
PATIENT PRESENTING CLINICAL SIGNS

Eleanor Shin History: Had previous abdominal ultrasound 8/19/22. Recently developed stridor. Generally ADR. Slightly reduced appetite and decreased energy. Has been on Ursodiol 125mg SID, occasional Metronidazole and pre/pro biotics and Gabapentin as needed. HR 90/RR40. No heart murmur.

SPECIES Abnormal PE/Chem/CBC/UA Results: amylase 491.

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

BREED

Maltese

SEX

Spayed female

AGE

12 years

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. Trivial turbulence was noted at the **mitral** valve. 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. Trivial turbulence was noted at the **tricuspid** valve. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. Trivial turbulence was noted at the **pulmonary valve**. 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.

WEIGHT

7 kg

INTERPRETED BY

Eric Lindquist, DMV
 DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Crystal Hill, RVT

HOSPITAL NAME

Downtown AH

REFERRING VET

Dr. Ahn

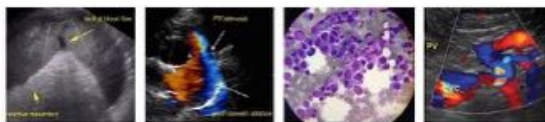
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CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base;)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT			1.0	1.04		71	0.1
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	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	BELOW	BELOW	BELOW	BELOW
PATIENT			1.16	7 kg	2.56 max	1.9	



PATIENT **ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Eleanor Shin

Urinary System

SPECIES

Canine

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The pelvic urethra was imaged 2.0 cm beyond the cystourethral junction and appeared normal. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

BREED

Maltese

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. The right kidney measured 4.97 cm. The left kidney measured 3.96 cm. Occasional cortical cysts were noted in the kidneys. Blood flow is subjectively normal to slightly subnormal on power Doppler assessment.

SEX

Spayed female

AGE

12 years

Adrenal Glands

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 1.9 x 0.71 cm at the caudal pole and 0.59 cm at the cranial pole. The right adrenal gland measured 1.53 x 0.93 cm at the cranial pole and 0.51 cm at the caudal pole.

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Spleen

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes was noted.

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Liver

The **liver** was uniformly swollen. The liver presented coarse architecture with mildly increased portal markings and subtle, mixed echogenic changes. This is consistent with vacuolar hepatopathy and some level of remodeling and history of inflammatory component. There was no overt suspicion of neoplasia. The gallbladder was over distended with polypoid changes that measured 3.0 x 2.0 cm.

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Gastrointestinal

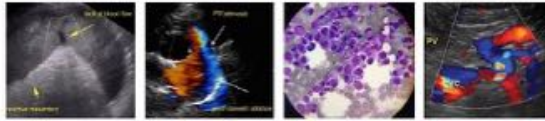
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Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and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

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PATIENT *Pancreas*

Eleanor Shin The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

SPECIES

Canine

ULTRASONOGRAPHIC FINDINGS

BREED

Normal echocardiogram, no evidence of pathology. Trivial turbulence was noted at the mitral, tricuspid and pulmonic valves.

Maltese

Subjectively benign hepatopathy with emerging mucocele formation.

SEX

Spayed female

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Hepatic FNA and Ursodiol therapy is indicated. FNA is recommended for further definition. Continuation of Ursodiol therapy is indicated. Recheck sonogram is recommended in 6 months or earlier if ALKP elevations occur. The respiratory signs are not related to cardiac disease.

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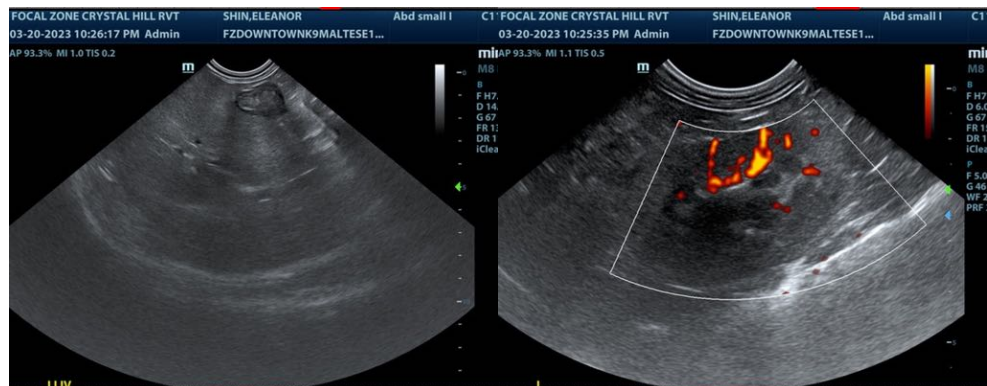
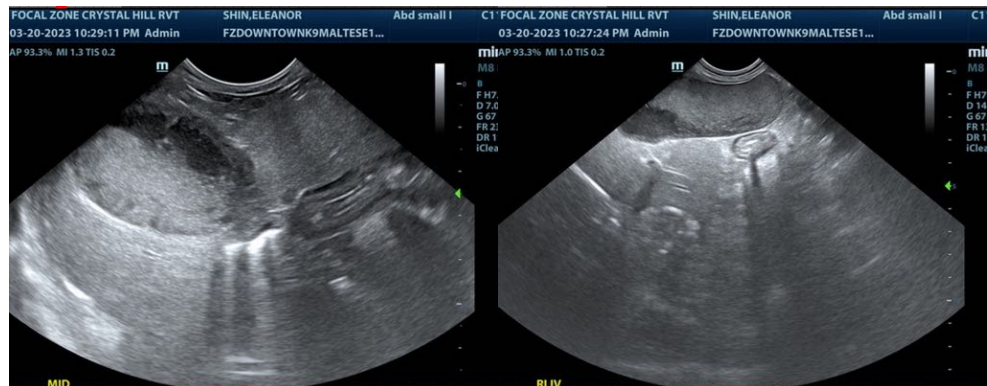
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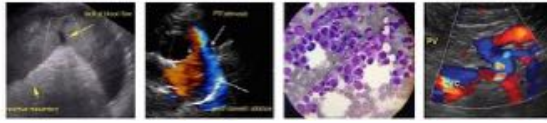
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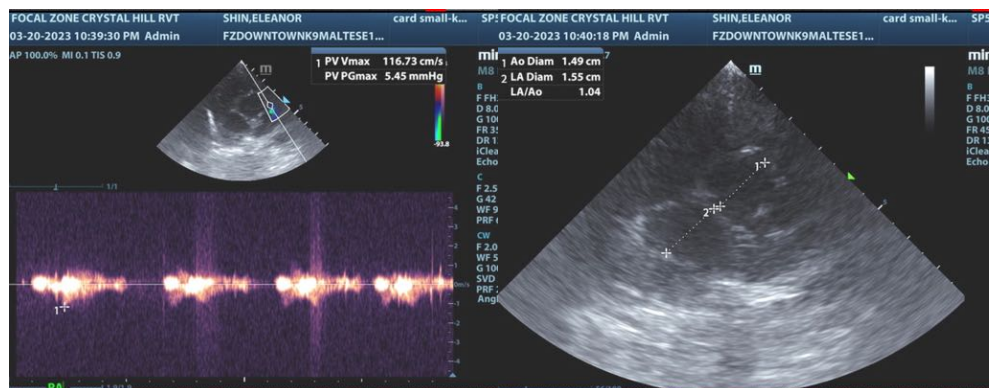
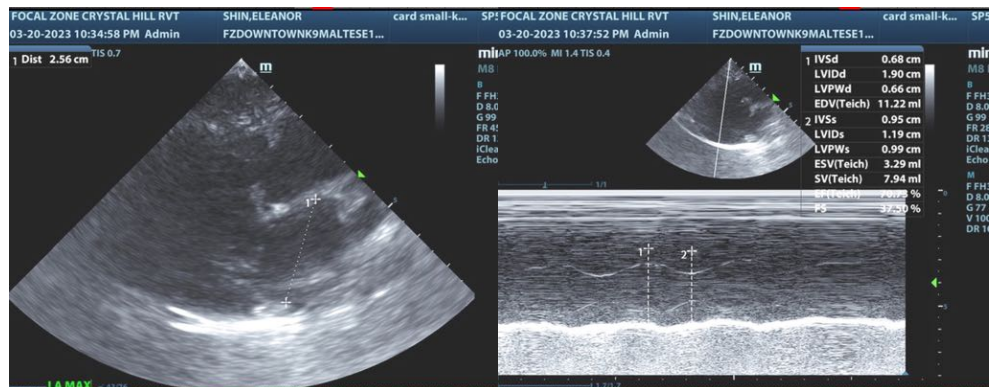
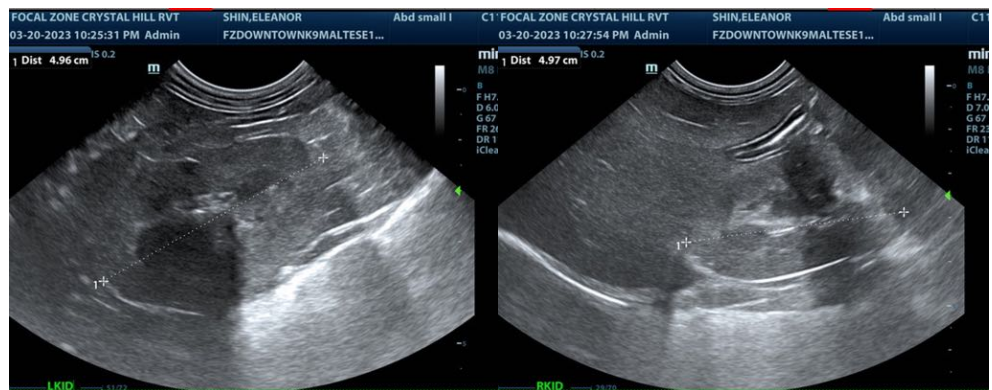
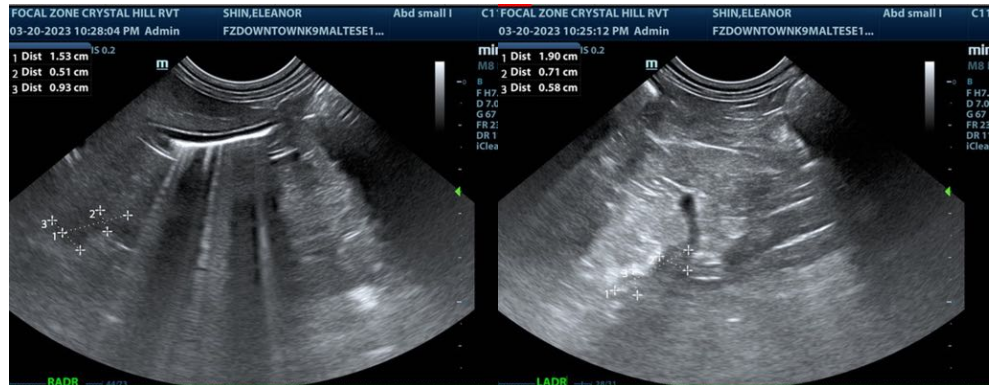
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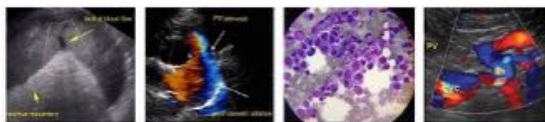
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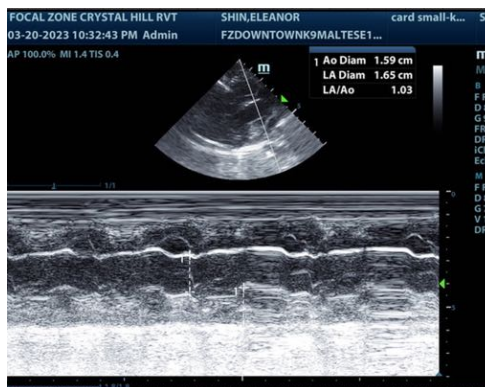
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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