


**PATIENT**

Mo Norato

**PRESENTING CLINICAL SIGNS**

newly diagnosed diabetic suspect DKA resp distress

**SPECIES**

Feline

**BREED**

DSH

**SEX**

FS

**AGE**

12

**WEIGHT**

11.8

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Jenn

**HOSPITAL NAME**

 Rockaway Animal  
 Hospital

**REFERRING VET**

Dr. Maniar

**INVOICE**

12825ag

**DATE**

01/31/2023

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN AND HEART**

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		188	0.54	1.6	0.56	37.5	66
FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART BASE (Sisson)	LA 2D 4-chamber long axis AS to FW (Sisson) (cm)	LVOT VEL. (m/s)	RVOT VEL. (m/s)	IVRT (m/)	
NORMAL PARAMETER	<1.5	0.88-1.79	0.7-1.7	<1.6	<1.3	40-60	
PATIENT		1.4	1.3	NM	0.9		
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 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. The 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.

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with mild non-dependent particulate sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

Normal size and asymmetrical 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 moderate increased echogenicity and loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Dystrophic left kidney medullary mineral was present. Mild



<b>PATIENT</b>	right kidney pyelectasia was present. The left kidney measured 3.7 cm in length. The right kidney measured 4.0 cm in length.
Mo Norato	The area of the aortic trifurcation was free of pathology.
<b>SPECIES</b>	<b>Adrenal Glands</b>
Feline	The left and right adrenal glands were not definitively visualized.
<b>BREED</b>	<b>Spleen</b>
DSH	The spleen exhibited borderline subnormal size and 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.
<b>SEX</b>	
FS	<b>Liver/Gallbladder</b>
<b>AGE</b>	The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content with mild echogenic luminal debris. The cystic and common bile ducts were normal.
12	
<b>WEIGHT</b>	<b>Gastrointestinal</b>
11.8	The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained minor retained non-shadowing ingesta/chyme with no signs of ileus, obstruction or foreign material.
<b>INTERPRETED BY</b>	
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	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.
<b>IMAGING PERFORMED BY</b>	Normal visible colon wall layers were present with apparent formed feces in lumen.
Jenn	<b>Pancreas</b>
<b>HOSPITAL NAME</b>	The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.
Rockaway Animal Hospital	<b>Free Abdomen</b>
<b>REFERRING VET</b>	No overt lymphadenopathy or peritoneal effusion was present.
Dr. Maniar	Unspecified irregular hypoechoic mass/lesion noted in the mid cranial abdomen adjacent to the left and right kidneys within the area of the caudal pancreas and caudal to the caudate liver lobe. Mild surrounding hyperechoic omentum was present.
<b>INVOICE</b>	<b>ULTRASONOGRAPHIC FINDINGS</b>
12825ag	<ul style="list-style-type: none"> <li>• Overtly normal cardiac structure and function</li> <li>• Mild urinary bladder sediment</li> <li>• Unspecified irregular hypoechoic nodular mass/lesion within the area of the adrenal glands, caudal pancreas and caudate liver lobe</li> <li>• Non-specific chronic renal changes with left kidney dystrophic medullary mineral and right kidney mild pyelectasia</li> </ul>
<b>DATE</b>	
01/31/2023	



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- Heterogenous discernable pancreas
- Overtly normal GI tract/liver, minor gallbladder debris

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**SPECIES**

Feline

Although not definitive with sampling required for a definitive diagnosis the unspecified mid to cranial abdominal mass/lesion is highly suspicious for neoplastic criteria with potential origins including left/right adrenal gland, caudal pancreas or lymph node as primary considerations. A screening BP is advised to assess for evidence of hypertension which may allude to emerging adrenal neoplastic criteria i.e., pheochromocytoma. A spec fPL is recommended.

**BREED**

DSH

Correlation with a full CBC/chemistry panel, UA and urine C/S with assessment for potential hypokalemia is recommended. Three view chest radiographs are recommended if not done to assess for occult thoracic pathology.

**SEX**

FS

An extremely guarded prognosis is indicated.

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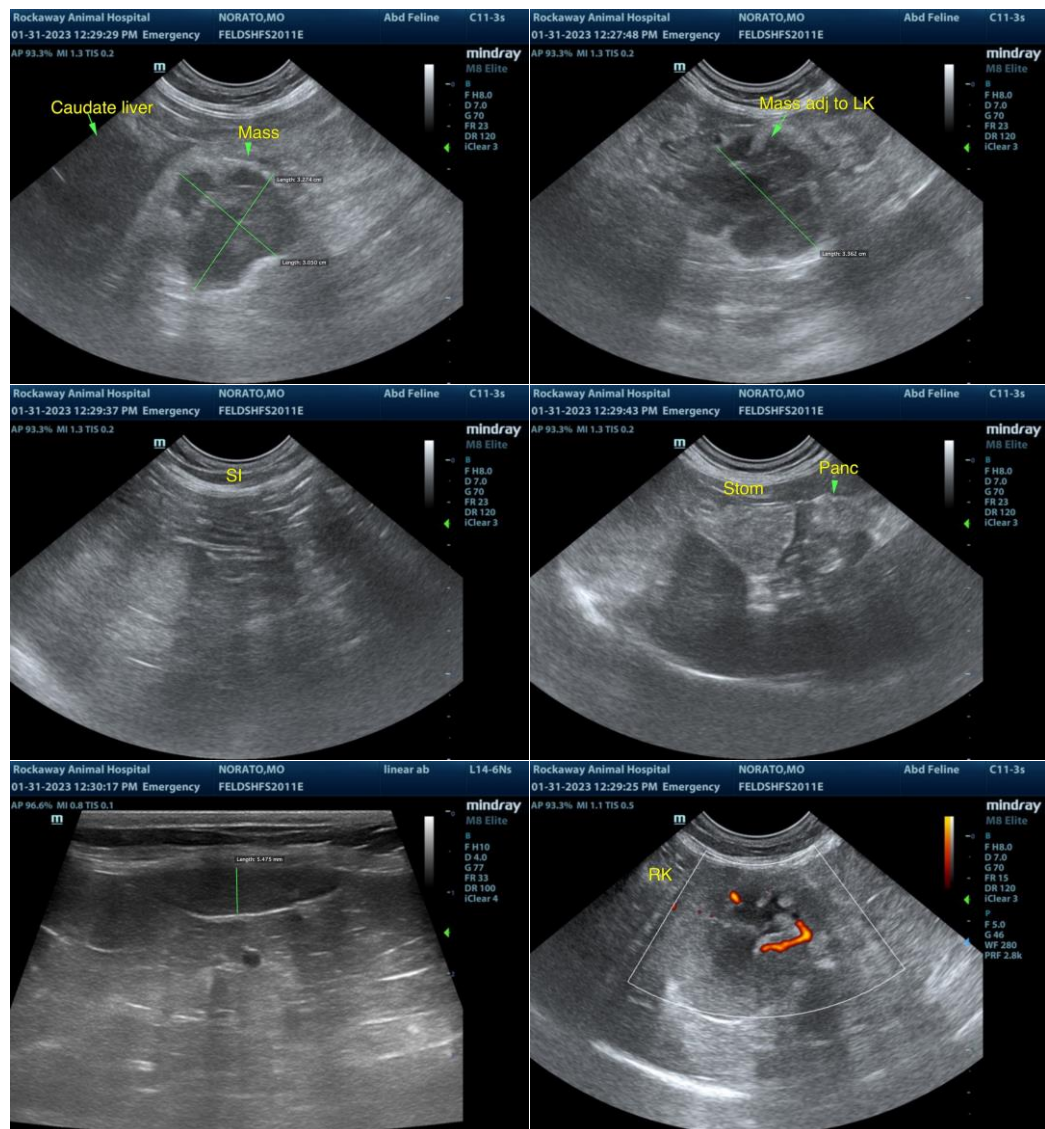
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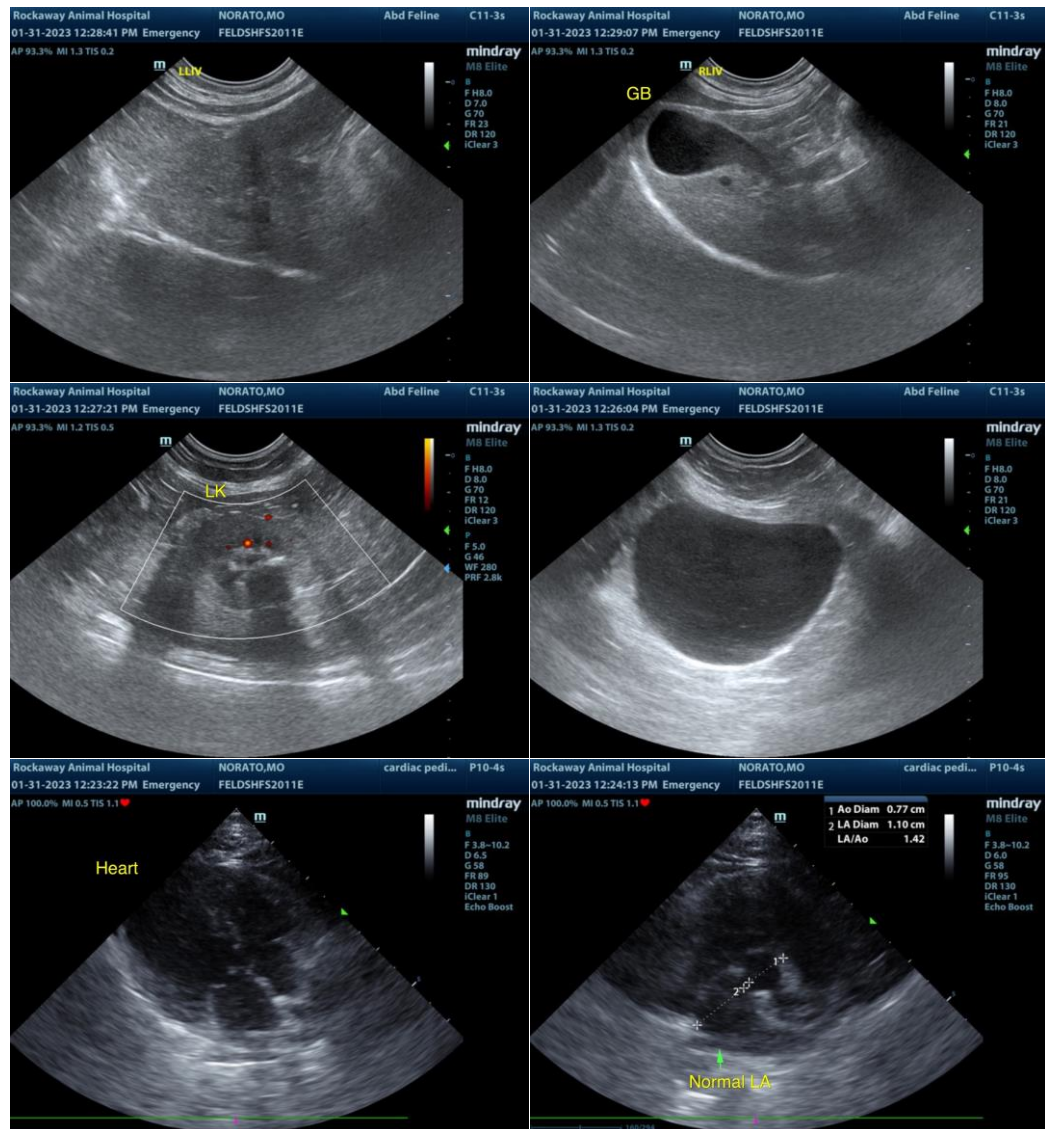
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)  
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