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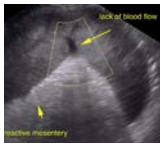
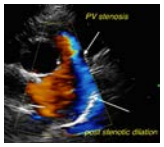
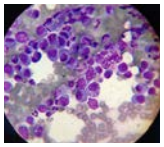
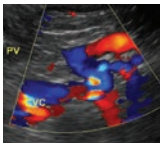

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1-800-838-4268 info@sonopath.com

PATIENT
Salem Bowens

SPECIES
Canine

BREED
Siberian Husky

SEX
Spayed Female

AGE
11 Years

WEIGHT
49 Pounds

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

IMAGING PERFORMED BY
Shari Reffi, CVT

HOSPITAL NAME
Newton Vet Hospital

REFERRING VET
Dr. Chun

INVOICE
33666

DATE
12/22/21

PRESENTING CLINICAL SIGNS

Chronic hx of elevated liver values, inappetence. Normal LDDS test. Prev. u/s 6/2021 and 7/29/21 (attached)
Abnormal PE/Chem/CBC/UA Results: ALT 1,003, ALP 533

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

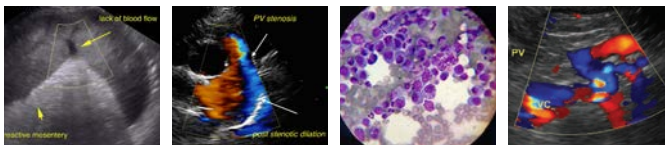
CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT			NM	1.1	41.7	76	0.2
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT** (kg)	**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	149	1.0	0.85		2.8	2.4	

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 increased IVS and LV free wall thicknesses with maintained linear contour and without evidence of LV dilation or restriction. 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. No evidence of arrhythmogenic disease.

Urinary System

The urinary bladder presented uniformly thickened urinary bladder wall isoechoic to the adjacent normal urinary bladder wall. Minimal urine was present in the urinary bladder, which prohibited full evaluation of the urinary bladder walls. The luminal margin of the thickened urinary bladder wall was mildly asymmetrical in contour. No overt evidence of neoplastic criteria. Mild dependent to adhered mineral was present along the apical and ventral luminal surface. The urethra was normal to a depth of 3.0 cm.



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The area of the aortic trifurcation was free of pathology.

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 loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 6.9 cm. The right kidney measured 6.3 cm.

Adrenal Glands

The area of the left adrenal gland revealed an expansive, non-homogeneous mass measuring approximately 8.0 cm in length x 3.8 cm in width. The mass appeared to potentially extend into the retroperitoneal space caudal to the left kidney with associated retroperitonitis and potential for scant retroperitoneal free fluid.

The right adrenal gland was normal in size, measuring 3.4 cm length x 0.97 cm at the caudal pole. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia.

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.

Liver

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. 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.

Gastrointestinal

The visualized gastric walls were sonographically unremarkable. Ventral gastric body wall measured 0.35 cm. The lumen of the stomach contained mild to moderate nonshadowing ingesta, most consistent with post prandial presentation without signs of ileus, obstruction or foreign material.

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. Duodenum wall measured 0.50 cm. Jejunum wall measured 0.40 cm.

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

Pancreas

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

No omental masses, lymphadenopathy or effusion.

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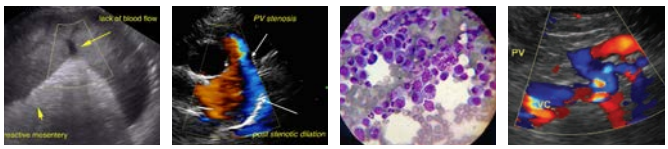

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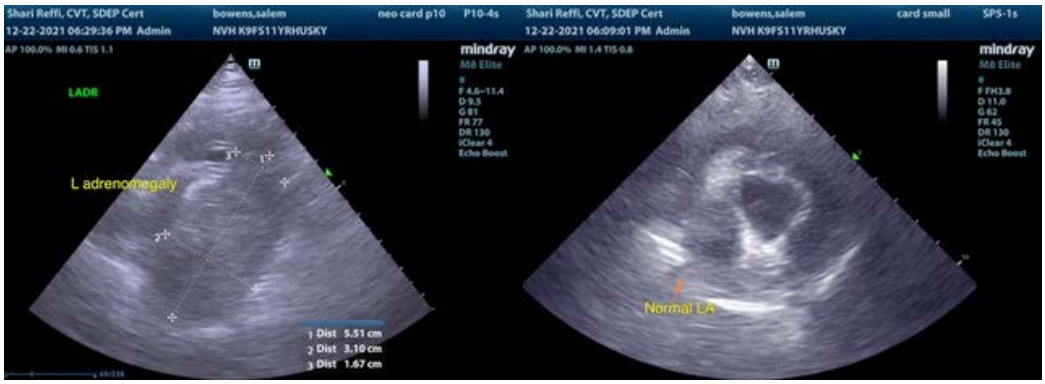
ULTRASONOGRAPHIC FINDINGS

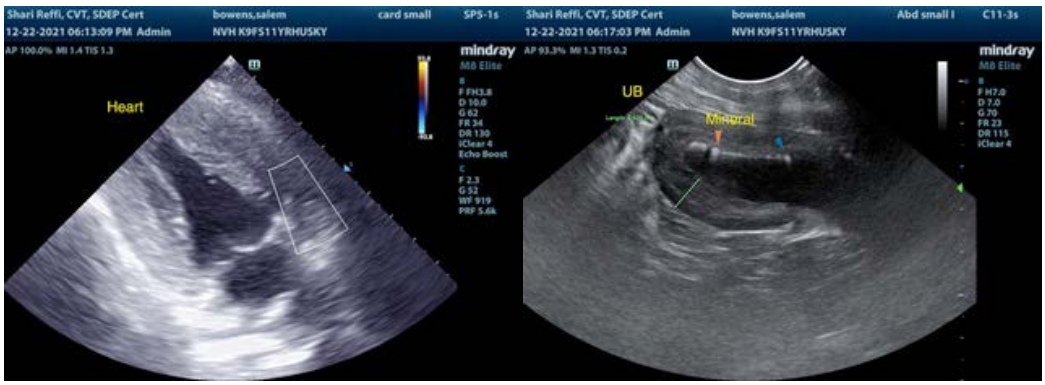
- Overtly normal cardiac function
- Subjective mild IVS and LV free wall hypertrophy/pseudohypertrophy
- Normal left atrium
- Cystitis pattern with mild dependent to adhered mineral
- Left adrenal mass with likely associated retroperitonitis
- Chronic hepatopathy
- Mild chronic renal changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overall, normal cardiac function. The left ventricle hypertrophy/pseudohypertrophy may be owing to volume changes (dehydration) or potential systemic hypertension. Assessment of blood pressure is recommended.

Unfortunately, the previously noted left adrenomegaly has progressed into an expansive left adrenal mass consistent with neoplastic criteria. Adenocarcinoma and primary concern for pheochromocytoma (especially if hypertension is confirmed) are considered primary differential diagnoses. Potential for vascular invasion cannot be excluded. CT assessment of the mass could be considered for further clarification and assessment of potential surgical resectability. The presence of gastric ingesta is consistent with food, and may suggest some degree of gastric hypomotility if documented NPO. As-needed gastrointestinal support recommended.





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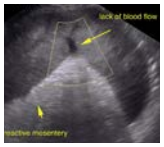
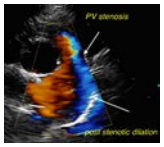
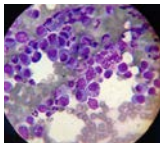
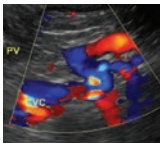

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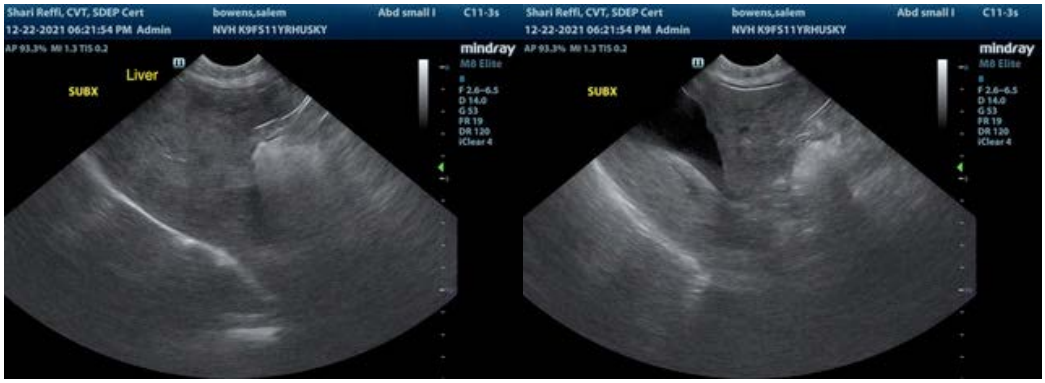

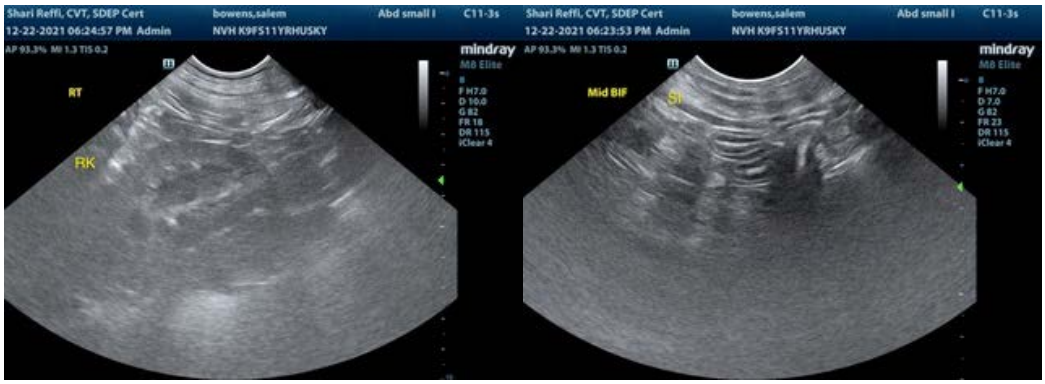

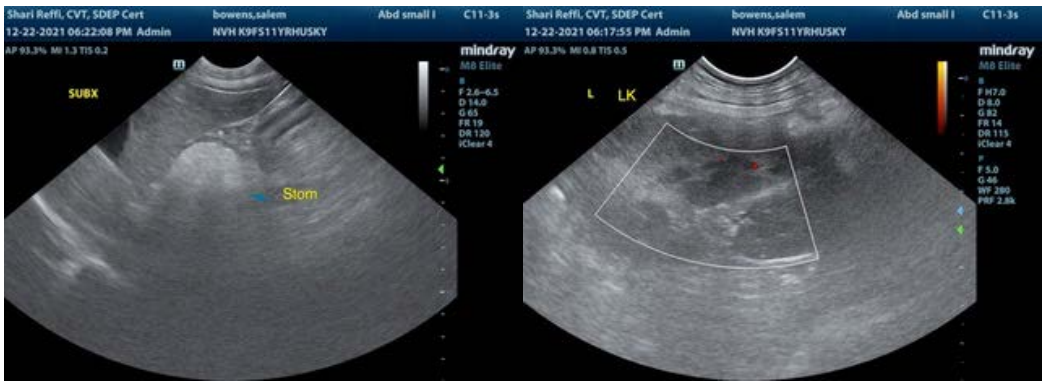

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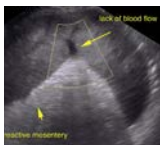
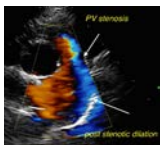
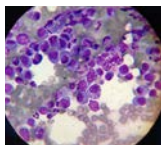
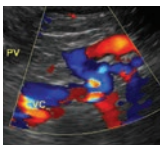

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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