



PATIENT

Pecorino Carnovale

SPECIES

Canine

BREED

Mixed

SEX

MN

AGE

12yr

WEIGHT

14lb

INTERPRETED BY

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

PRESENTING CLINICAL SIGNS

- Prev. US 2022- hyperechoic foci in renal cortices
- Dystrophic mineralization assoc. w. chronic or prev. inflammation.
- Hx of GI issues
- Tylan

Abnormal PE/Chem/CBC/UA Results: Creat-1.9

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN AND HEART

	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		--	--	--	1.2	50	84	0.1
	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		186	1.0	1.1	14lb	2.2	2.0	--

IMAGING PERFORMED BY

Kerri Becker

HOSPITAL NAME

Marsh AH

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Dr Armani

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DATE

02/05/2026

Cardiac Presentation

The echocardiogram in this patient demonstrated normal left atrial size and structure. Chamber volume and blood echogenicity were normal. The cranial and caudal mitral valve leaflets presented minor irregular age-related changes that are not clinically significant at this time with adequate extension in systole and union in diastole. The left ventricle presented normal free wall and septal thicknesses with linear contour. The myocardium presented some echogenic remodeling consistent with expected age-related change. Contractility of the ventricular walls was adequate and in normal range for this breed and patient size. The left ventricular outflow tract demonstrated normal laminar flow with subjectively unremarkable structure. Subjective assessment of the right atrium and auricle revealed normal size, structure and content. No evidence of masses was noted. Tricuspid valvular assessment demonstrated expected findings for this age patient. The right ventricle was of normal size (1/3 diameter of LV), echogenicity and thickness. Pulmonic tract assessment revealed normal valve structure, laminar flow, and diameter (approx.1:1 pa/ao ratio). No dilation due to heartworm disease, cor pulmonale, stenosis, or pulmonic hypertension was noted. No visible pericardial or free pleural fluid was noted. The mediastinum was free of masses in the visible window.



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Urinary System

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The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra exhibited normal thickness and tone. Anechoic urine was present in the lumen with no evidence of urine/lumen sediment, mineral, or calculi. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

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Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were non-homogenous in texture with some increased echogenicity and moderate loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Bilateral discreet indistinct hyperechoic corticomedullary foci was present which may indicate areas of cortical microinfarction, fibrosis or mineralization. The left kidney measured 3.3 cm in length. The right kidney measured 3.3 cm in length.

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The area of the aortic trifurcation was free of pathology.

MN

Adrenal Glands

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The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.48 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 0.43 cm width at the caudal pole.

12yr

Spleen

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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/Gallbladder

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a 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 thin walls and mild non-organized debris. The cystic and common bile ducts were normal.

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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 mild variably echogenic non-shadowing ingesta sonographically suggestive of food echogenicity with no signs of ileus, obstruction or foreign material.

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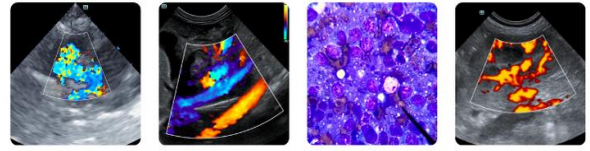
The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of mechanical/metabolic ileus, obstruction or foreign material.

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

No omental masses, overt lymphadenopathy or peritoneal effusion was present.

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Primary

- Normal cardiac structure/function
- Bilateral chronic renal changes
- Benign hepatic parenchymal remodeling
- Mild gallbladder debris (non-mucocele)
- Sonographically unremarkable gastrointestinal tract/ colon with non-shadowing gastric ingesta and formed fecal matter -ingesta consistent with food echogenicity

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No evidence of significant cardiac or abdominal visceral pathology. Further renal staging to include C/S and UPC level may be considered if clinically indicated. At times the gastrointestinal presentation may not correlate with historical gastrointestinal issues.

WEIGHT
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Empirically, a limited antigen or hydrolyzed diet trial with potential long term dietary therapy, prophylactic deworming (Panacur 50 mg/kg SID x 5 consecutive days with repeat protocol in 3 weeks even if fecal testing is negative), high colony count probiotic (Provable or Visbiome), cobalamin supplementation pending assessment of cobalamin level +/- antibiotic trial with consideration for adverse effects on normal GI flora with long term antibiotic use and as needed gastrointestinal support with assessment of clinical response may prove beneficial. Intestinal biopsies may be indicated if GI signs continue despite empirical therapy.

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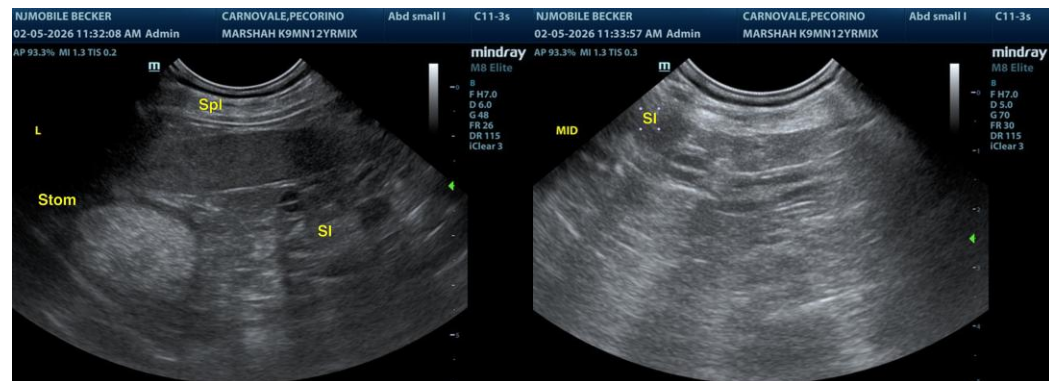
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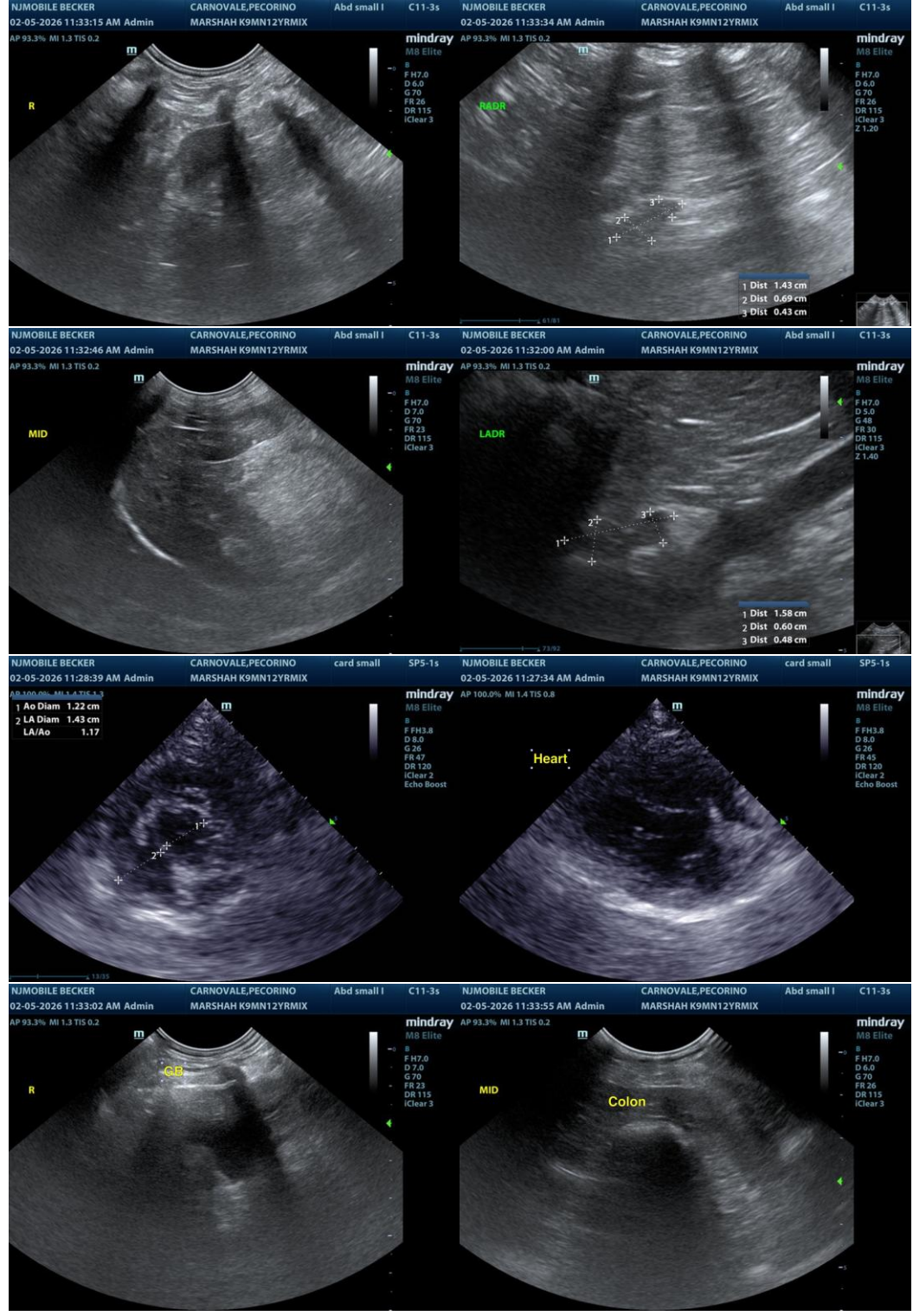
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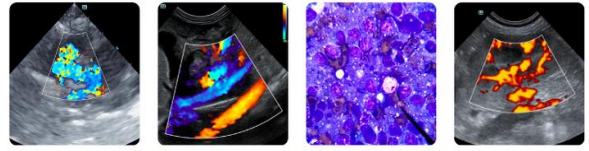
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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.

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