

**PATIENT**

Mookie Skoglund

**SPECIES**

Canine

**BREED**

Victorian Bulldog

**SEX**

Spayed Female

**AGE**

7 Years

**WEIGHT**

58 Pounds

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Sarah Pender, CVT

**HOSPITAL NAME**

SVS Imaging QC

**REFERRING VET**

Dr. Christine Skoglund

**INVOICE**

15029

**DATE**

5/2/22

**PRESENTING CLINICAL SIGNS**

History: Hemangiosarcoma found last scan 10/15/21. Spleen removed October 28th and chemotherapy (doxorubicin, 5 doses 3 weeks apart) completed March 18th. Doing repeat scan to see if additional tumors found or metastasis found

Abnormal PE/Chem/CBC/UA Results: Lab values have been WNL Previous DC on 10/12/21: Normal canine cardiac presentation with mild tricuspid insufficiency. Splenic mass with separate nodules. Suspect hemangiosarcoma

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN**

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
PATIENT	--	2.7	NM	1.25	38	70	0.30
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LA 2D short axis Base view (cm)	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	167	1.0	0.75	--	3.7	3.1	--

**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. Mild eccentric MR noted 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. 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. Minor TR present 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). Trace PI on color doppler. 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**

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The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

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The area of the aortic trifurcation was free of pathology without evidence of medial iliac or sublumbal lymphadenopathy.

**BREED**

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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. The left kidney measured 4.9 cm in length. The right kidney measured 5.9 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 0.73 cm width at the caudal pole and 0.42 cm width at the cranial pole.

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The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.52 cm width at the caudal pole.

***Spleen*****WEIGHT**

58 Pounds

The area of the previous spleen was free of pathology.

***Liver*****INTERPRETED BY**R. McKenzie Daniel, DVM,  
DABVP (Canine and Feline)

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. 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 echogenic, non-shadowing ingesta without signs of obstruction or foreign material. The presence of gastric ingesta is likely consistent with recent meal ingestion.

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The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine contained segmental small intestinal ingesta/chyme.

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Normal visible colon wall layers were present with apparent formed feces in lumen.

***Pancreas*****INVOICE**

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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 was evident.

***Free Abdomen*****DATE**

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No omental masses, lymphadenopathy or peritoneal effusion.



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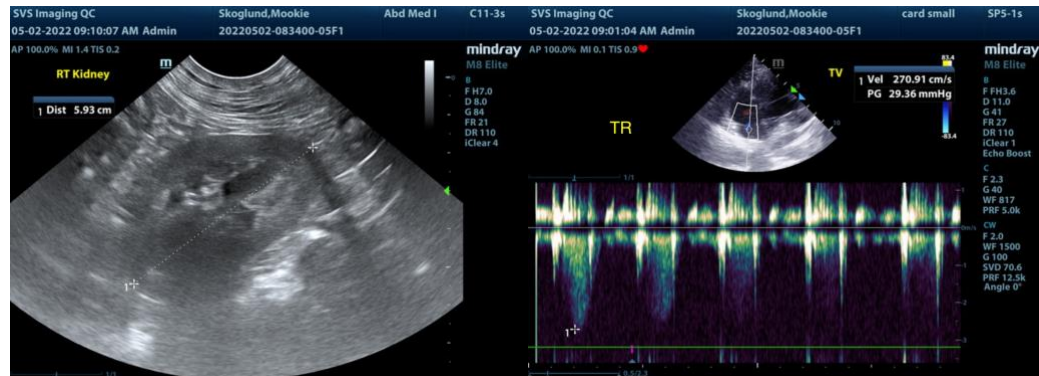
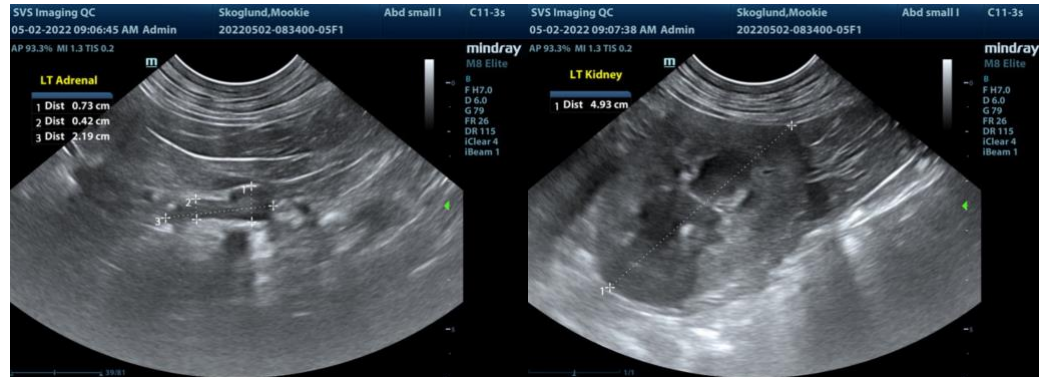
**ULTRASONOGRAPHIC FINDINGS**

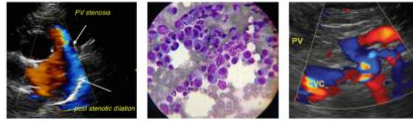
- Overtly normal cardiac structure and function- no evidence of cardiac or pericardial metastasis
- Mild MR/TR
- Trace PV insufficiency
- Sonographically normal abdomen

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

No evidence of structural or functional cardiomyopathy. Mild MR, TR and PV insufficiency was present yet not considered hemodynamically significant at this time. Recheck echocardiogram suggested in 6-12 months or sooner if recommended by an oncologist or if murmur develops or progresses. Previously noted TR was present with estimated pulmonary pressure gradient not consistent with clinical pulmonary hypertension.

No evidence of recurrent hemangiosarcoma or intraabdominal metastasis. Sonographic monitoring of the abdomen based on oncology recommendations is suggested.





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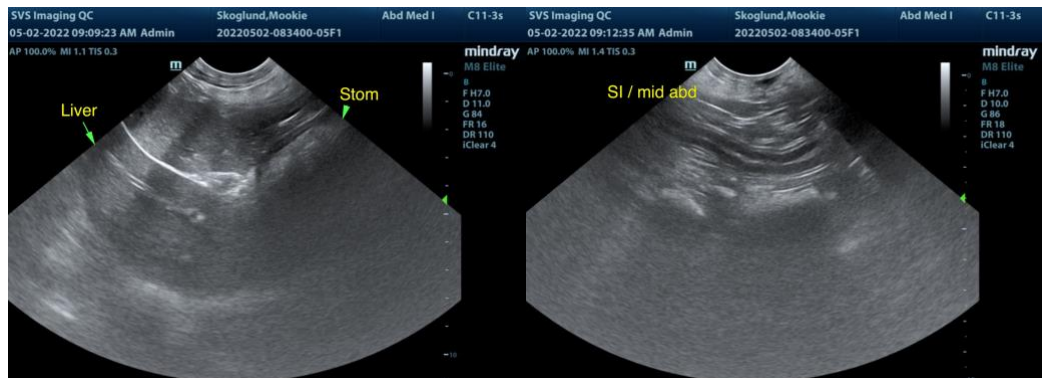
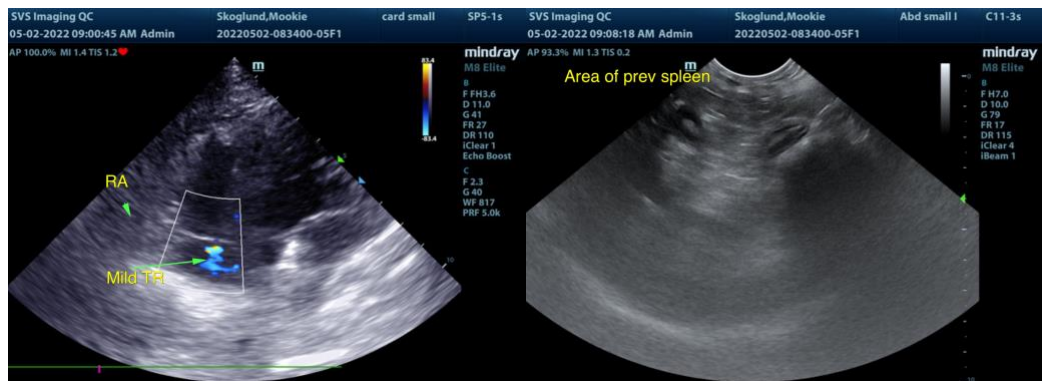
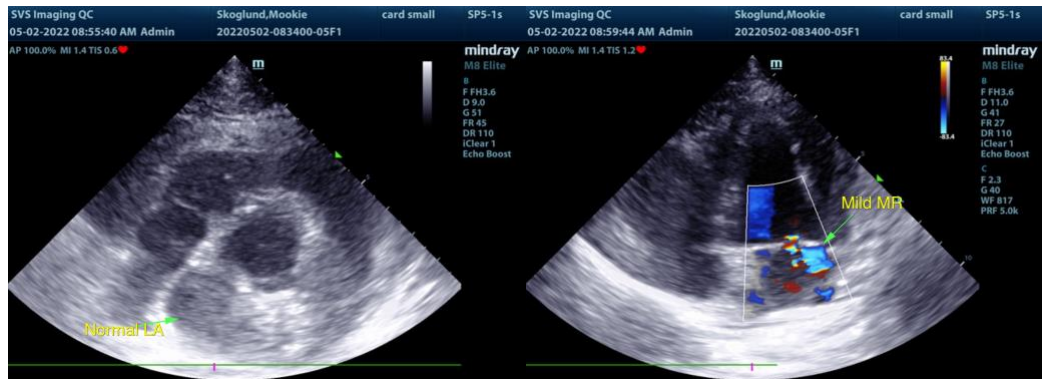
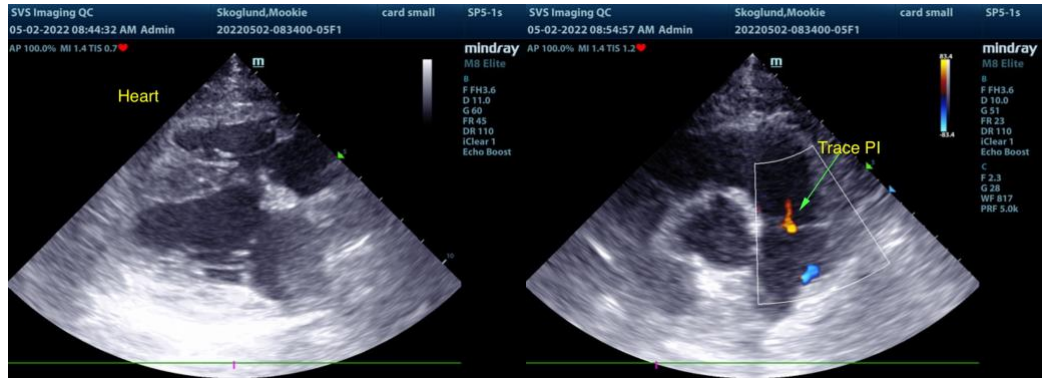
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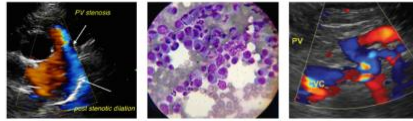
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The information and recommendations provided are based on the images presented by the

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svsimaging.net 309-737-3070



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referring veterinarian. 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)**  
**info@SonoPath.com**