



PATIENT PRESENTING CLINICAL SIGNS

China Novak Acute onset ataxia, lethargy, IVDD.

SPECIES Canine
BREED Shih Tzu Mix
SEX Female
AGE 15 years

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. The cranial and caudal **mitral valve** leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. 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. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonary outflow** 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. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window.

WEIGHT
22.5 lbs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

Rockaway AH

REFERRING VET

Dr. Maniar

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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	<1.6	28-40	40-100	<0.6
PATIENT			1.0	1.14	37	69	0.1
CANINE	HR	AV	PV	BODY WEIGHT	LA	LVIDd	LVIDs
CARDIAC PARAMETERS	(BPM)	VMAX (m/s)	MAX (m/s)		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	108	1.0	0.63	22.5 lbs	3.2	2.52	

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

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.



PATIENT	The right kidney revealed a 3.1 x 3.0 cm anechoic cyst at the cranial pole with moderate degenerative irregular cortical changes throughout the remainder of the kidney. The right kidney measured 5.6 cm with loss of corticomedullary definition. The left kidney measured 4.27 cm with slight pyelectasia and moderate cortical remodeling.
China Novak	
SPECIES	
Canine	Adrenal Glands
BREED	The left adrenal gland revealed a swollen cranial pole that measured 0.98 cm and 0.75 cm at the caudal pole. The left adrenal gland measured 2.42 cm in length. The right adrenal gland was uniform and measured 1.93 x 1.0 cm at the cranial pole and 0.58 cm at the caudal pole.
Shih Tzu Mix	
SEX	Spleen
Female	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.
AGE	
15 years	
WEIGHT	Liver
22.5 lbs	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. Left sided hepatic cyst was noted and measured 3.0 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. No overt evidence of active inflammatory, infiltrative or regenerative pathology was noted but should be paired with current or past LE elevations regarding any clinical significance to this presentation. The hepatic lymph nodes were unremarkable.
INTERPRETED BY	
Eric Lindquist, DMV DABVP, Cert. IVUSS	
IMAGING PERFORMED BY	Gastrointestinal
Shari Reffi, CVT	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.
HOSPITAL NAME	
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REFERRING VET	Pancreas
Dr. Maniar	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.
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PATIENT **ULTRASONOGRAPHIC FINDINGS**

China Novak
Normal echocardiogram.
Moderate degenerative renal changes with right renal cyst.

SPECIES
Hepatic cyst.

Canine
Irregular left adrenal gland.

BREED
Otherwise, geriatric abdomen.

Shih Tzu Mix

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

SEX
Female
Blood pressure measurements are warranted to assess for systemic hypertension. The kidneys appear near end stage. Renal values should be monitored carefully. Full CNS examination is warranted. If any abnormal clinical signs are present regarding CNS then CT with contrast of the brain is recommended. Pain related lethargy should be considered.

AGE
15 years

ABOUT SONOPATH CT SERVICES:

SonoPath CT Services are offered at the [Blairstown Animal Hospital](#). Blairstown, New Jersey. More information can be found at

WEIGHT
22.5 lbs

<https://sonopath.com/resources/sonopaths-teleconsultation-services-and-sdep-certification/sonopath-ct-services>

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Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Shari Reffi, CVT

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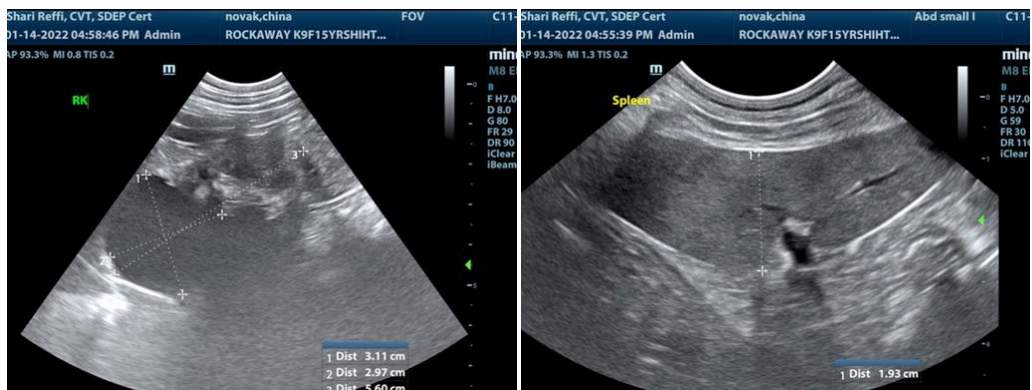
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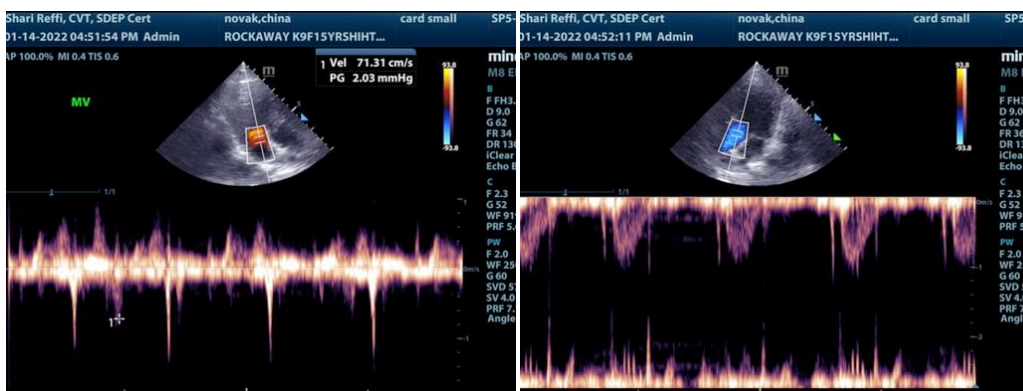
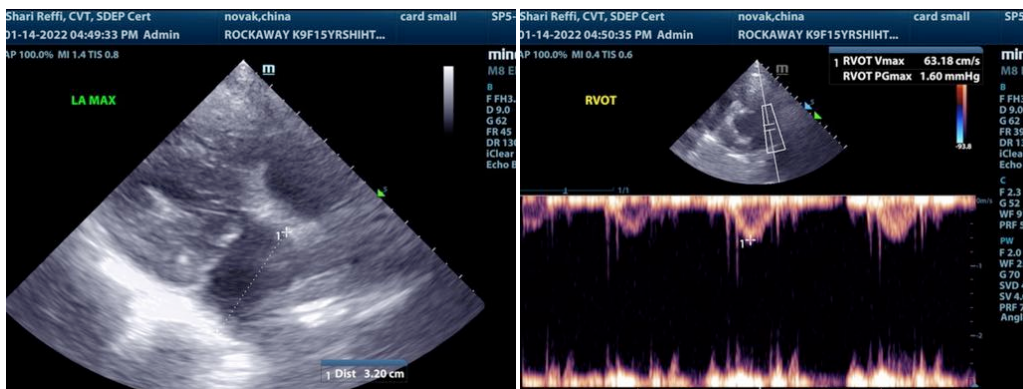
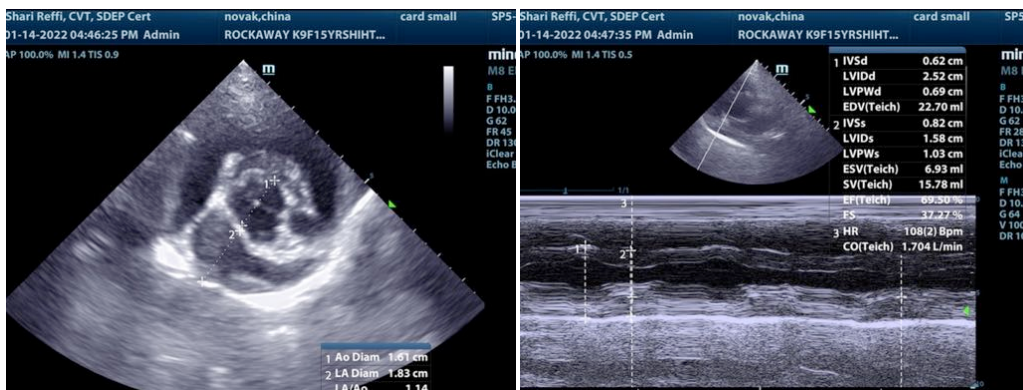
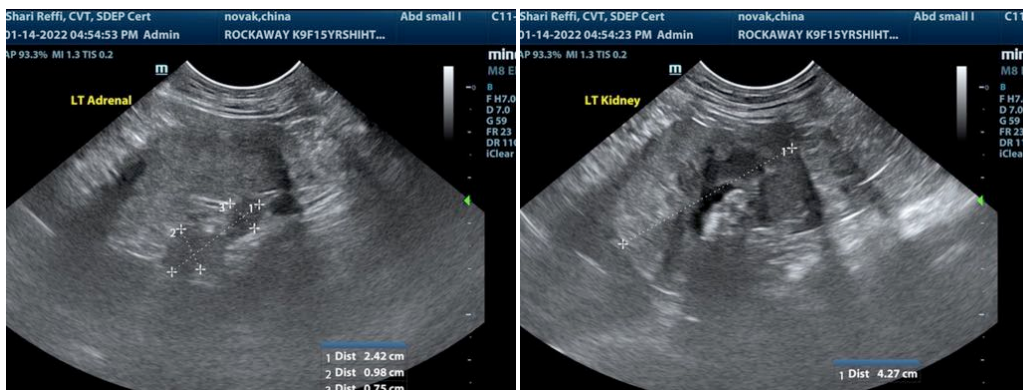
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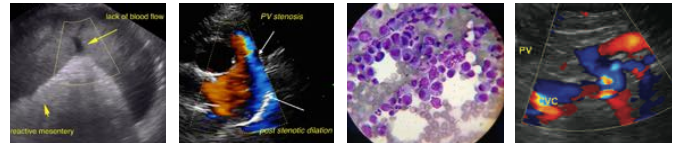
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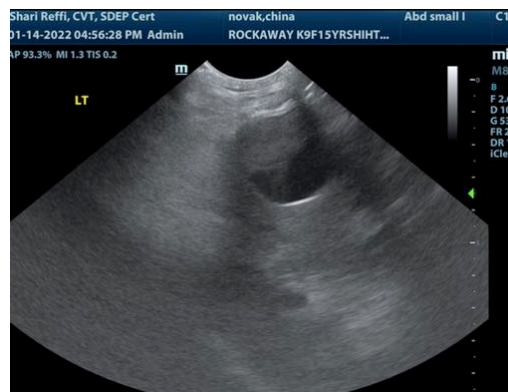
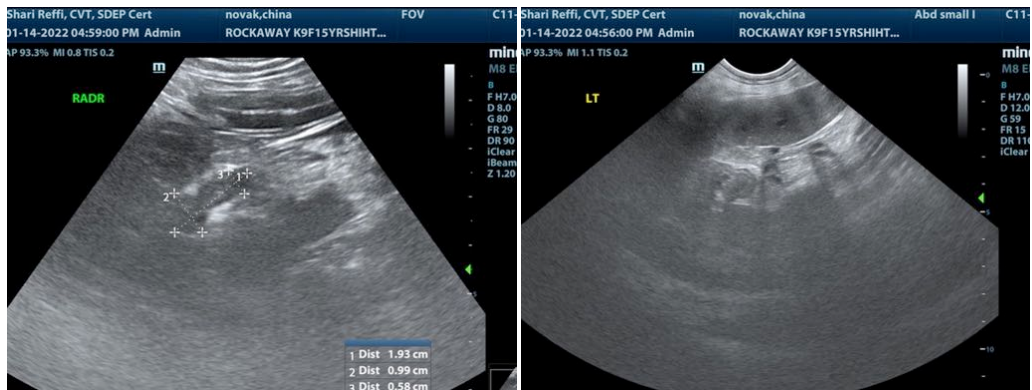
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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