



PATIENT

Bentley Nosal

SPECIES

Feline

BREED

DSH

SEX

Spayed Female

AGE

14 Years

WEIGHT

Not Provided

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP (Canine
/ Feline Practice)

IMAGING PERFORMED BY

Meghan Morse LVT
CVT

HOSPITAL NAME

Animal General
Augusta

REFERRING VET

Dr. Pileci

INVOICE

13849

DATE

02/17/26

PRESENTING CLINICAL SIGNS

- Labored breathing, abdominal press, anorexia
- Cardiac galloped rhythm, dehydrated, pale MM
- Current meds: Pred, MiraLAX, Doxycycline, Methimazole

Abnormal PE/Chem/CBC/UA Results: RBC 5.49, HCT 20.7, Retic 0.2, ALT 615

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm)	LVIDd (cm)	LVWd (cm)	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT	NP	NM	0.6	1.65	0.64	40	74
FELINE CARDIAC PARAMETERS	LA/AO (M-mode)	LA/AO HEART BASE (Sisson)	LAD LA MAX 4 Chamber		LVOT VEL (m/s)	RVOT VEL (m/s)	IVRT (m/)
NORMAL PARAMETER	<1.5	1.6	0.7-1.7		<1.6	<1.3	40-60
PATIENT	--	2.6	2.6		NM	NM	NM

Adapted from June Boon, Veterinary Echocardiography, 1998
Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705

Cardiac Presentation

The echocardiogram in this patient demonstrated severely increased **left atrial** dimension with bulbous appearance based on 2 separate LA measurements. No obvious significant spontaneous contrast or foreign thrombus. The cranial and caudal **mitral** valve leaflets presented irregular changes with mild eccentric MR on doppler. The **left ventricular** septum and free wall revealed adequate contractility and normal left ventricular volume with moderate to significant echogenic remodeling of the septum and free wall including distal upper septal thickening. This is most consistent with at least moderate **myocardial fibrosis**. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed mild increased dimension, normal structure and content. No evidence of spontaneous contrast. No evidence of masses was noted. . **Tricuspid** valvular assessment demonstrated mild thickening with mild TR on doppler. 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). A minor volume of **pericardial** and moderate volume of free pleura fluid was noted. The cranial **mediastinum** and **pericardial** regions were free of overt masses in the visible window.

Urinary System



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The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 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 change were noted.

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 to 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 3.7 cm in length. The right kidney measured 3.5 cm in length.

Adrenal Glands

The left adrenal gland was not definitively visualized.

The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.52 cm width.

Spleen

The spleen was mildly subnormal in size consistent with volume contraction and 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 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. The gallbladder wall was thickened in appearance consisting of an echogenic double rim corresponding to the inner and outer portions of the wall. This is consistent with gallbladder wall edema. Possible causes may include acute inflammation, edema and anaphylaxis. The common bile duct was not 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 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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No visualized significant omental lymphadenopathy or omental masses were present. Mild volume of peritoneal effusion.

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ULTRASONOGRAPHIC FINDINGS

Primary Findings

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- Severe left atrial enlargement with bi-atrial enlargement.
- Mildly thickened LV with myocardial remodeling/fibrosis, adequate contractility.
- MR/TR.
- Congested liver with minor edematous gallbladder.
- Pleural, pericardial and peritoneal effusion.

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Secondary Findings

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- Normal gastrointestinal tract.
- Bilateral chronic renal changes.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

This patient has severe potentially end-stage cardiomyopathy with considerations including end-stage HCM with potential for unclassified or restrictive component. Regardless of classification, the degree of LA enlargement indicates that CHF is present.

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ECG is recommended to assess for concurrent arrhythmia as a contributing factor. Continued hospitalization with injectable LASIX and as needed respiratory support in an attempt to stabilize patient is recommended with consideration for referral for 24-hour supportive care.

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If patient is stabilized, LASIX 1 to 2 mg/kg PO BID, Clopidogrel, 75 mg tab, 1 quarter tab SID and Pimobendan 1.25 mg BID is recommended. Monitoring of renal values, systemic BP ECG are recommended. This patient will remain at severely increased risk for progressive CHF, malignant arrhythmia, pulmonary hypertension and sudden death.

Unfavorable prognosis.

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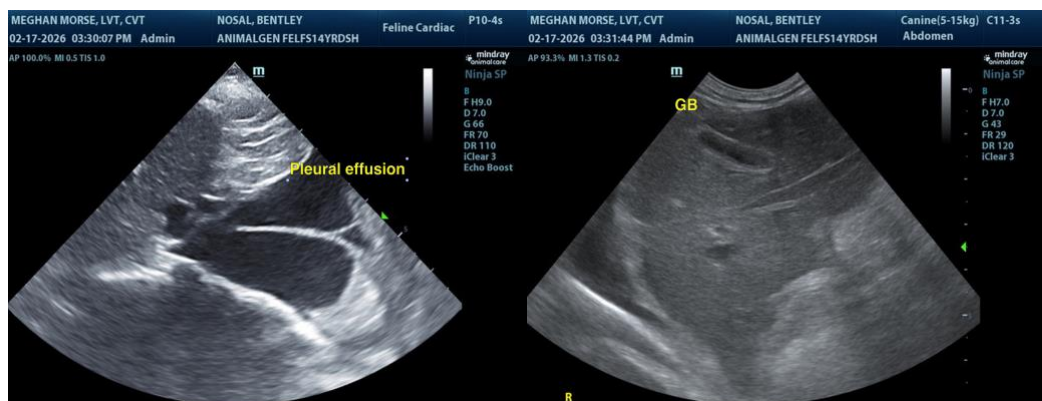
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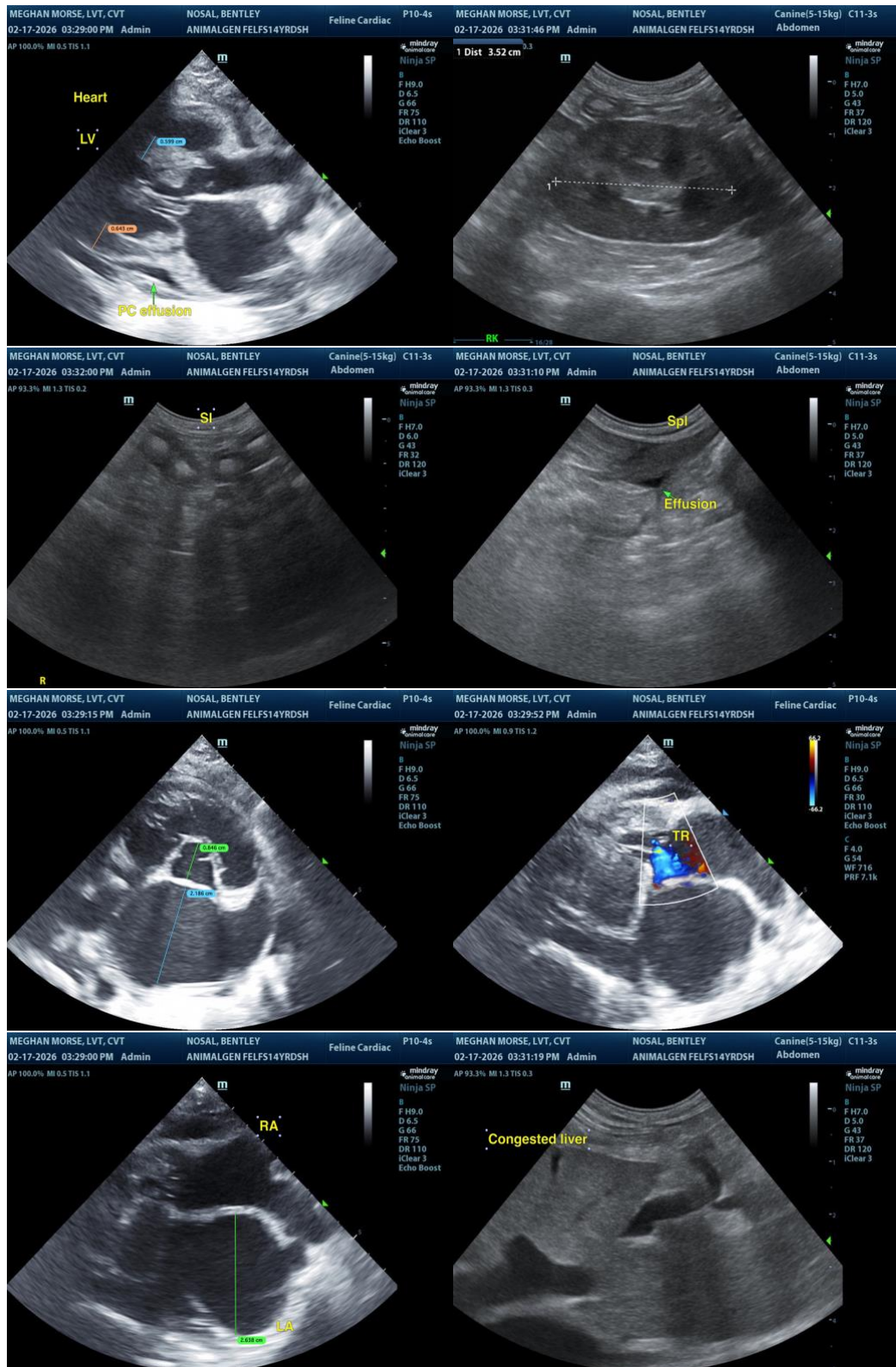
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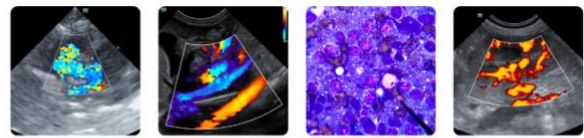
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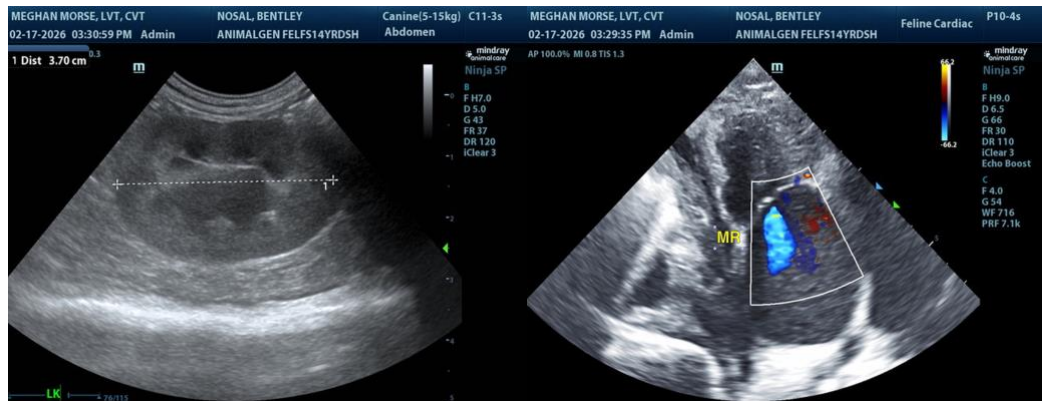
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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