



PATIENT PRESENTING CLINICAL SIGNS

Teri Hsieh History: Heart murmur, elevated liver enzymes. (poss Cushing's). No current meds.
 Abnormal PE/Chem/CBC/UA Results: Plt 604, Bun 42.2, ALT 192, ALP >993

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Canine

Urinary System

BREED 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.

SEX 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 this age patient. Medullary structure differed distinctly from that of the cortex. The right kidney measured 5.64 cm with slight pyelectasia. The left kidney measured 4.77 cm.

Spayed Female

AGE

16 years

Adrenal Glands

WEIGHT The left **adrenal gland** was at the upper limits of normal and measured 2.07 x 0.85 cm at the cranial pole and 0.86 cm at the caudal pole. Mineralization was noted in the left adrenal gland with slight, irregular capsular expansion. The right adrenal was also at the upper limits of normal and measured 2.3 x 1.18 cm at the cranial pole and 0.85 cm at the caudal pole.

15.7 lbs

INTERPRETED BY

Eric Lindquist, DMV
 DABVP, Cert. IVUSS

Spleen

IMAGING PERFORMED BY

Shari Reffi, CVT

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.

HOSPITAL NAME

Newton VH

Liver

REFERRING VET

Dr. Kim

The **liver** was uniformly swollen with minor, excessive gallbladder debris and over distension with dependent and suspended bile without evidence of overt mucocele formation. However, excessive sludge was present. Minor gallbladder polyps were noted. 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.

INVOICE

92482

DATE

10/19/21



PATIENT *Gastrointestinal*

Teri Hsieh 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

Spayed Female

Pancreas

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.

AGE

16 years

WEIGHT

15.7 lbs

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DABVP, Cert. IVUSS

IMAGING PERFORMED BY

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HOSPITAL NAME

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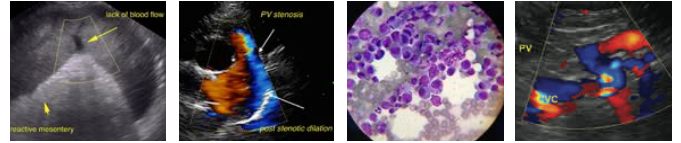
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ULTRASONOGRAPHIC EXAMINATION OF THE HEART

The echocardiogram in this patient demonstrated enlarged **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. Minor prolapse of the anterior mitral valve leaflet was also noted. Doppler indicated measurable insufficiency. Complete filling of the left atrium was noted on color flow assessment. 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. Aortic insufficiency was noted at 5.0 m/sec. 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.



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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	5.14	1.47	1.5	1.7	51	84	NM
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				
PATIENT	103	1.28	0.87	15.7 lbs	3.8 max	3.1	

ULTRASONOGRAPHIC FINDINGS

Early stage B2 valvular disease.

Mild left atrial enlargement.

Bilateral adrenal hypertrophy.

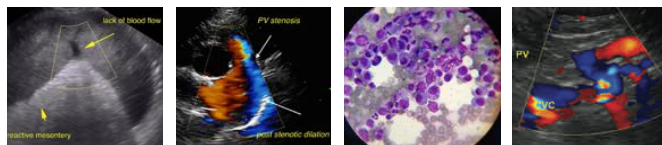
Pyelectasia.

Age related hepatic and pancreatic changes.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

If vertebral heart score is excessive then Pimobendan at 0.3 mg/kg b.i.d. is recommended. If anesthesia is necessary, there is no overt contraindication to an anesthetic procedure. Suggested protocol includes Torbutrol premed, Propofol induction, and Isoflurane maintenance. Recheck echocardiogram in 6 months or earlier if murmur grade increases or clinical signs initiate. Blood pressure measurements are recommended.

The left adrenal gland should be monitored. There is a potential for carcinoma in this patient or pheochromocytoma of the left adrenal gland. A recheck sonogram is recommended in a month of the cardiac and adrenal presentation.



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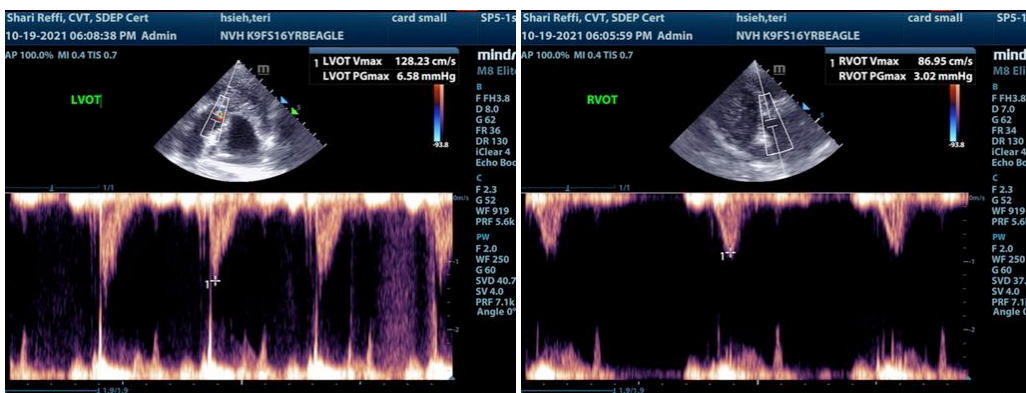
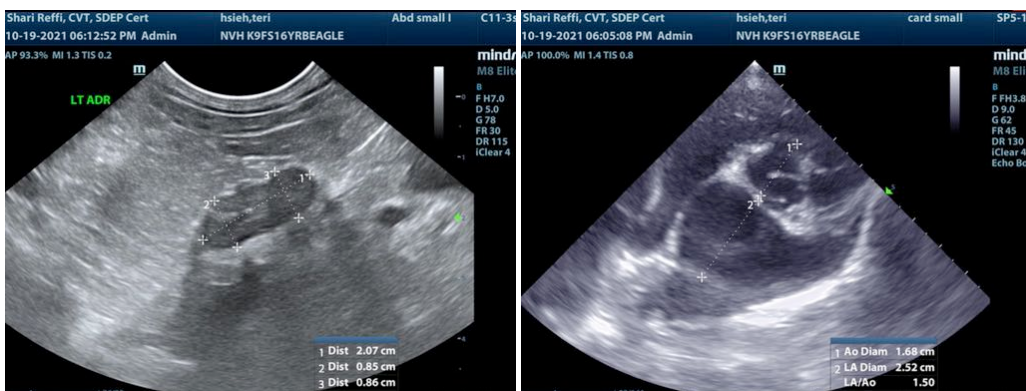
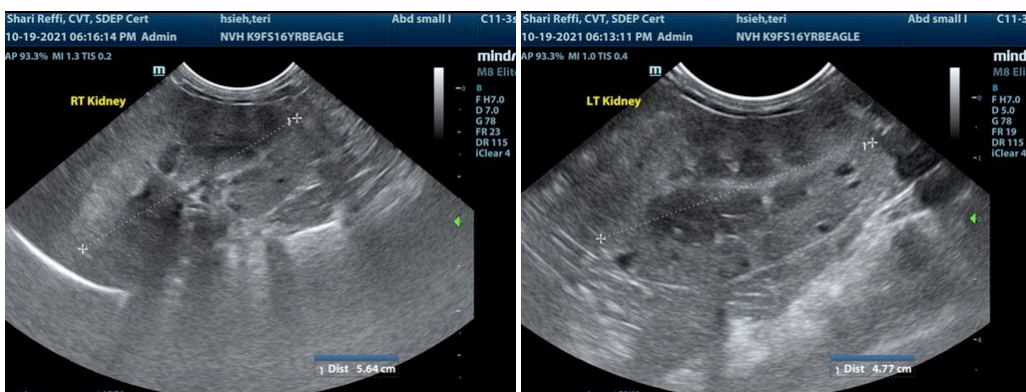
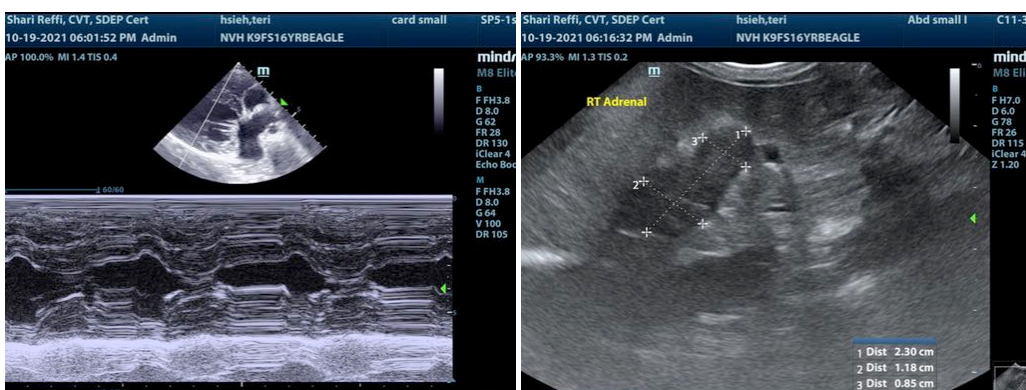
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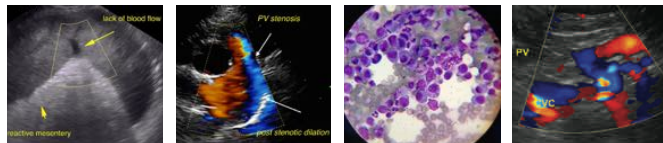
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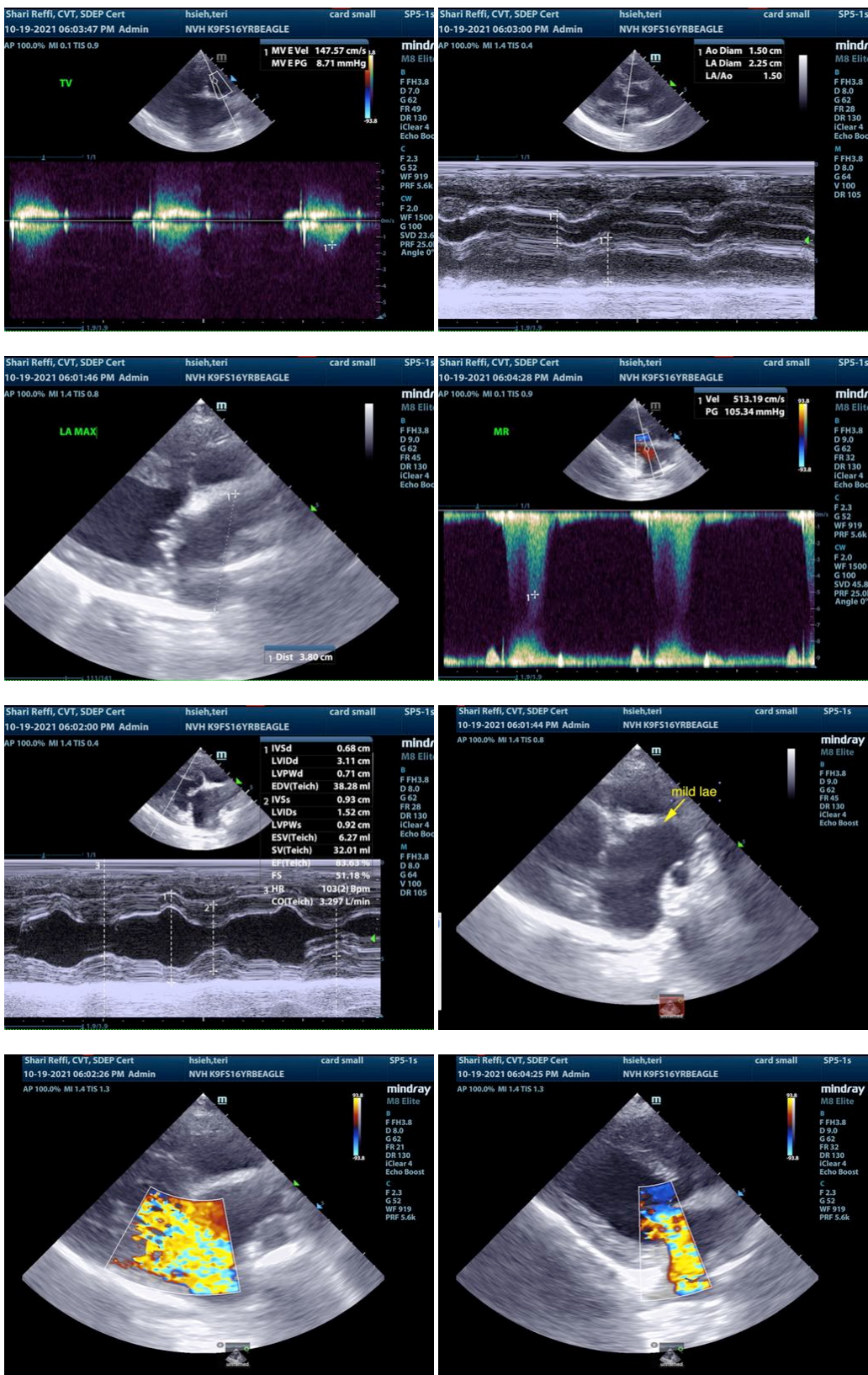
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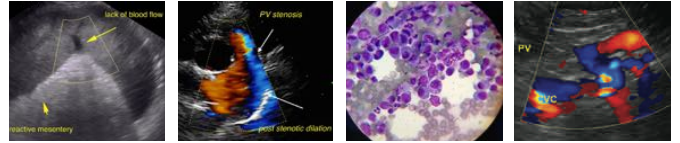
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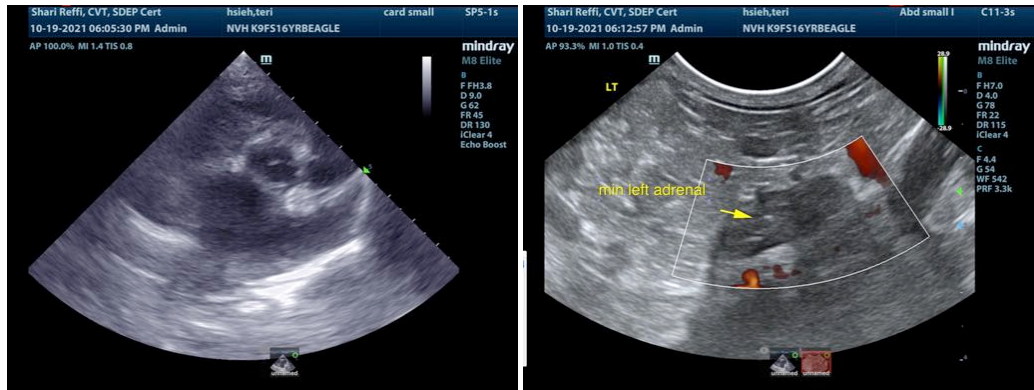
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

AGE

16 years

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.

WEIGHT

15.7 lbs

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Info@SonoPath.com

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