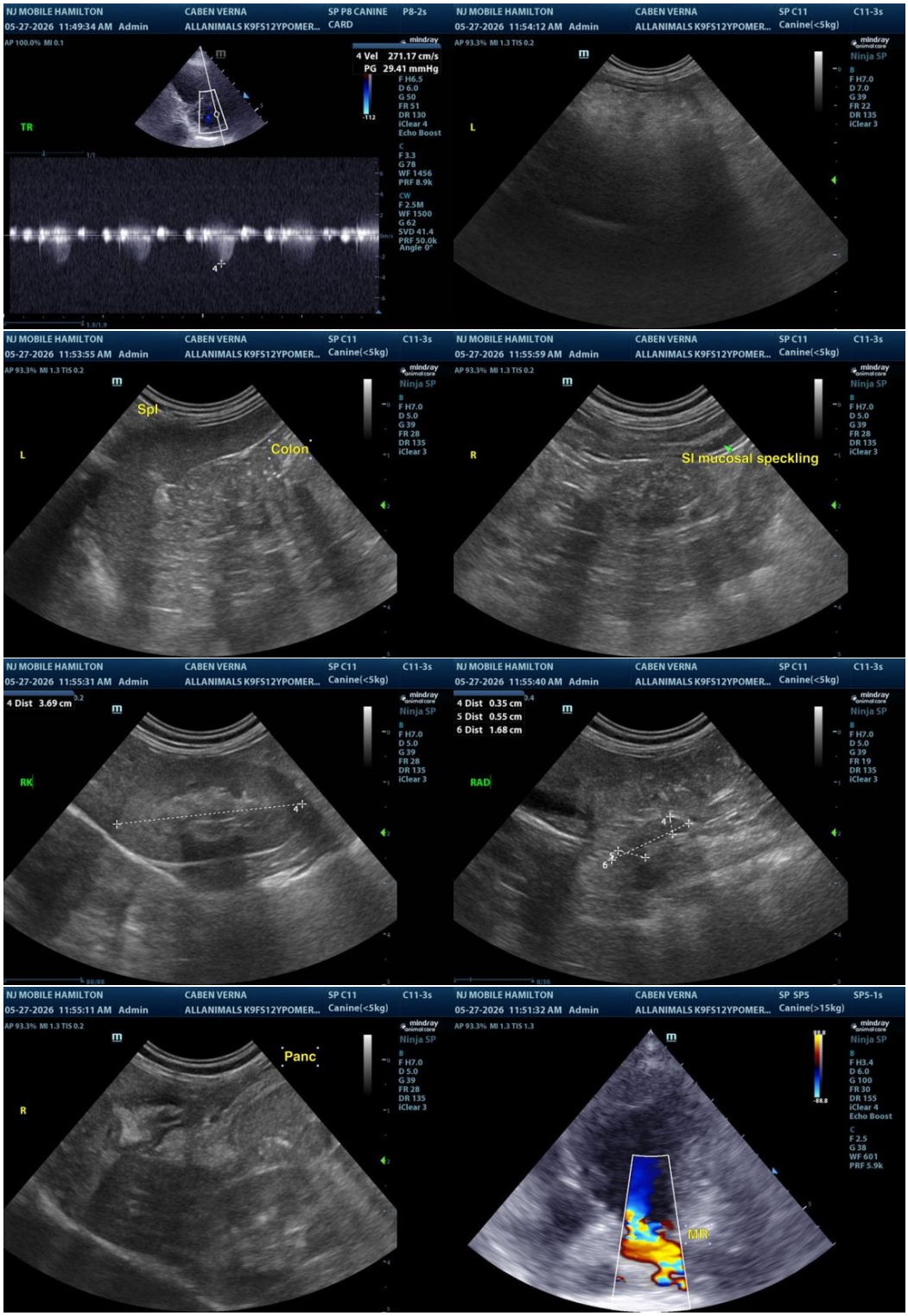

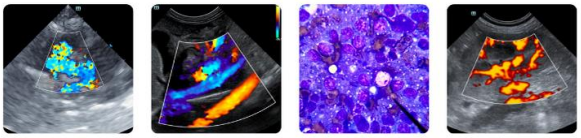

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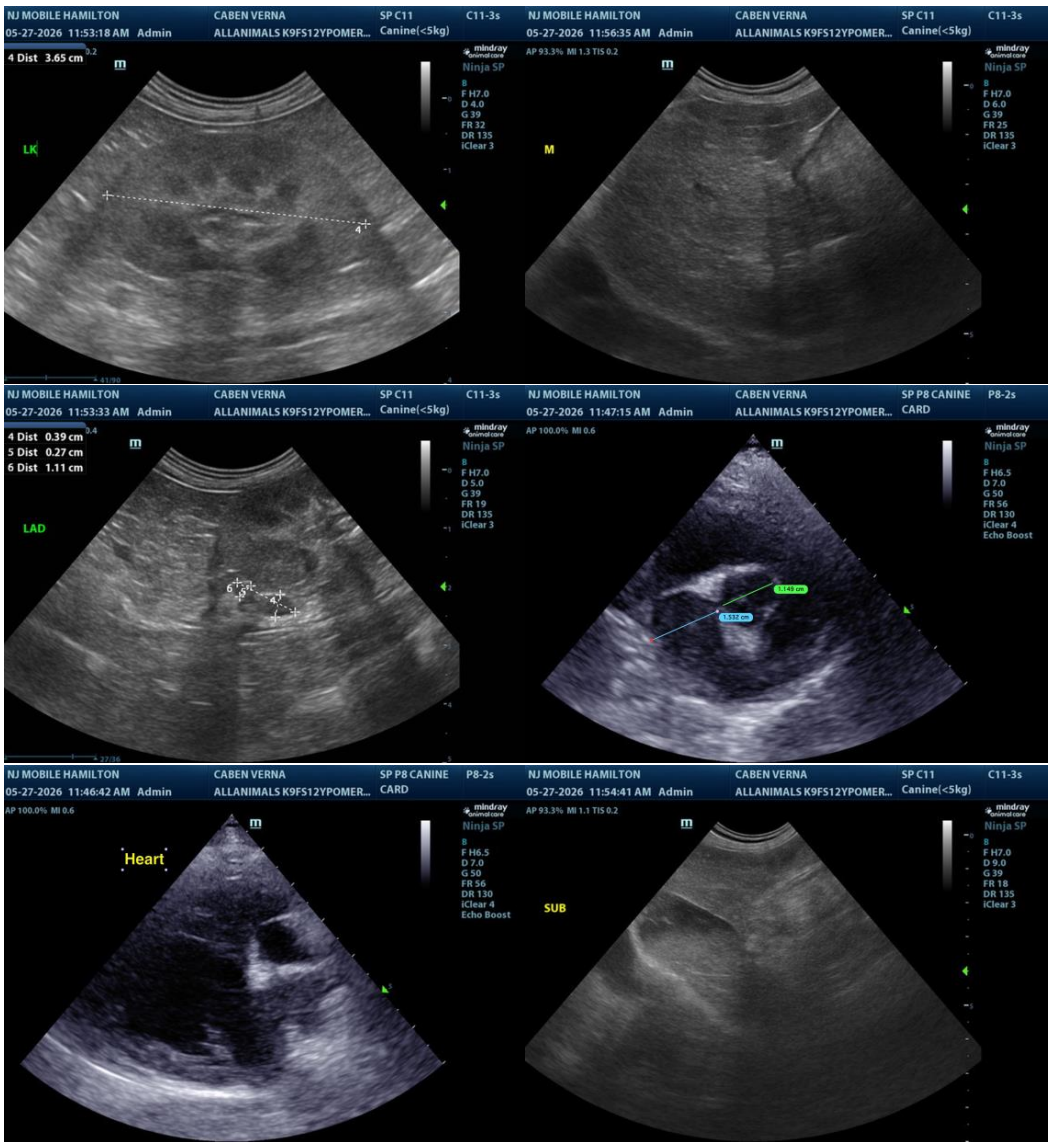

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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