



PATIENT PRESENTING CLINICAL SIGNS

Koda Henderson vomiting, ultrasound rec on rad report. Abnormal Kidney values Medication: Unasyn, Cerenia, Buprenex.

SPECIES Abnormal PE/Chem/CBC/UA Results: BUN = 157.8 Creatinine = 14.7 Phosphorus = 14.5 Alb = 2.1 Glob = 5.1 Glucose = 69 Coolest = 360. WBC = 25.18 Neu = 20.54 Mono = 1.52 Urine Specific Gravity = 1.014
Canine

BREED ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN AND HEART

Labrador Mix

SEX

FS

AGE

7yr

WEIGHT

31.5lb

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	--	--	--	1.32	42	65	0.3
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	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	--	1.8	0.8	--	3.4	3.3	--

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr Ken Leal

HOSPITAL NAME

Newton Veterinary Hospital

REFERRING VET

Newton Vet

INVOICE
23257

DATE
12/17/2025

Cardiac Presentation

The echocardiogram in this patient demonstrated normal left atrial size based on 2 separate methods of LA evaluation. The cranial and caudal mitral valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. No overt MR on Doppler. 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. Normal measured LVOT velocity. The right atrium and auricle revealed normal size, structure and content. No evidence of masses was noted. Tricuspid valvular assessment demonstrated adequate linear morphology and kinesis. No overt TR on Doppler. The right ventricle was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. Pulmonary outflow tract assessment revealed normal valve structure, laminar flow, and diameter (approx.1:1 pa/ao ratio). Normal measured RVOT velocity. No visible pericardial or free pleural fluid



PATIENT

Koda Henderson

was noted. The cranial mediastinum and pericardial and extra-cardiac regions were free of masses in the visible window.

Urinary System

SPECIES

Canine

The urinary bladder presented uniformly thickened urinary bladder wall isoechoic to the adjacent normal urinary bladder wall. The luminal margin of the thickened urinary bladder wall was mildly asymmetrical in contour. Urinary bladder wall thickness measured 0.68 cm. Mineralization or echogenic foci within the thickened areas of urinary bladder wall was not present. Mildly prominent ureteral papilla was present. No evidence of trigone or cystourethral junction mass.

BREED

Labrador Mix

Normal size and mild asymmetrical margination were present in the kidneys. A normal 1:3 cortex / medulla ratio and mildly indistinct corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. Areas of non-obstructive medullary renoliths were present. The left kidney measured 6.7 cm in length. The right kidney measured 6.9 cm in length.

SEX

FS

The area of the aortic trifurcation was free of pathology.

AGE

7yr

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.79 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 0.87 cm width at the caudal pole.

WEIGHT

31.5lb

Spleen

INTERPRETED BY

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

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.

**IMAGING
PERFORMED BY**

Dr Ken Leal

Liver/Gallbladder

The liver presented 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 with mild non-organized debris. No evidence of gallbladder/peripheral gallbladder inflammation or wall edema was present. The cystic and common bile ducts were normal.

HOSPITAL NAME

Newton Veterinary
Hospital

REFERRING VET

Newton Vet

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.

**INVOICE
23257**

**DATE
12/17/2025**



PATIENT

Koda Henderson

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.

SPECIES

Canine

Pancreas

The area of the pancreas was sonographically normal.

Free Abdomen

No evidence of peritoneal effusion was present.

BREED

Labrador Mix

Several enlarged cystic non-homogenous hepatic to cranial mesenteric lymph nodes were present, an example measured 3.3 cm x 1.4 cm.

SEX

FS

ULTRASONOGRAPHIC FINDINGS

Primary

AGE

7yr

- Normal echocardiogram
- Bilateral nephropathy exhibiting non-obstructive medullary renoliths
- Non-congested borderline/ mild hepatomegaly
- Non-organized gallbladder debris
- Sonographically normal gastrointestinal tract / pancreas
- Intermittent cystic to non-homogenous hepatic / cranial mesenteric lymphadenopathy

WEIGHT

31.5lb

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

INTERPRETED BY

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

The bilateral kidneys did not appear to be end stage indicating potential for acute kidney injury or insult. Consideration for infectious disease, i.e. leptospirosis or toxic insult indicated. Leptospirosis titer / PCR is warranted. The cystic to non-homogenous hepatic to cranial mesenteric lymph nodes did not overtly meet neoplastic criteria which is considered less likely. Monitoring for concurrent emerging hepatopathy is recommended.

**IMAGING
PERFORMED BY**

Dr Ken Leal

Assuming normal clotting status and using a 25g needle, a hepatic and accessible lymph node FNA for screening cytology could be considered for further assessment.

HOSPITAL NAME

Newton Veterinary
Hospital

Renal and gastrointestinal support with monitoring of renal parameters and UA is recommended for further assessment and prognosis.

REFERRING VET

Newton Vet

**INVOICE
23257**

DATE
12/17/2025



PATIENT

Koda Henderson

SPECIES

Canine

BREED

Labrador Mix

SEX

FS

AGE

7yr

WEIGHT

31.5lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr Ken Leal

HOSPITAL NAME

Newton Veterinary
 Hospital

REFERRING VET

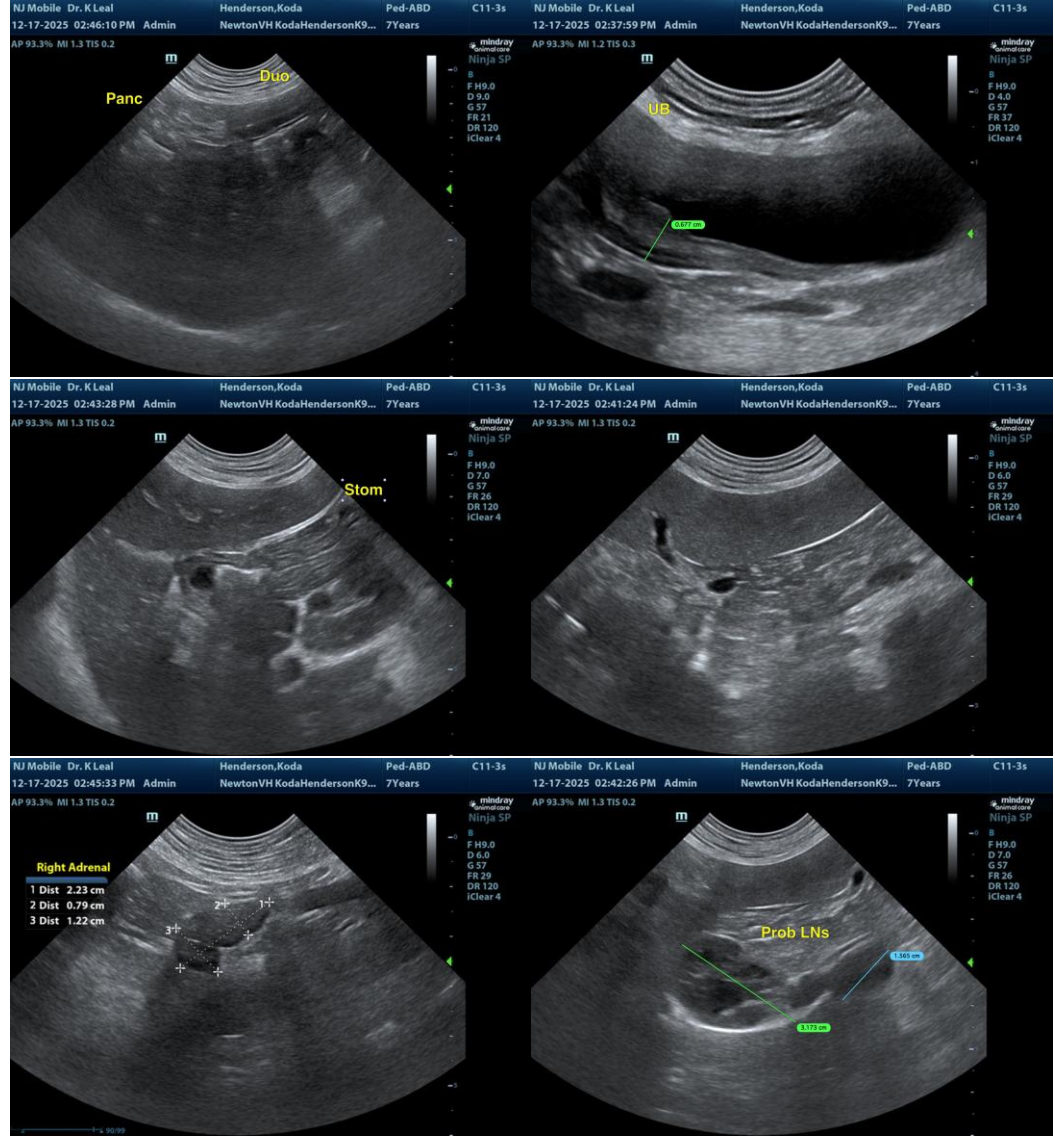
Newton Vet

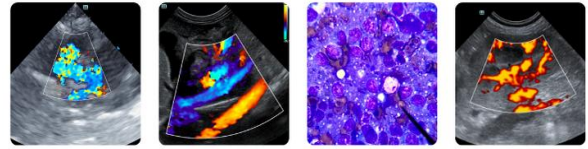
INVOICE

23257

DATE

12/17/2025





PATIENT

Koda Henderson

SPECIES

Canine

BREED

Labrador Mix

SEX

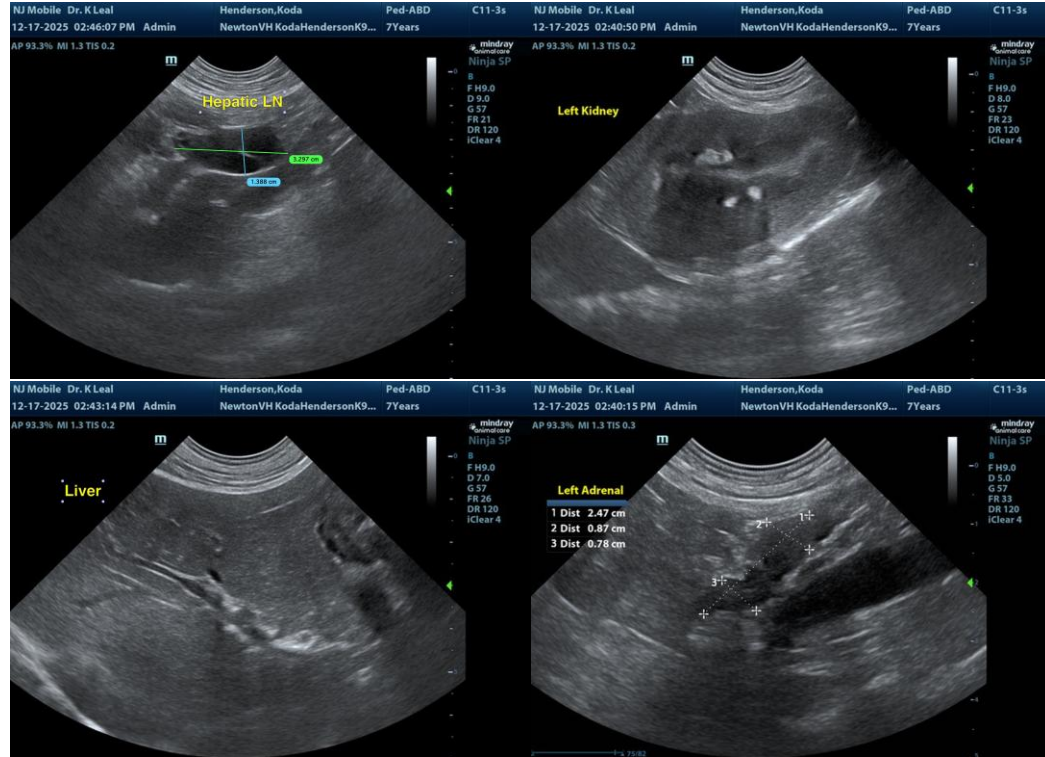
FS

AGE

7yr

WEIGHT

31.5lb



INTERPRETED BY

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

IMAGING PERFORMED BY

Dr Ken Leal

HOSPITAL NAME

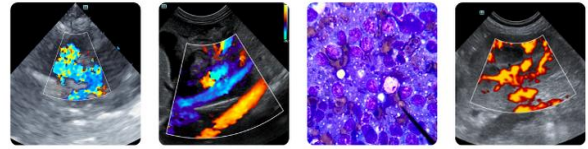
Newton Veterinary
 Hospital

REFERRING VET

Newton Vet

INVOICE
 23257

DATE
 12/17/2025



PATIENT

Koda Henderson

SPECIES

Canine

BREED

Labrador Mix

SEX

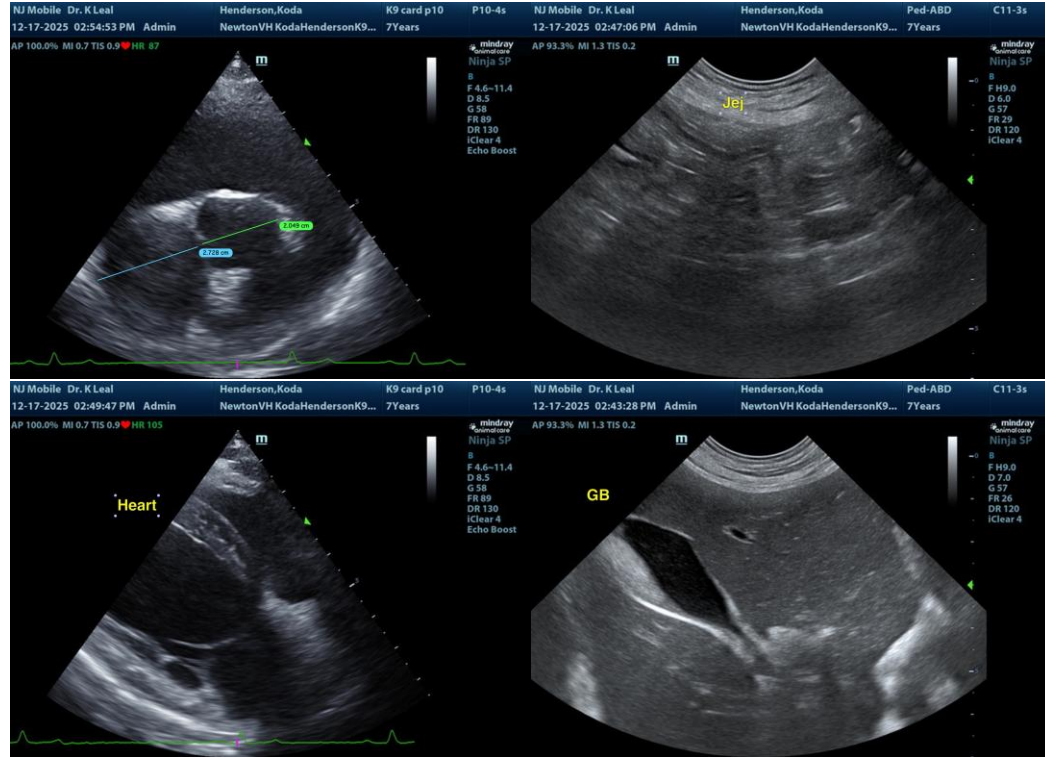
FS

AGE

7yr

WEIGHT

31.5lb



INTERPRETED BY

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

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.

IMAGING PERFORMED BY

Dr Ken Leal

R. McKenzie Daniel, DVM, DABVP (Canine/Feline Practice)
info@sonopath.com

HOSPITAL NAME

Newton Veterinary
 Hospital

REFERRING VET

Newton Vet

INVOICE
 23257

DATE
 12/17/2025