



PATIENT PRESENTING CLINICAL SIGNS

Inu Kim Patient with history of Lyme positive -Lyme C6: 37, (treated with Doxycycline - starting on 3/14/22) presents today for vomiting, anorexia, and lethargy; had diarrhea this morning. Patient is not vaccinated for Lepto. Current meds: IVFs, Cerenia, Famotadine, Cefazolin, Enrofloxacin, Vit. B complex, Sulfa 500mgs 1/2 tab PO, metro 250mgs 3/4 tab PO, Tylan 200mgs PO.

SPECIES Abnormal PE/Chem/CBC/UA Results: Preliminary blood work on 3/4/22 found an Alk. Phos. of 401, triglycerides 564, PrecisionPSL 164, platelet count 539, SDMA was: 12.2. Recheck blood work today: ALT 1,253, Alk. Phos. 1,090, T. bili 0.5, creatinine 1.7, magnesium 11, cholesterol 464, HGB 12.0, SDMA 24.5.

BREED

Shiba Inu

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. 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 or chamber overload. **Tricuspid** valvular assessment demonstrated adequate linear morphology. 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.

SEX

Spayed Female

AGE

13 years

WEIGHT

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Vazquez, CVT

HOSPITAL NAME

Marsh Hospital for
Animals

REFERRING VET

Dr. Milwicki

INVOICE

99229

DATE

4/7/22

CANINE	MR	TR	LA/AO	LA/AO	FS	EF	EPSS
CARDIAC PARAMETERS	VMAX (m/s)	VMAX (m/s)	(Boon method)	(Heart Base; Swe)	(%)	(%)	(cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
PATIENT	5.6		1.3	1.3	30	49	0.4
CANINE	HR	AV	PV	BODY WEIGHT	LA	LVIDd	LVIDs
CARDIAC PARAMETERS	(BPM)	VMAX (m/s)	MAX (m/s)	(kg)	2D short axis Base view (cm)	Avg; 2D and m-mode short axis (cm)	Avg; 2D and m-mode short axis (cm)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6				
PATIENT		1.15	0.78		2.5 max	3.25	



PATIENT **ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Inu Kim

Urinary System

SPECIES

Canine

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. 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

Shiba Inu

The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex. The capsules were acceptably uniform without significant irregularities. The right kidney measured 4.78 cm. The left kidney revealed slight pyelectasia. The left kidney measured 5.02 cm.

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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 right adrenal gland measured 1.63 x 0.53 cm at the caudal pole and 0.65 cm at the cranial pole. The left adrenal gland measured 1.59 x 0.52 cm at the caudal pole and 0.47 cm at the cranial pole.

WEIGHT

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Spleen

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The **spleen** revealed focal, hypoechoic nodule at the cranial pole measuring 0.4 cm. The remainder of the spleen was unremarkable.

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Liver

Kelly Vazquez, CVT

The **liver** revealed increased portal markings, coarse architecture and mild gallbladder debris. The gallbladder wall was echogenic and double layered. This is consistent with cholangitis.

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Gastrointestinal

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The **stomach** presented concentric thickening and measured up to 1.0 cm. There were some areas of loss of mural detail noted. The small intestine was spastic and hyperperistaltic.

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Pancreas

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The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Some parenchymal remodeling, however, with mild deviation from curvilinear normalcy was observed. Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxiphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

DATE

4/7/22



PATIENT **ULTRASONOGRAPHIC FINDINGS**

Inu Kim Stage B1 valvular disease.

Cholangiohepatitis pattern. No evidence of hepatic neoplasia.

SPECIES

Duodenal thickening. Spastic bowel. Severe gastritis versus emerging gastric neoplasia.

Canine

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

SEX

Undefined gastric thickening with cholangiohepatitis liver pattern. FNA of the liver is recommended as well as Leptospirosis titers, Ampicillin and Metronidazole combination. GI protectants are recommended and ideally endoscopy to obtain gastric mucosal biopsies or surgical biopsies of the stomach and liver. Guarded prognosis.

Spayed Female

No cardiac treatment is recommended.

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B1: The heart is stable without clinical disease. No overt contraindication for anesthesia of brief to moderate duration. I suggest Torbutrol premed, Propofol induction, Isoflurane 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.

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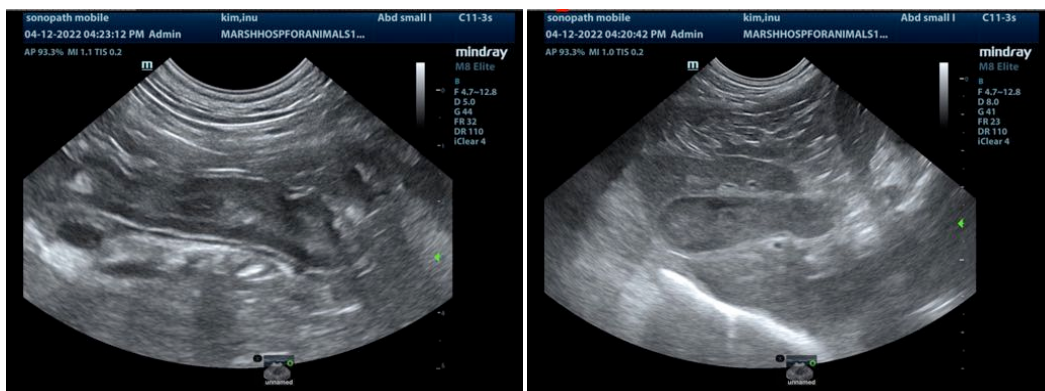
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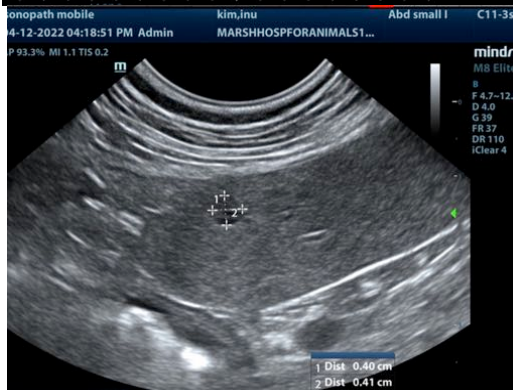
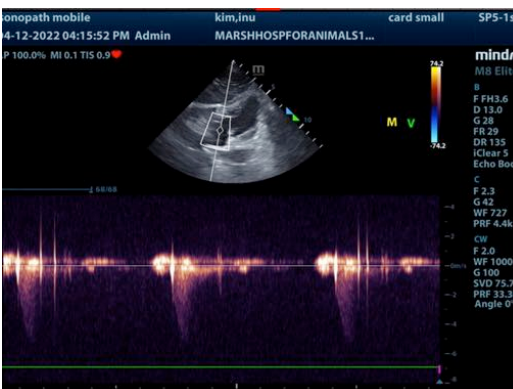
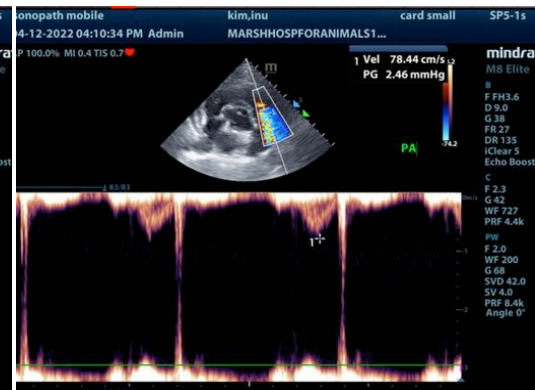
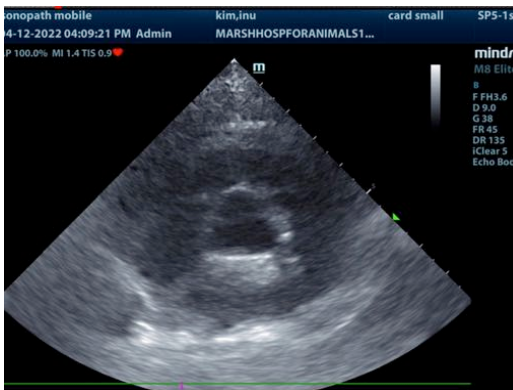
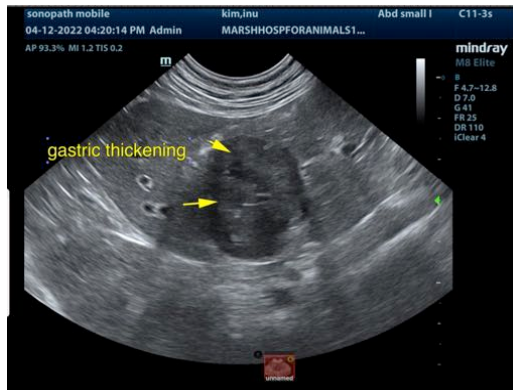
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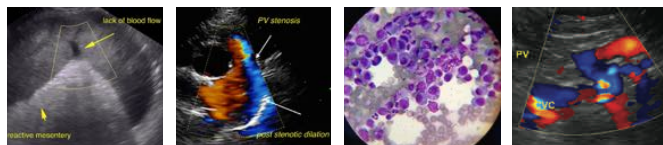
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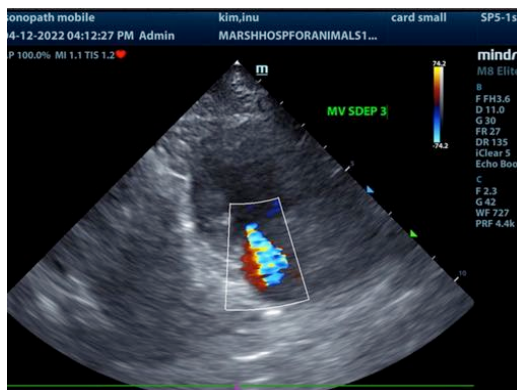
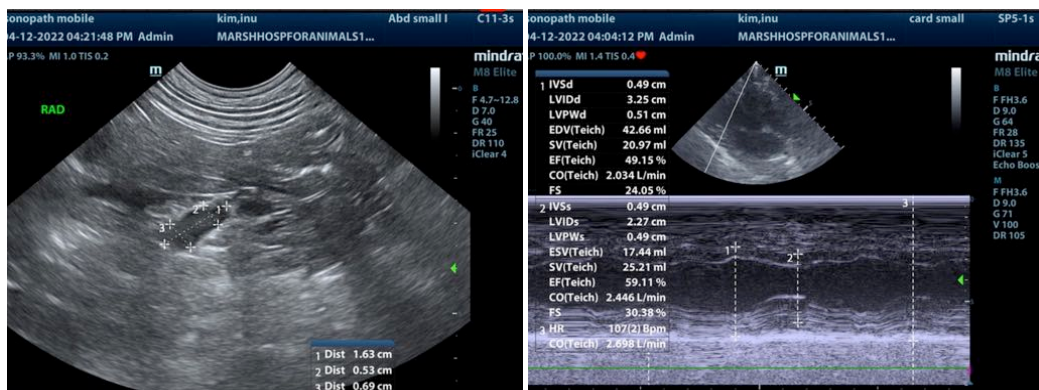
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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