



PATIENT	PRESENTING CLINICAL SIGNS
Reggie Molnar	History: New II/VI heart murmur. Losing weight, GI signs. Elevated Ca. Current meds: Panacur, Carprofen, Apoquel, Dasuquin.
SPECIES	Abnormal PE/Chem/CBC/UA Results: ALP 684, ALT 147, Ca 12.5, Chol 421, T4 0.6, FT4 13.4
Canine	ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN
BREED	Urinary System
Beagle	The urinary bladder , trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. A grouping of calculi were noted and measured up to 0.4 cm with grouping of calculi measuring 1.0 cm. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.
SEX	The prostate was uniform and measured 1.06 cm.
Neutered male	The kidneys revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. Slight mineralization was noted in the kidneys. The left kidney measured 6.15 cm.
AGE	
12 ½ years	
WEIGHT	
41 lbs	
INTERPRETED BY	Adrenal Glands
Eric Lindquist, DMV DABVP, Cert. IVUSS	The adrenal glands appeared slightly enlarged and swollen. No evidence of focal capsular expansion or invasion into the phrenic veins was noted. No overt suspicion of neoplasia was noted. This is considered likely a hyperplastic change associated with stress or adrenal endocrinopathy (PDH). If isosthenuria is persistently present and the patient morphologically suggests Cushing's disease then ACTH testing would be indicated. The left adrenal gland measured 2.29 x 0.98 cm at the caudal pole and 0.75 cm at the cranial pole. The right adrenal gland measured 2.32 x 1.04 cm at the cranial pole and 0.8 cm at the caudal pole.
IMAGING PERFORMED BY	Spleen
Shari Reffi, CVT	The spleen revealed expansive 3.3 cm parenchymal mass that was deriving from the caudal pole.
HOSPITAL NAME	Liver
Tranquility VC	The liver images from right and left intercostal as well as subcostal views revealed subjectively normal liver size, contour, and structure. The liver revealed a hyperechoic mass in the left cranial liver that measured 3.3 cm. Lobar biliary calculi were noted. Some age-related parenchymal remodeling was noted but likely not clinically significant at this time. Vascular and biliary tracts were of normal volume and no evidence of congestion was noted. The gallbladder was unremarkable.
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PATIENT

Gastrointestinal

Reggie Molnar

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

SPECIES

Canine

BREED

Beagle

SEX

Neutered male

Pancreas

Diffuse hyperechoic changes were present in the area of the **pancreas**. The pancreatic remodeling was evident with multifocal to diffuse hyperechoic changes. These changes are consistent with fibrosis, amyloid, saponification of fat and may contain areas of low-grade chronic active inflammation especially if pain on imaging (+ Murphy sign) was present +/- focal subxiphoid palpation reveals pain response. No overt masses were noted.

AGE

12 ½ years

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable insufficiency. 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. Trivial aortic insufficiency was noted. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. Minor **tricuspid** insufficiency was noted measuring 1.9 m/sec. 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. No echographically detectable evidence of infiltrative disease was visible. The cranial **mediastinum and pericardial regions** were free of masses in the visible window.

WEIGHT

41 lbs

INTERPRETED BY

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DABVP, Cert. IVUSS

IMAGING PERFORMED BY

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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	6.0	1.9	1.15	1.3	34	64	0.1
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT	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	BELOW	BELOW	BELOW	BELOW
PATIENT	82	1.26		41 lbs	4.03	3.16	

ULTRASONOGRAPHIC FINDINGS

Stage B1 valvular disease.

Bilateral adrenal hypertrophy.

Stable splenic mass.

Left liver mass. Carcinoma versus nodular hyperplasia of the liver or mild potential for metastatic disease. Benign hyperplasia versus round cell neoplasia or hemangiosarcoma are all possible.

Gallbladder polyps.

Pancreatic fibrosis.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The heart is stable without clinical disease. No overt contraindication for anesthesia of brief to moderate duration. I suggest Torbutrol premed, Propofol induction, Isoflo maintenance or similar protocol if anesthesia is desired. Blood pressure recommended if not already performed and target white coat negative systolic pressure of < 160 mmHg. If higher than this ACE-inhibitor is suggested to reach this level. Recheck echocardiogram is recommended in 6 months, earlier if murmur grade increases or clinical signs initiate.

The liver mass may be resectable. CT evaluation for surgical planning would be ideal; however, full left lobectomy would likely be necessary. Splenectomy, left liver lobectomy and cystotomy can all be considered. If the patient appears Cushingoid and urine specific gravity is less than 1.020 then work-up for PDH is indicated. The hepatic mass may be completely benign. Screening FNA of the splenic and hepatic masses can be considered.



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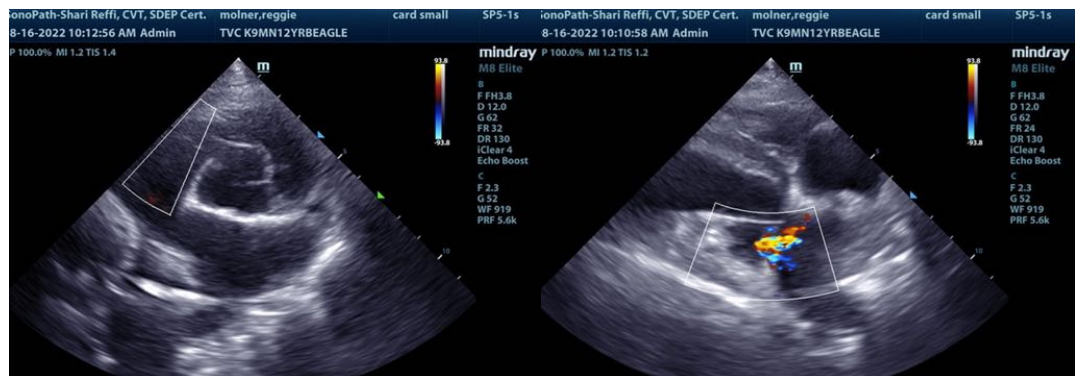
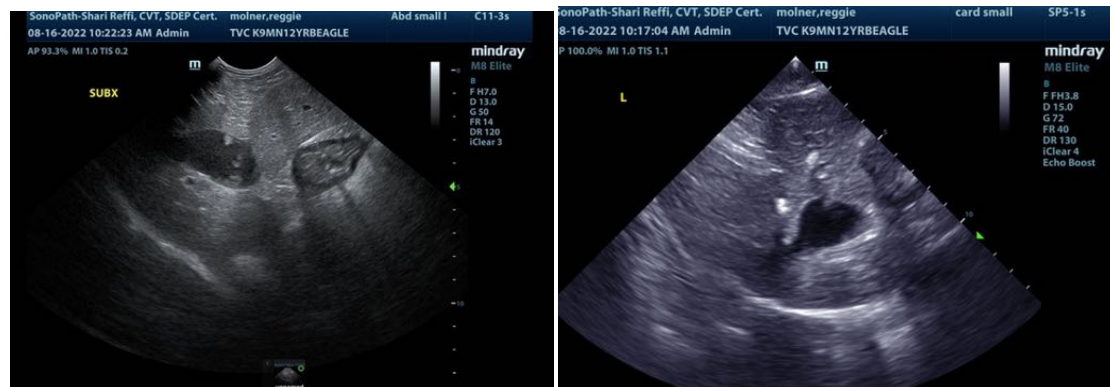
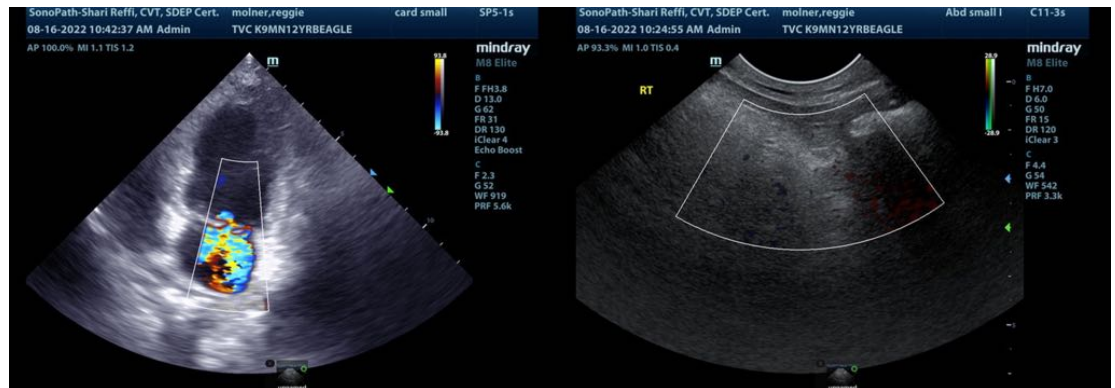
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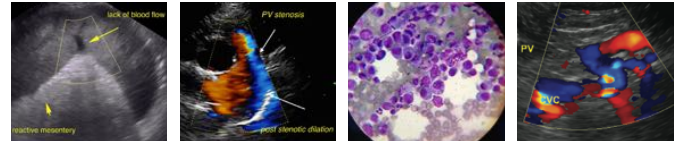
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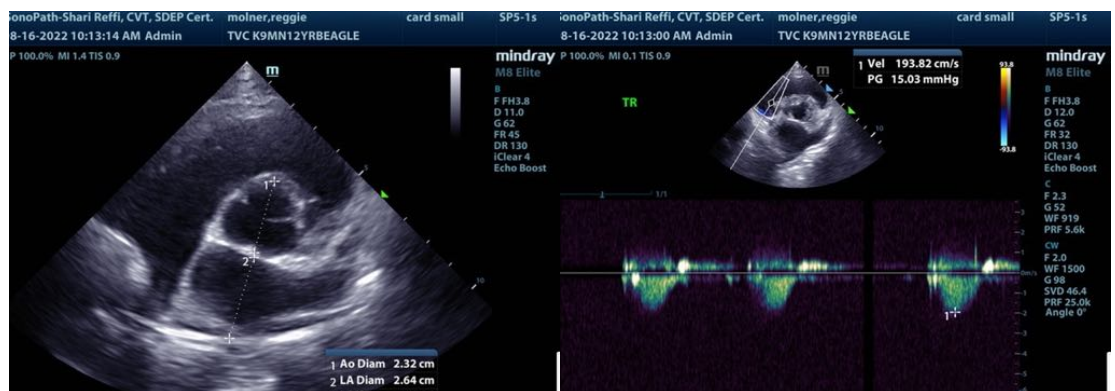
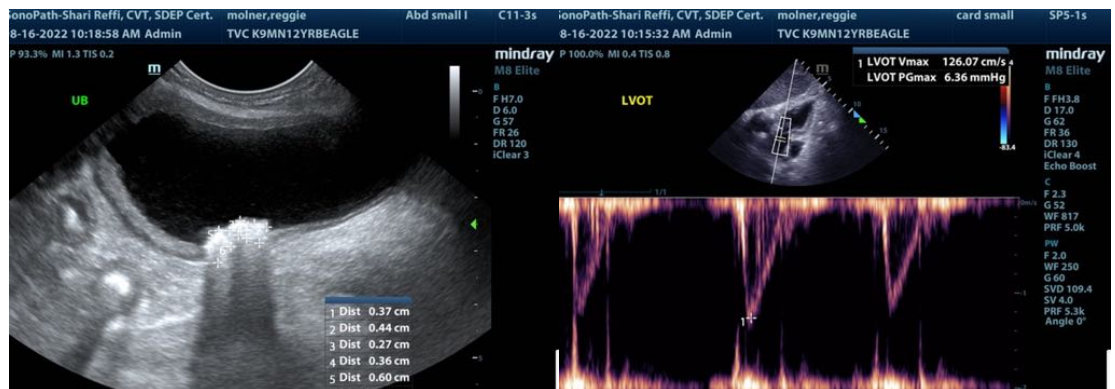
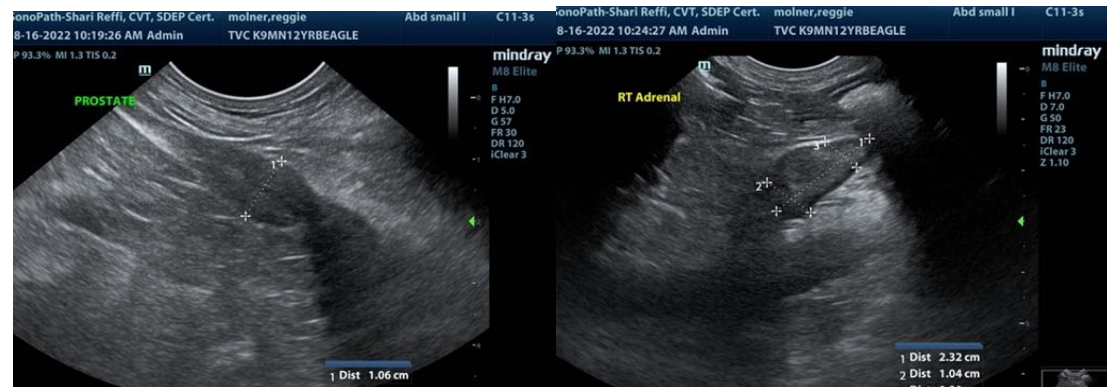
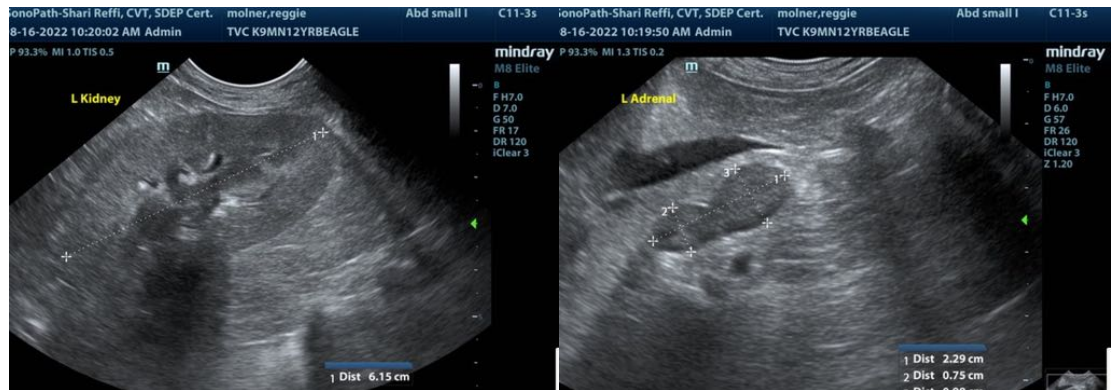
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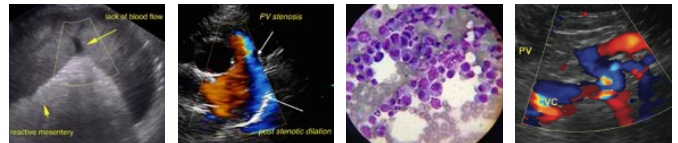
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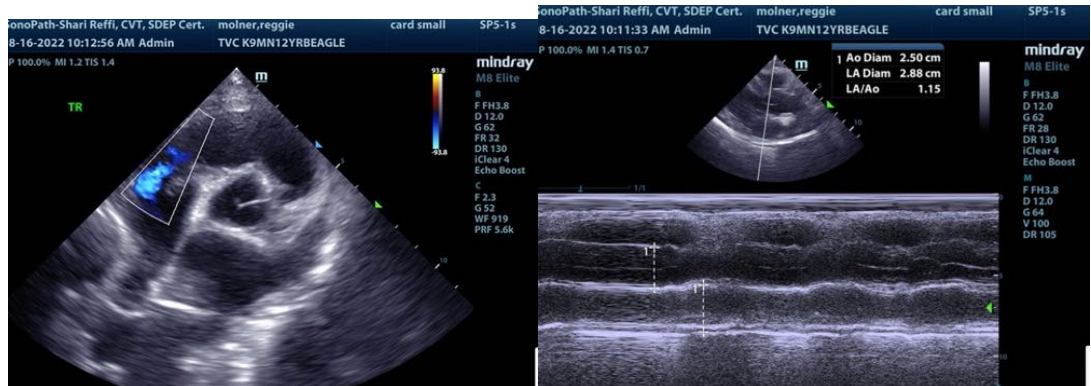
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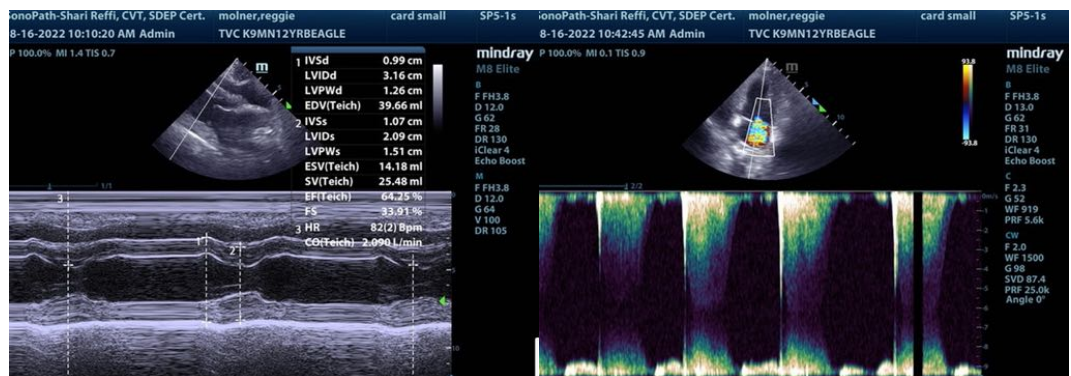
Neutered male

AGE

12 ½ years

WEIGHT

41 lbs



INTERPRETED BY

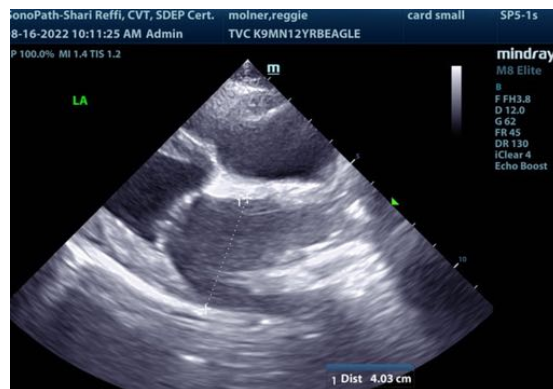
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com
Info@SonoPath.com