



## PATIENT

Lily Coviello

## SPECIES

Canine

## BREED

Maltese

## SEX

FS

## AGE

6 years

## WEIGHT

10.3 lbs.

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Kelly Vazquez

## HOSPITAL NAME

Riverdale Integrative  
VC

## REFERRING VET

Dr. Kuo

## INVOICE

17079

## DATE

6/13/23

## PRESENTING CLINICAL SIGNS

Patient presents for double cavity U/S (echo/abd) due to history of mast cell on back. Concern for any type of metastatic process due to another lump located near excision area of initial back mass.

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

CANINE	MR	TR	LA/AO	LA/AO	FS	EF	EPSS
<b>CARDIAC PARAMETERS</b>	<b>VMAX</b> (m/s)	<b>VMAX</b> (m/s)	(Boon method)	(Heart Base; Swe)	(%)	(%)	(cm)
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
<b>PATIENT</b>				1.38	39	74	0.2
CANINE	HR	AV	PV	BODY WEIGHT	LA	LVIDd	LVIDs
<b>CARDIAC PARAMETERS</b>	(BPM)	<b>VMAX</b> (m/s)	<b>MAX</b> (m/s)	(kg)	2D short axis Base view (cm)	Avg; 2D and m-mode short axis (cm)	Avg; 2D and m-mode short axis (cm)
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6				
<b>PATIENT</b>	130	1.7	1.4		2.8	2.8	

### Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 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. 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. 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. 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). No visible **pericardial** or free pleura fluid was noted. The cranial **mediastinum and pericardial and extra-cardiac 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 3.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or



**PATIENT**

Lily Coviello

sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

**SPECIES**

Canine

A solitary visualized medial iliac lymph node was present. The lymph node was essentially isoechoic to adjacent omentum without evidence of peripheral inflammation and maintaining a normal width: length ratio (<0.5). The lymph node measured 0.8 cm diameter. The lymph node was not consistent with inflammatory or neoplastic / metastatic criteria and considered incidental.

**BREED**

Maltese

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio and normal 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. A solitary, thinly walled cyst was present in the cranial left kidney measuring 0.9 cm diameter. The cyst contained anechoic fluid. The left kidney measured 4.0 cm in length. The right kidney measured 4.4 cm in length.

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**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.45 cm width at the caudal pole and 0.44 cm width at the cranial pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.44 cm width at the caudal pole.

**WEIGHT**

10.3 lbs.

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**Spleen**

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 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 containing primarily anechoic content with minor, echogenic gallbladder sediment. The cystic and common bile ducts were normal.

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**Gastrointestinal**

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained mild to moderate, variably echogenic, nonshadowing ingesta without signs of obstruction or foreign material.

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The small intestine presented generalized intact wall layering with a maintained normal 1:3 muscularis/mucosa ratio. Segmental, nonspecific, increased duodenojejunal mucosal echogenicity was present.

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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 were evident.

**SPECIES**

Canine

**Free Abdomen**

**BREED**

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No omental masses, omental lymphadenopathy, or evidence of peritoneal free fluid were noted.

**SEX**

- Normal echocardiogram

FS

- Gastric ingesta - sonographically consistent with food

**AGE**

6 years

- Nonspecific increased segmental duodenojejunal mucosa echogenicity
- Small left kidney cyst

**WEIGHT**

10.3 lbs.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

No sonographic evidence of cardiomyopathy or intrabdominal neoplastic / metastatic criteria.

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The increased duodenojejunal mucosa echogenicity is nonspecific with potential for patient variant, yet at times has been associated with potential intestinal disease. Monitoring for gastrointestinal signs and/or albumin levels going forward may be considered.

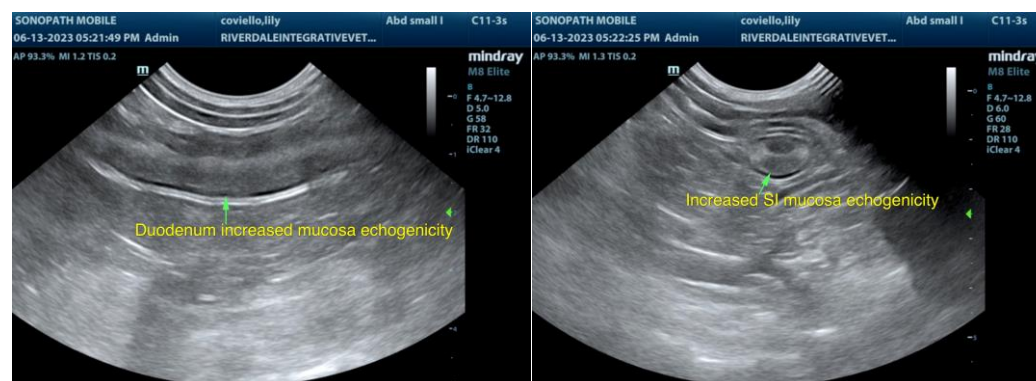
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The small left kidney cyst is incidental and not considered pathological. Sonographic monitoring is recommended.

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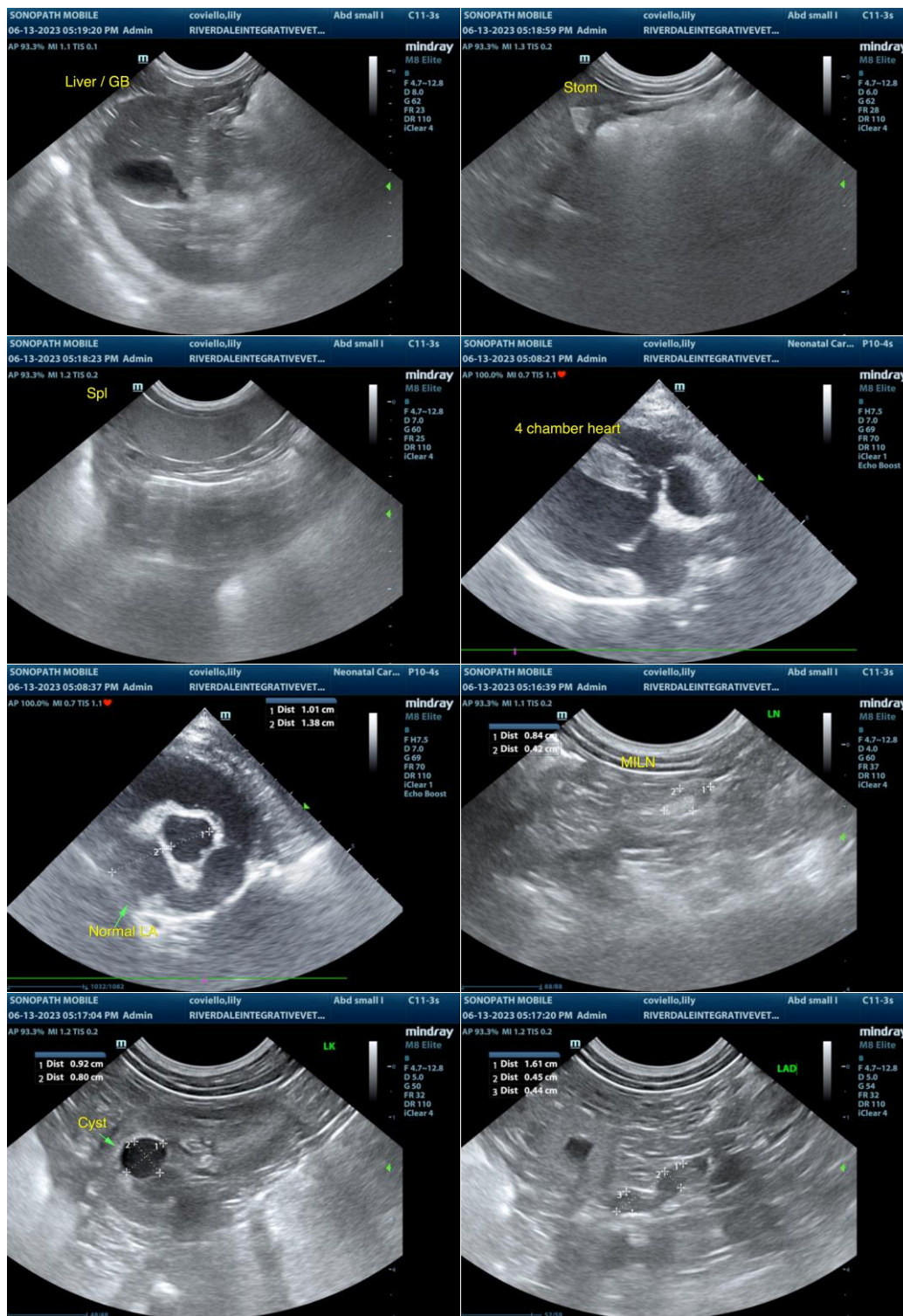
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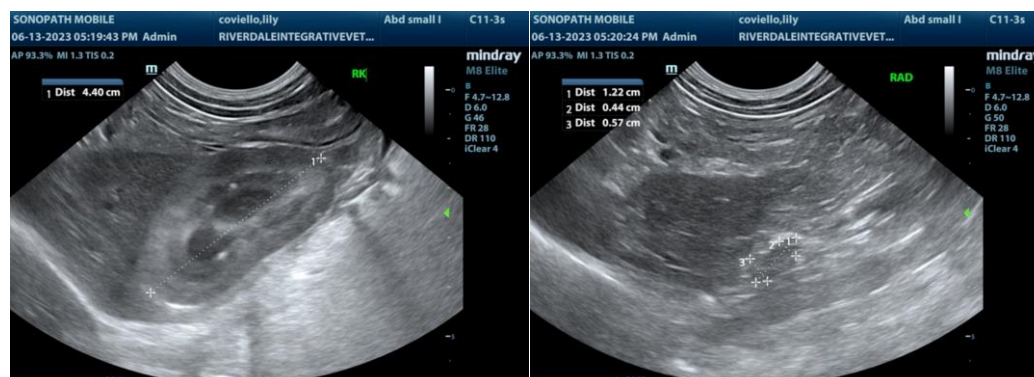
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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