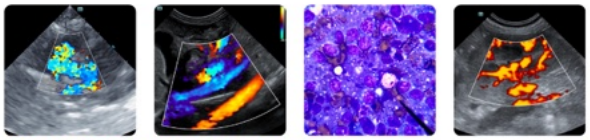


PATIENT

Jack Rishell

SPECIES

Feline

BREED

Domestic Shorthiar

SEX

Neutered male

AGE

11 years

WEIGHT

9.1 lbs

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Alex McFeely

HOSPITAL NAME

Centre AH

REFERRING VET

Dr. McFeely

INVOICE

75479

DATE

5/13/26

PRESENTING CLINICAL SIGNS

History: Echocardiogram and Abdominal Ultrasound
- Jack presented for cardiac and abdominal ultrasounds 5/12/26.
- Grade III/IV heart murmur.
- Not eating well and weight loss since January 2026.

Pronounced progressive generalized muscle atrophy, especially dorsally.

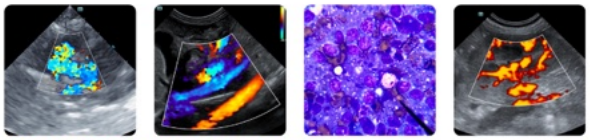
ULTRASONOGRAPHIC EXAMINATION OF THE HEART

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate LA measurements. The cranial and caudal **mitral** valve leaflets presented normal linear structure and kinetics.. The **left ventricle** presented normal 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 and angles 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 adequate linear morphology and kinetics. 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 or extra cardiac pathology in the visible planes. The cranial **mediastinum and pericardial regions** were free of masses in the visible window.

E Wave 0.5 m/sec

FELINE CARDIAC PARAMETERS	BODY WEIGHT	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	9.1 lbs	200	0.5	1.2	0.5	50	NM
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	1.1	NM	1.2		NM	1.0	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



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ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

The **kidneys** were bilaterally enlarged and measured up to 6.0 cm each with subcapsular halo. There were nodular, irregular cortical changes and loss of corticomedullary definition. This is strongly consistent with round cell neoplasia/lymphoma. 25-gauge FNA is indicated.

Adrenal Glands

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient.

Spleen

The **spleen** was slightly irregular, yet measures normal at 0.8 cm. The spleen revealed uniform parenchyma.

Liver

The **liver** was mildly swollen and slightly heterogenous with mildly increased portal markings. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

Gastrointestinal

The upper **gastrointestinal tract** revealed variable thickening. A variable intestinal mass was noted in the jejunum and caudal abdomen. The mass extended for approximately 5.0 x 2.0 cm. mesenteric lymph nodes were enlarged, somewhat rounded, hypoechoic and irregular measuring up to 1.5 cm.

Pancreas

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

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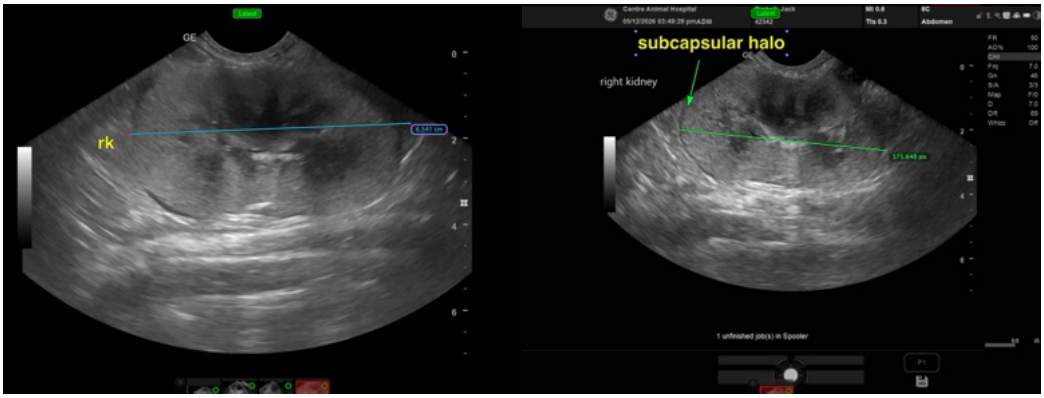
ULTRASONOGRAPHIC FINDINGS

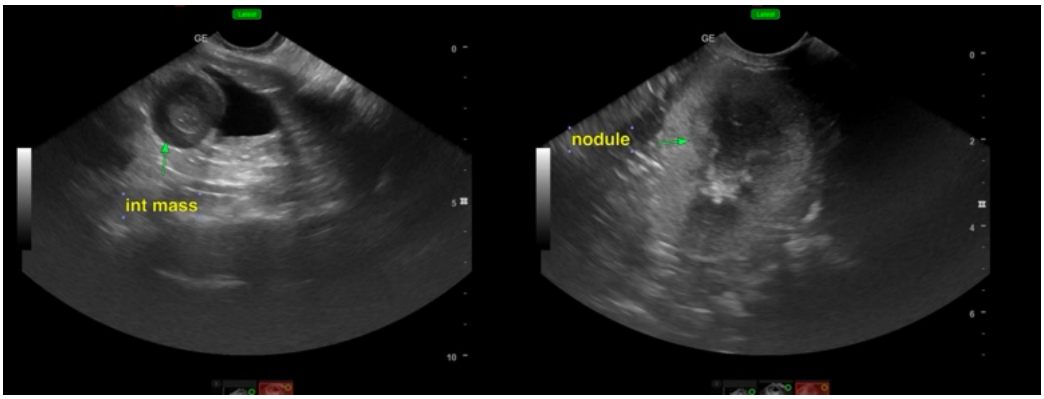
Normal echocardiogram, no evidence of pathology.

Multi-centric intestinal and renal lymphoma with likely lymph node and potentially hepatic involvement.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

FNA of the kidneys, lymph nodes, intestinal mass and liver would all be justified. The most dramatic infiltrative pattern involves the kidneys. Chest radiographs are warranted to assess for metastatic disease.





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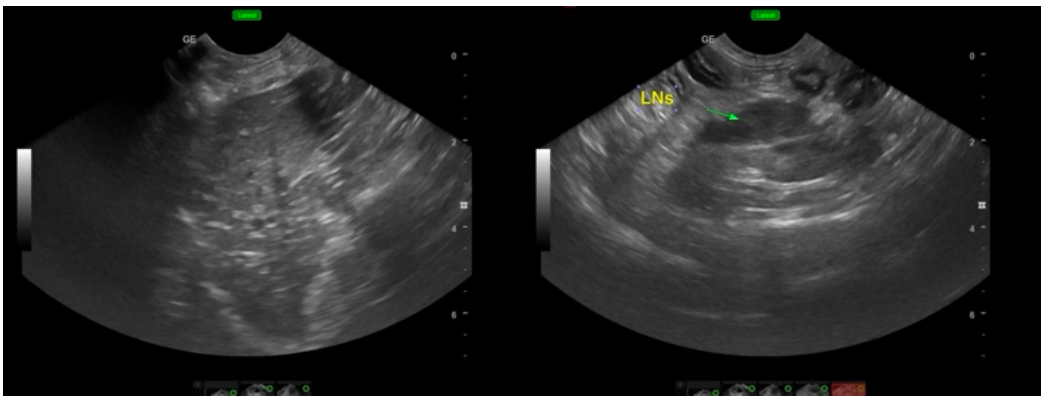

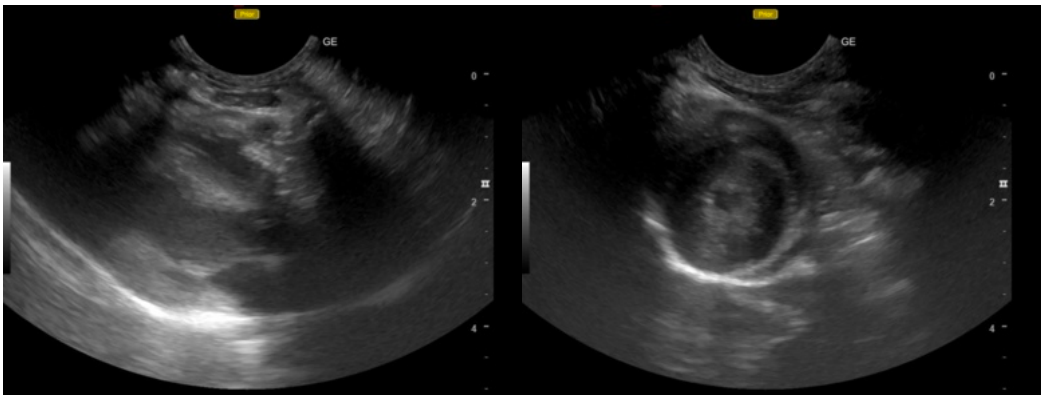

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP (CFM), Cert. IVUSS, CEO of SonoPath.com

info@SonoPath.com