



**PATIENT**

Big Kitty Stephens

**PRESENTING CLINICAL SIGNS**

had enucleation done, now distended abd, enlarged left kidney, concern for possible heart failure

**SPECIES**

Feline

**BREED**

DSH

**SEX**

MN

**AGE**

5 years

**WEIGHT**

10.3 lbs.

**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		NM	0.42	1.9	0.38	42.1	76.5
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		1.1	1.4		0.75	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							

**INTERPRETED BY**

R. McKenzie Daniel, DVM, DABVP

**IMAGING PERFORMED BY**

Kelly Reschny

**HOSPITAL NAME**

Smithville AH

**REFERRING VET**

Dr. Hagar

**INVOICE**

14447

**DATE**

7/28/22

**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. **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.



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**Urinary System**

The urinary bladder was mildly distended in size yet normal tone. Anechoic urine was present with mild nondependent particulate sediment. No evidence of inflammatory or neoplastic urinary bladder mural changes was noted. The urethra exhibited normal structure and tone to a depth of 2.0 cm.

The area of the aortic trifurcation was free of pathology.

Variably enlarged renal size with asymmetrical margination were present in both kidneys. The renal cortex presented uniformly increased in echogenicity with uniform echotexture. The renal cortex appeared to be hypertrophied resulting in an altered cortex: medulla ratio. Mild loss of corticomedullary distinction was also present. The renal medullary volume was subjectively reduced. The left kidney measured 5.0 cm in length. The right kidney measured 5.5 cm in length. No evidence of left or right retroperitoneal inflammation or effusion was noted.

**Adrenal Glands**

No overt pathology was noted in the area of the left or right adrenal gland. The right adrenal gland measured 0.33 cm width.

**Spleen**

The spleen was mildly enlarged yet maintained symmetrical capsule contour with subtle parenchyma heterogeneity exhibiting potential for very subtle micronodular parenchyma changes. The spleen measured 1.1 cm width at the level of the hilus. No splenic masses were noted. Normal splenic vascularity was present.

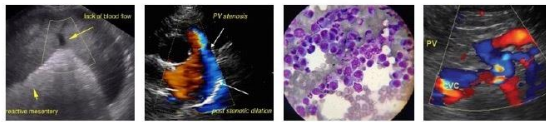
**Liver/ Gallbladder**

The liver exhibited subjective mild generalized enlargement. 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 evidence of hepatic congestion. The gallbladder was non-distended in size with primarily anechoic luminal content. The cystic and common bile ducts were normal.

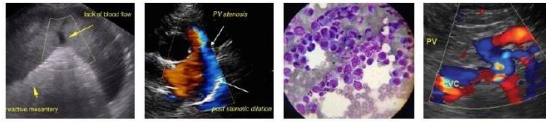
Transdiaphragmatic view revealed mild comet tail lung pattern, which is echogenic sound wave interface with microconsolidations within the caudal lung field. The lung field should not be visualized by sonogram unless pathology is present. Chest radiographs are recommended to rule out alveolar/lung disease such as neoplasia, thromboembolic disease, chronic inflammatory disease with microconsolidation.

**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 gastric body wall width measured 0.25 cm.



<b>PATIENT</b>	The intestinal walls demonstrated intact yet generalized thickened walls owing to propensity for generalized prominent muscularis layer. No evidence of loss of intestinal wall layering or intestinal masses. Intestinal wall width measured 0.35 cm.
Big Kitty Stephens	
<b>SPECIES</b>	Normal visible colon wall layers were present with apparent formed feces in lumen.
Feline	<b>Pancreas</b>
<b>BREED</b>	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 were evident.
DSH	<b>Free Abdomen</b>
<b>SEX</b>	No omental masses, or significant lymphadenopathy, or peritoneal free fluid were noted.
MN	
<b>AGE</b>	<b>ULTRASONOGRAPHIC FINDINGS</b>
5 years	<ul style="list-style-type: none"> <li>• Overtly normal cardiac structure and function, normal left atrium</li> <li>• Mild hepatosplenomegaly</li> <li>• Mild transdiaphragmatic comet tail artifact</li> <li>• Intact yet generalized prominent small intestinal walls - suggestive of infiltrative enteropathy, IBD with potential early neoplastic infiltrative enteropathy i.e., lymphoma</li> <li>• Bilateral variable renomegaly exhibiting increased cortex echogenicity - nonspecific, potential nephritis, while emerging renal neoplastic criteria cannot be excluded</li> <li>• Mild urinary bladder sediment</li> </ul>
<b>WEIGHT</b>	
10.3 lbs.	
<b>INTERPRETED BY</b>	<b>INTERPRETATION OF THE FINDINGS &amp; FURTHER RECOMMENDATIONS</b>
R. McKenzie Daniel, DVM, DABVP	The cardiac presentation was overtly normal without evidence of significant structural or functional cardiomyopathy or secondary pleural / peritoneal effusion.
<b>IMAGING PERFORMED BY</b>	
Kelly Reschny	
<b>HOSPITAL NAME</b>	Although not definitive, potential for multicentric round-cell neoplastic criteria i.e., lymphoma, given the hepatosplenomegaly, intestinal and renal presentation, is of concern.
Smithville AH	
<b>REFERRING VET</b>	Assuming normal clotting status and using a 25-gauge needle, hepatosplenic FNA is recommended for screening cytology.
Dr. Hagar	Cystocentesis for urinalysis +/- C/S If evidence of inflammatory cells is recommended. A GI panel to include PLI/TLI/Cobalamin/Folate to assess for underlying Intestinal disease could be considered especially if gastrointestinal signs develop or if evidence of weight loss. Three-view chest radiographs are recommended if not done.
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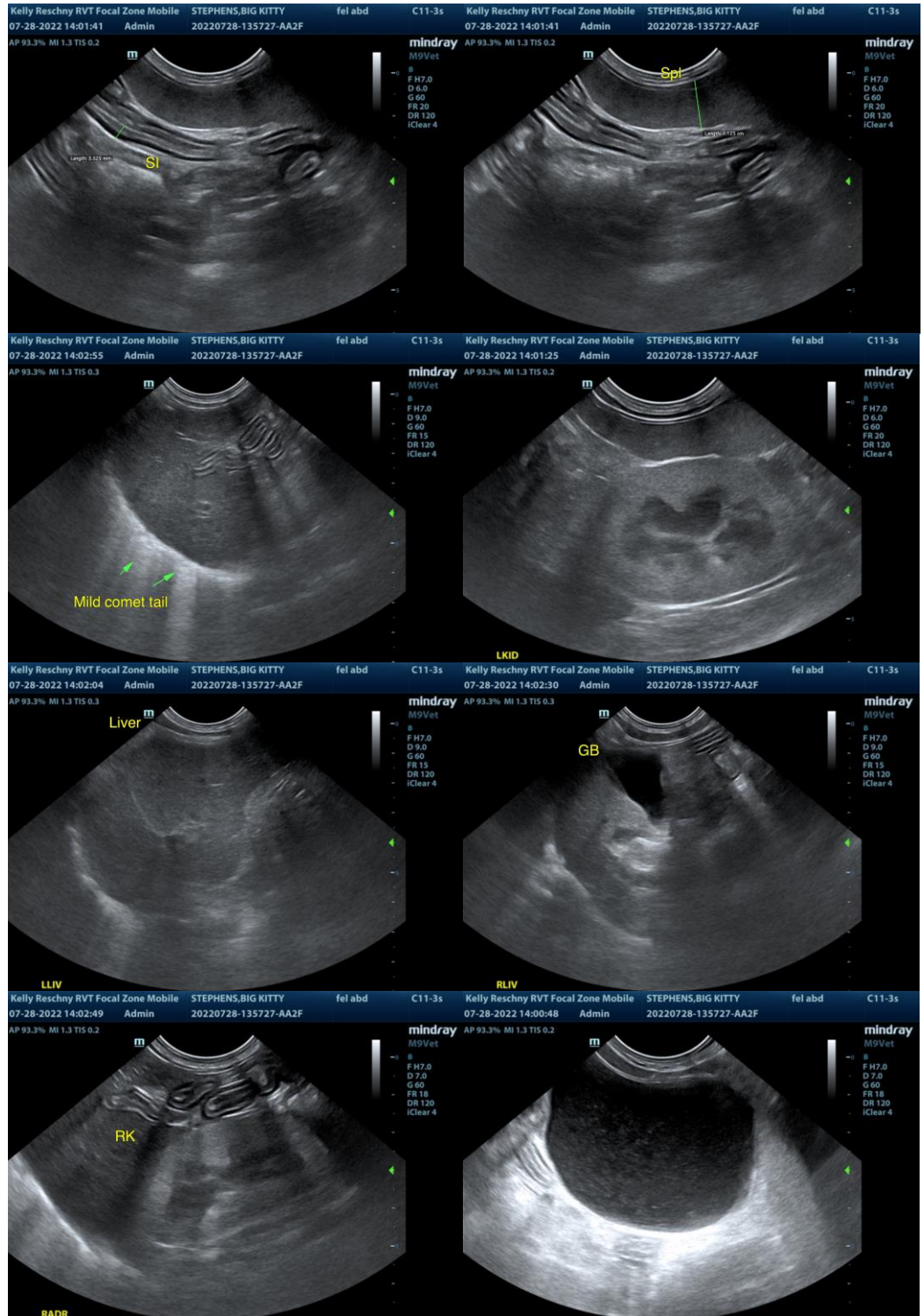
Dr. Hagar

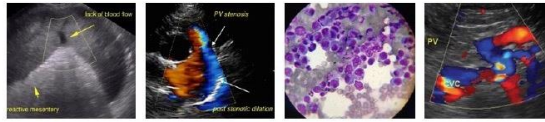
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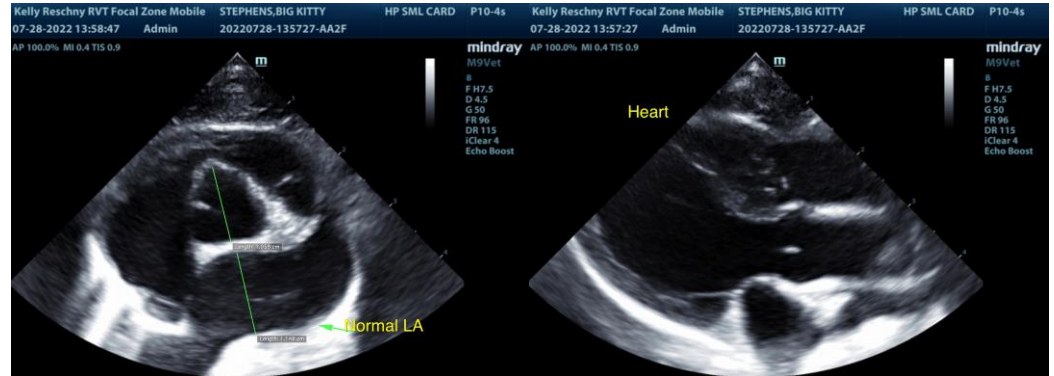
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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