



PATIENT PRESENTING CLINICAL SIGNS

Cassie Kent
 History: Pre-anesthetic double cavity u/s for dental recommendation. Chronic liver/ALKP elevation- prev. aus showed nodule. Grade II-III/VI L sided murmur. Current meds: Denamarin, Tylan powder, Tacrolimus, Systane eye drops.

SPECIES

Canine

Abnormal PE/Chem/CBC/UA Results: 3/2022- ALKP 845, 666, BUN 34, USG 1.023, PH 7. 6/2022-ALKP 472

BREED

Shih Tzu

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

SEX

Spayed Female

AGE

13 Years

WEIGHT

13 Pounds

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	<1.3	28-40	40-100	<0.6
PATIENT	5.02	3.5	1.25	1.27	33	64	NM
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	119	1.0	.86	--	2.76	2.26	--

INTERPRETED BY

Eric Lindquist, DMV
 DABVP, Cert. IVUSS

Cardiac Presentation

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** insufficiency was noted, consistent with early pulmonary hypertension. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. Minor **pulmonic** insufficiency noted. 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.

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

Whippany VH

REFERRING VET

Dr. Cordero

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DATE

4/8/22

Urinary System



PATIENT

Cassie Kent

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 were noted. Ureteral papillae were normal. The pelvic urethra was imaged 3.0 cm beyond the cystourethral junction.

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Canine

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with moderate 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 4.11 cm. The left kidney measured 3.53 cm.

BREED

Shih Tzu

SEX

Spayed Female

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 1.69 cm x 0.83 cm at the cranial pole and 0.63 cm at the caudal pole. The left adrenal gland measured 2.01 cm x 0.54 cm at the cranial pole and 0.55 cm at the caudal pole.

AGE

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Spleen

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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 were noted.

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Liver

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The **liver** images from right and left intercostal as well as subcostal views revealed subjectively normal liver size, contour, and structure. Some age-related parenchymal remodeling was noted but likely not clinically significant at this time. Hyperechoic nodular changes were noted in the left cranial liver without disruption of architecture. The nodule measured 2.0 cm. Vascular and biliary tracts were of normal volume and no evidence of congestion was noted. The gallbladder presented some dependent debris with essentially normal contour. The cystic and common bile ducts were normal.

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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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Pancreas

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.

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ULTRASONOGRAPHIC FINDINGS

- Stage B-1 valvular disease



PATIENT

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- Early pulmonary hypertension, compensated at this time
- Minor pulmonic insufficiency
- Geriatric abdomen
- Nodular hyperplasia liver pattern, mild potential for emerging neoplasia

SPECIES

Canine

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No specific therapy warranted. No evidence of volume overload or left/right sided failure.

BREED

Shih Tzu

FNA of the cranial liver nodule would be ideal yet subjectively appears benign. Structurally, the adrenal glands appear largely normal for this age patient, however, if urine specific gravity continues to drop and the patient appears cushingoid, then work up for PDH warranted. Blood pressure measurements indicated.

SEX

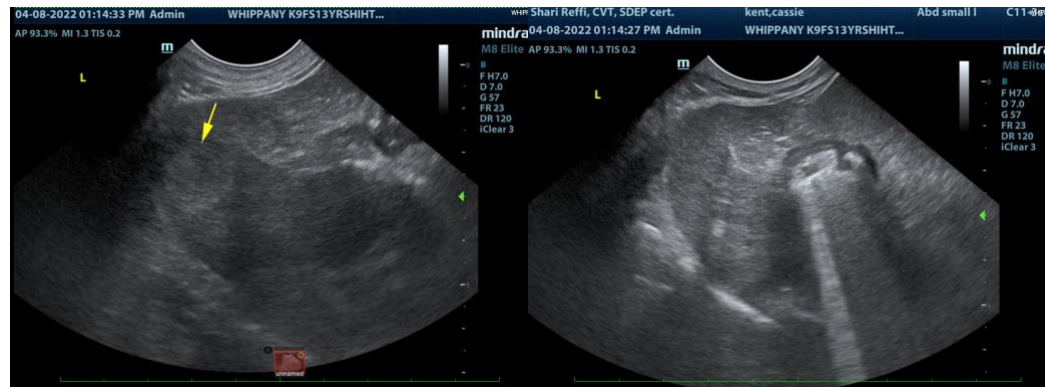
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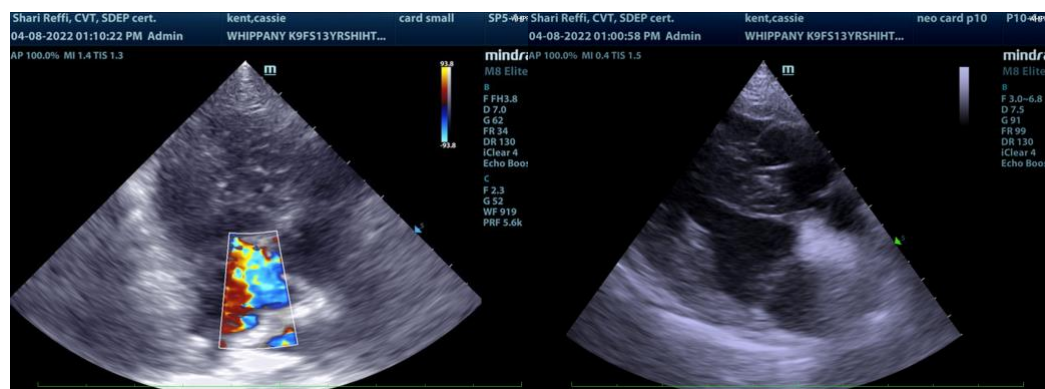
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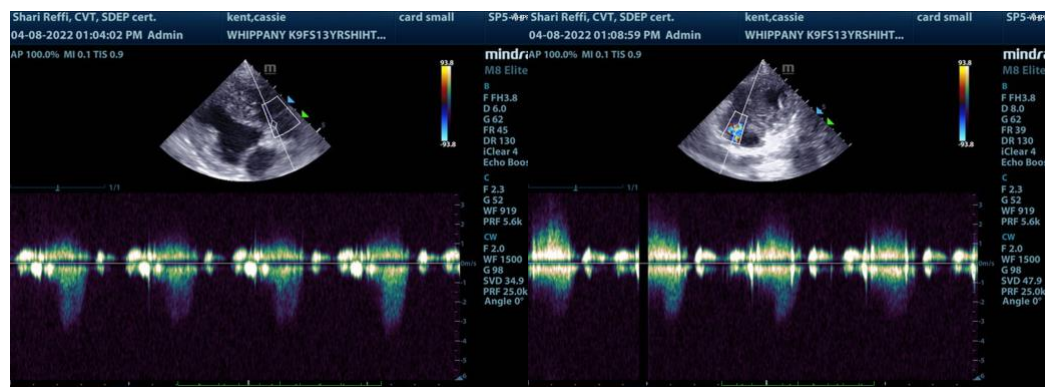
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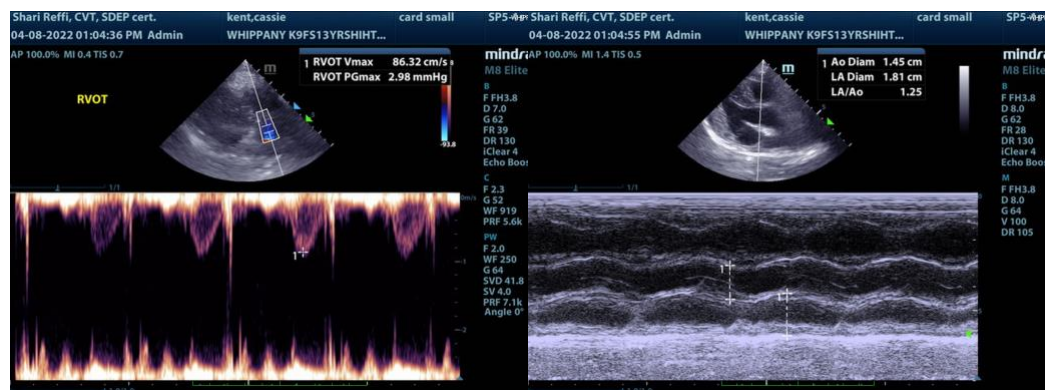
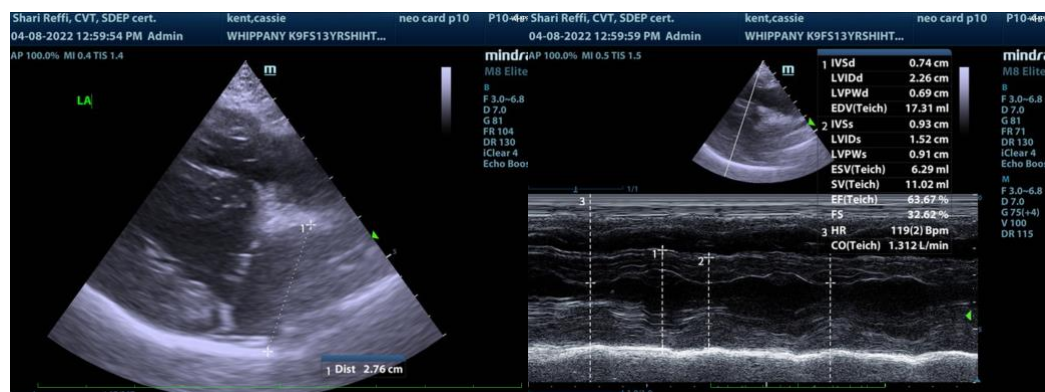
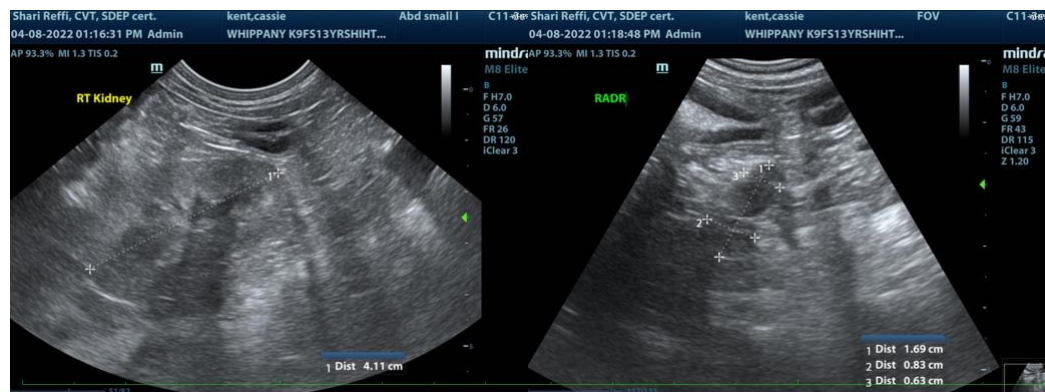
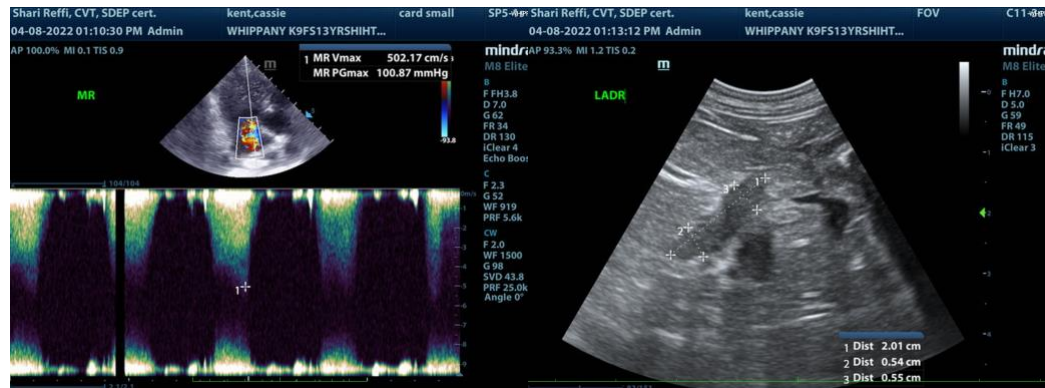
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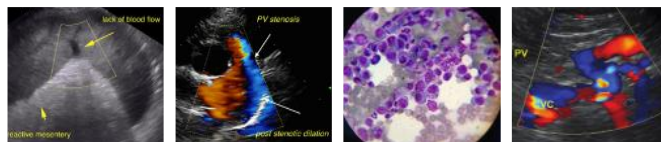
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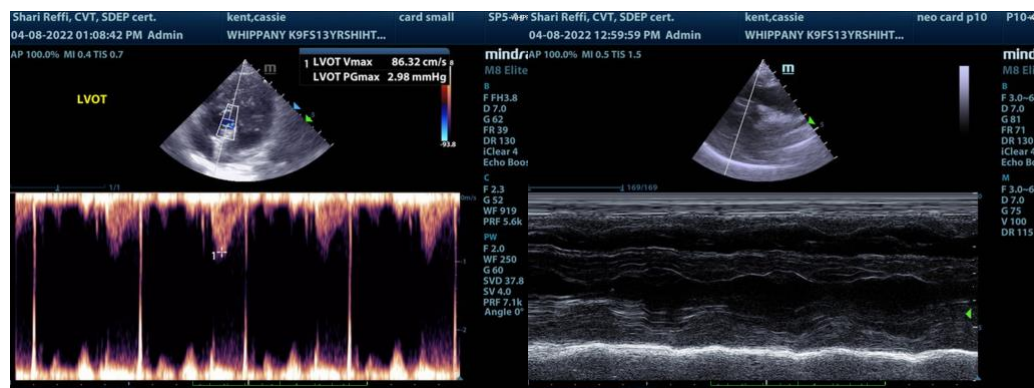
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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