



PATIENT

Samantha Kobyłka

PRESENTING CLINICAL SIGNS

Ascites-moderate transudate/cardiomegaly -rad. Dyspnea , cough
Abnormal PE/Chem/CBC/UA Results: WBC 20; ALT 173

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

BREED

Border Collie

SEX

Spayed Female

AGE

14 Years

WEIGHT

45 lbs

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	5.0	3.8 max	NM	2.4	35	67	0.5
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	143	1.1	0.6	45	5.4	4.6	--

INTERPRETED BY

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

Cardiac Presentation

The echocardiogram in this patient demonstrated severe increased **left atrial** size and sphericity with an intraatrial septal deviation on two LA measurement methods. The cranial and caudal **mitral valve** leaflets presented mild thickening consistent with mild degenerative change/endocardiosis. Doppler indicated severe eccentric to centralized MR. The **left ventricle** presented normal to mildly decreased thickness with maintained linear contour and severe increased LV dimension and sphericity. 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** valve demonstrated mild thickening with TR on doppler. Measured TR velocity 3.8 m/sec max (approximately 58 mm Hg pressure). 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. No overt tachycardia or arrhythmia.

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

All Creatures Great & Small (Denville)

REFERRING VET

Dr. Silas Ashmore

INVOICE

72822

DATE

12/29/25

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



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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 loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Left kidney measured 4.5 cm. Right kidney measured 5.1 cm.

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.52 cm at the caudal pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.46 cm 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

The liver presented enlarged in size with symmetrical yet swollen contour. The parenchyma exhibited conserved uniform parenchyma with normal echogenicity isoechoic to the spleen and falciform fat. The hepatic vasculature was dilated in appearance, most notable at the level of the hepatic vein / caudal vena cava junction, without evidence of thrombosis.

The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The common bile duct was not definitively visualized.

Gastrointestinal

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.

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 right pancreas was mildly prominent in size with mild capsule asymmetry, exhibiting mild non-homogeneous, hypoechoic parenchymal.

Free Abdomen

Mild to moderate volume ascites. Generalized mild increased omental echogenicity. No visualized significant omental lymphadenopathy.



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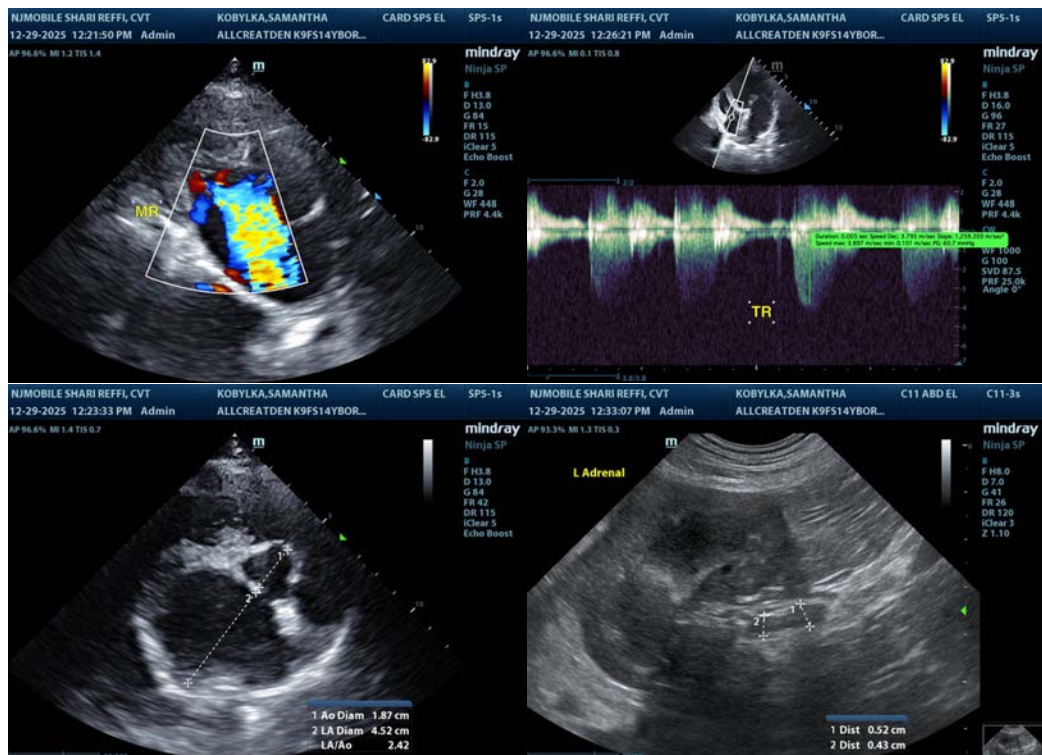
ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease with severe left heart volume overload (ACVM Stage C).
- Moderate pulmonary hypertension.
- Congested hepatomegaly.
- Mild to moderate volume ascites.
- Mildly prominent, non-homogeneous to hypoechoic pancreas – probable pancreatic edema, potential for mild pancreatic inflammation.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic significant to potentially end stage valvular disease is probable, without overt evidence of DCM criteria, and with alternative condition such as myocarditis, hypothyroidism, taurine deficiency, or infiltrative cardiac disease thought less likely. Correlation with diet history +/- taurine or troponin level may be considered. Regardless of classification, the degree of left heart volume overload predisposes to pulmonary congestion, whereas moderate pulmonary hypertension predisposes to right heart congestion as indicated by hepatic congestion and concurrent ascites.

If patient is unstable or tachypneic, hospitalization with respiratory support and IV diuretic therapy until patient is stabilized is recommended. Pimobendan 0.3 mg/kg BID, Lasix/Spirolactone combination but 1-2 mg/kg PO BID, ACE inhibitor 0.5 mg/kg SID possibly titrating to BID is indicated. Going forward this patient will remain at significant increased risk for progressive CHF, development of malignant arrhythmia, progressive pulmonary hypertension, or possible sudden death. Monitoring of renal parameters, ECG, and systemic BP is recommended. Anesthesia is not advised. Sonographic monitoring recommended with initial recheck in 3-4 weeks, sooner if clinically indicated.





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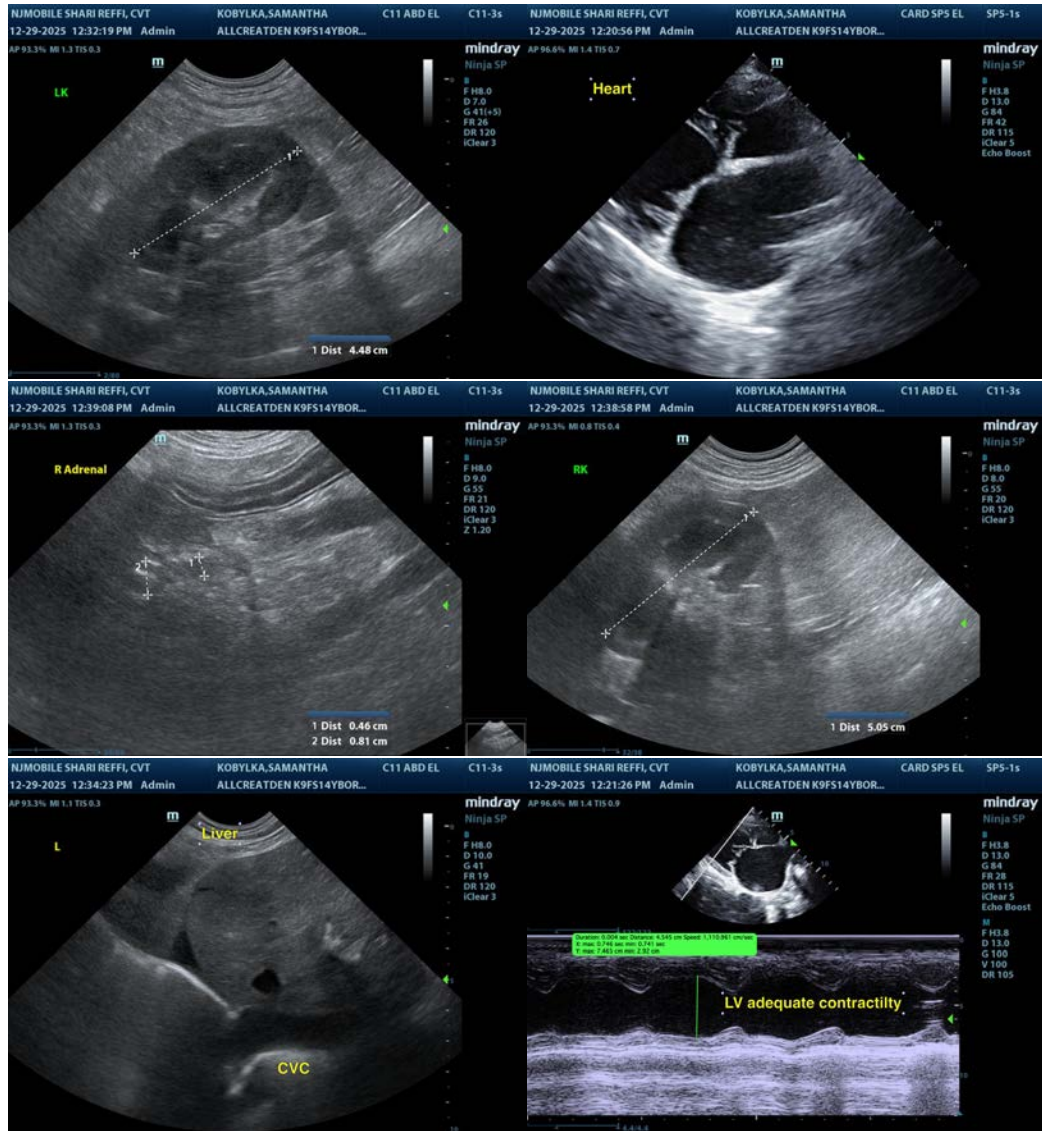
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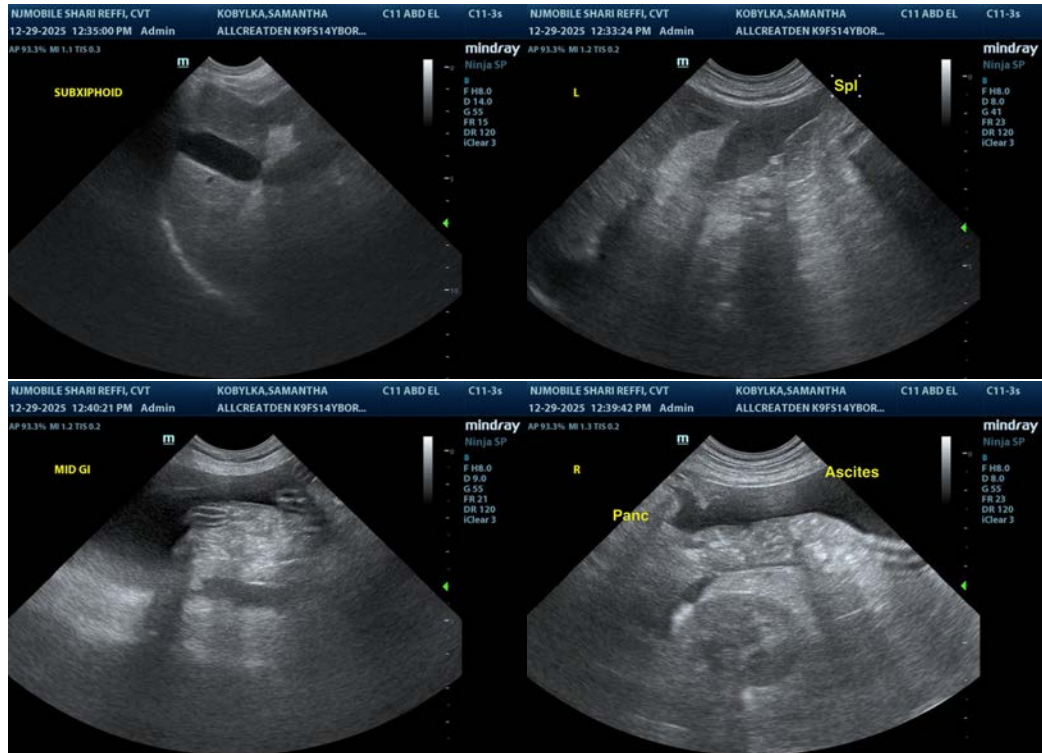
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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