



**PATIENT PRESENTING CLINICAL SIGNS**

Ruba Poyton

Owner was away for a few days and dog was home with husband. Upon return she seemed very lethargic and her abdomen a bit "pottier". Exam showed abdominal distension and when tapped blood was obtained. Suspicion of neoplasia. Owner requested Echo portion last minute as wanted to cover everything as was very concerned. Dog's age is an estimate, was a street dog.

**SPECIES**

Canine

Abnormal PE/Chem/CBC/UA Results: Rads showed suspicious rounded mass effect in cranial abdomen.

**BREED**

Husky X

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN**

**SEX**

FS

**AGE**

≈ 10 yrs

**WEIGHT**

≈ 55 lbs.

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP

**IMAGING PERFORMED BY**

Crystal Hill

**HOSPITAL NAME**

Westoak AH

**REFERRING VET**

Dr. Kohlmaier

**INVOICE**

16425

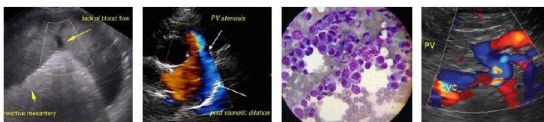
**DATE**

3/22/23

CANINE	MR	TR	LA/AO	LA/AO	FS	EF	EPSS
<b>CARDIAC</b>	<b>VMAX</b>	<b>VMAX</b>	(Boon method)	(Heart Base; Swe)	(%)	(%)	(cm)
<b>PARAMETERS</b>	(m/s)	(m/s)					
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
<b>PATIENT</b>				1.4	30	60	0.3
CANINE	HR	AV	PV	BODY WEIGHT	LA	LVIDd	LVIDs
<b>CARDIAC</b>	(BPM)	<b>VMAX</b>	<b>MAX</b>	(kg)	2D short axis Base view	Avg; 2D and m-mode short axis	Avg; 2D and m-mode short axis
<b>PARAMETERS</b>		(m/s)	(m/s)		(cm)	(cm)	(cm)
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6				
<b>PATIENT</b>	NM	1.5	0.9		3.2	3.4	

**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 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 yet borderline subnormal as 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.


**PATIENT**
**Urinary System**

Ruba Poyton

The urinary bladder, trigone, and cystourethral junction 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 was noted.

**SPECIES**

Canine

The area of the aortic trifurcation was free of pathology.

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Normal size and 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 increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 5.5 cm in length. The right kidney measured 6.0 cm in length.

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FS

**Adrenal Glands**
**AGE**

≈ 10 yrs

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 2.0 cm length x 0.58 cm width at the caudal pole. The right adrenal gland was not definitively visualized.

**Spleen**
**WEIGHT**

≈ 55 lbs.

A moderately sized, nonhomogeneous to cavitated mass involving the caudal spleen with secondary asymmetrical capsule expansion and disruption was present and measured 4.5 cm diameter. The non-affected spleen exhibited generalized parenchyma heterogeneity with potential discrete concurrent separate splenic nodules and areas of mild capsule asymmetry. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Regional omental inflammation was present around the mass.

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**Liver/ Gallbladder**
**IMAGING**
**PERFORMED BY**

Crystal Hill

The liver exhibited generalized enlargement with a moderately sized, nonhomogeneous cavitated mass involving the subjective left liver parenchyma measuring approximately 8.0 cm in diameter. A separate, smaller nonhomogeneous mass was noted in the deep mid-liver parenchyma adjacent to and dorsal to the gallbladder measuring 4.8 cm in diameter. Concurrent intermittent nonhomogeneous hepatic intraparenchymal nodules were noted. An intraparenchymal nodule noted in the ventral caudal liver measured 2.2 cm in diameter. The gallbladder was non-distended in size containing anechoic content with mild hyperechoic nonorganized gallbladder debris. The gallbladder was otherwise normal. The cystic and common bile ducts were normal.

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**Gastrointestinal**
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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.

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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.

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



**PATIENT**

**Pancreas**

Ruba Poyton

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**

Moderate volume peritoneal effusion exhibiting echogenic changes, consistent with fluid cellularity, was noted. Generalized primarily perisplenic to perihepatic hyperechoic omentum was present. No overt lymphadenopathy or visualized omental masses were noted.

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**ULTRASONOGRAPHIC FINDINGS**

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- Normal echocardiogram with borderline decreased LV contractility
- Caudal splenic mass
- Concurrent hepatic intraparenchymal masses and nodules
- Moderate volume echogenic peritoneal effusion - consistent with hemoabdomen

**AGE**

≈ 10 yrs

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**WEIGHT**

≈ 55 lbs.

Unfortunately, the splenic and hepatic masses are consistent with multicentric neoplasia and most likely suggestive of multicentric sarcoma. No overt evidence of cardiac or pericardial metastasis was noted. Regardless, the multicentric neoplasia presentation precludes surgical options at this stage. An unfavorable prognosis is indicated.

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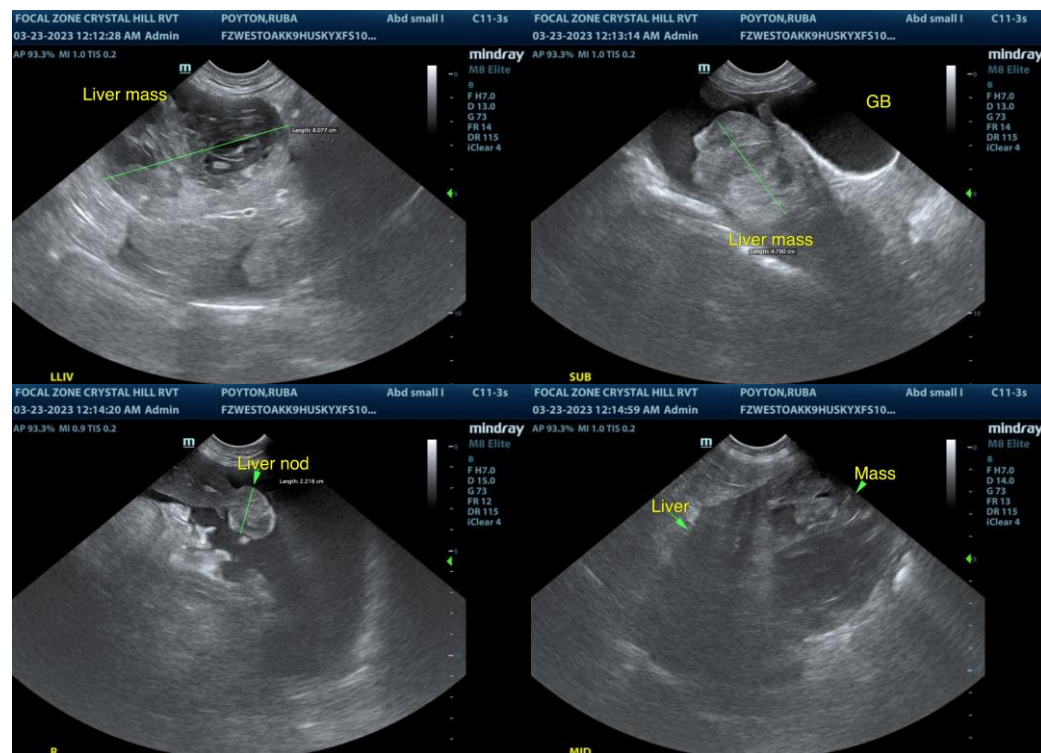
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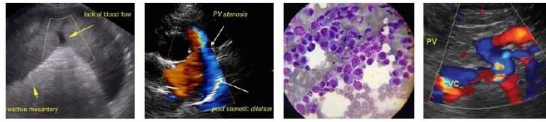
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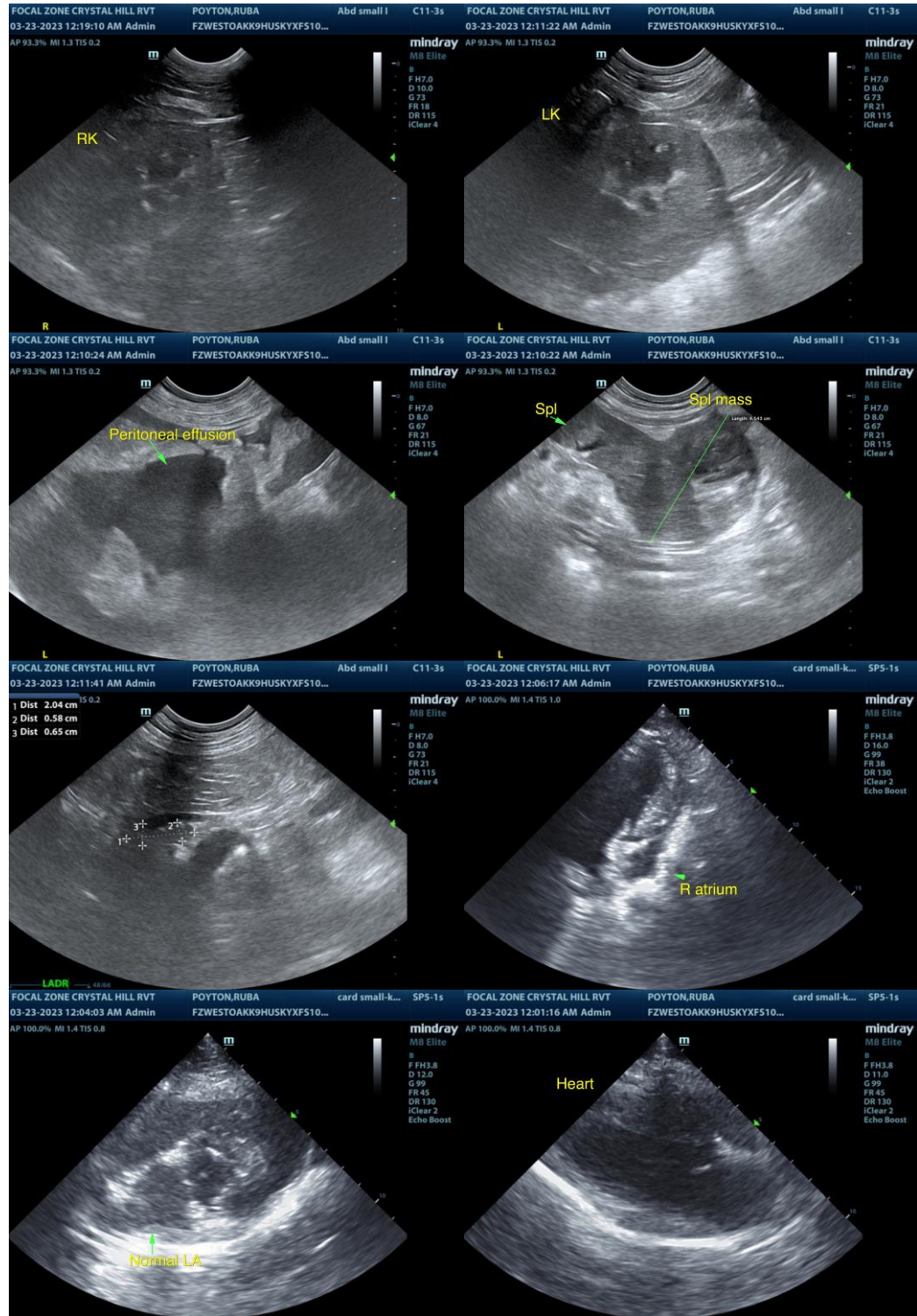
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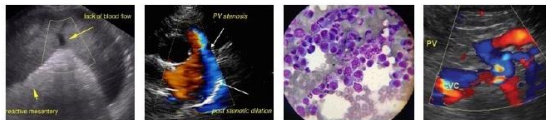
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## PATIENT

Ruba Poyton

## SPECIES

Canine

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.

## BREED

Husky X

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.

## SEX

FS

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info@SonoPath.com

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