



PATIENT

Thunder Chang

SPECIES

Canine

BREED

Havanese

SEX

Neutered Male

AGE

10

WEIGHT

20

INTERPRETED BY

Eric Lindquist, DMV,
DABVP (CFM), Cert.
IVUSS

IMAGING PERFORMED BY

Jenn

HOSPITAL NAME

Rockaway Animal
Hospital

REFERRING VET

Dr. Salazar

INVOICE

72101

DATE

11/26/25

PRESENTING CLINICAL SIGNS

Following initial assessment on 11/25 Patient was hospitalized on Plasmalyte at 1.5 times maintenance as well as injectable medications listed Current meds Apoquel 3.6mg Metro Unasyn Panto Cerenia

Abnormal PE/Chem/CBC/UA Results: 11/26 Chem 11/25 TP 6.0 Alb 3.2 ALT 387 ALP 498 11/26 TP 5.9 Alb 2.6 ALT 335 ALP 560 CBC 11/25 HCT 37.7 Hb 12.9 Mono 1.27 MPV 13.0 Platelets 0.49 11/26 HCT 36.5 Hb 12.5 Mono 1.59 MPV 13.6 Platelets 0.54

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (M-Mode)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
PATIENT	5.0	--	1.3	--	50	--	NM
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT	LAD LA MAX 4 Chamber	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	--	--	0.8	20	2.5	2.4	--

Cardiac Presentation

The cardiac presentation presented mitral insufficiency without volume overload of the left atrium or left ventricle. Tricuspid insufficiency also noted. Pericardial effusion was present with right auricular collapse owing to pressure overload in the pericardial space, defining the presence of tamponade. No overt masses noted. However, I cannot rule out a neoplastic process. Arrhythmogenic disease noted.

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 were noted. Ureteral papillae were normal.

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. Right kidney measured 4.0 cm. Left kidney measured 4.4 cm.



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Adrenal Glands

The regions of the **adrenal glands** were unremarkable.

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 were noted.

Liver

The **liver** was swollen with passive congestion pattern, dilated hepatic veins. Hepatic parenchyma was uniform. The gallbladder and common bile duct were unremarkable.

Gastrointestinal

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.

Pancreas

Heterogeneous **pancreatic** changes noted with enhanced surrounding mesentery.

Free Abdomen

Large amount of anechoic ascites noted in the abdomen.

ULTRASONOGRAPHIC FINDINGS

- Pericardial effusion without evident masses – idiopathic pericardial effusion versus pericarditis less likely, occult neoplasia possible.
- Secondary ascites and low-grade inflammatory hepatopathy potentially owing to hypoxia.
- Heterogeneous pancreas.
- Age related renal changes.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Ultrasound guided pericardiocentesis, cytospin of the pericardial fluid, and immediate slide preparation recommended. The pericardiocentesis would be both therapeutic and diagnostic. This may represent an idiopathic or potential infectious or occult neoplastic manifestation. No volume overload within the heart. I do not recommend Lasix therapy.



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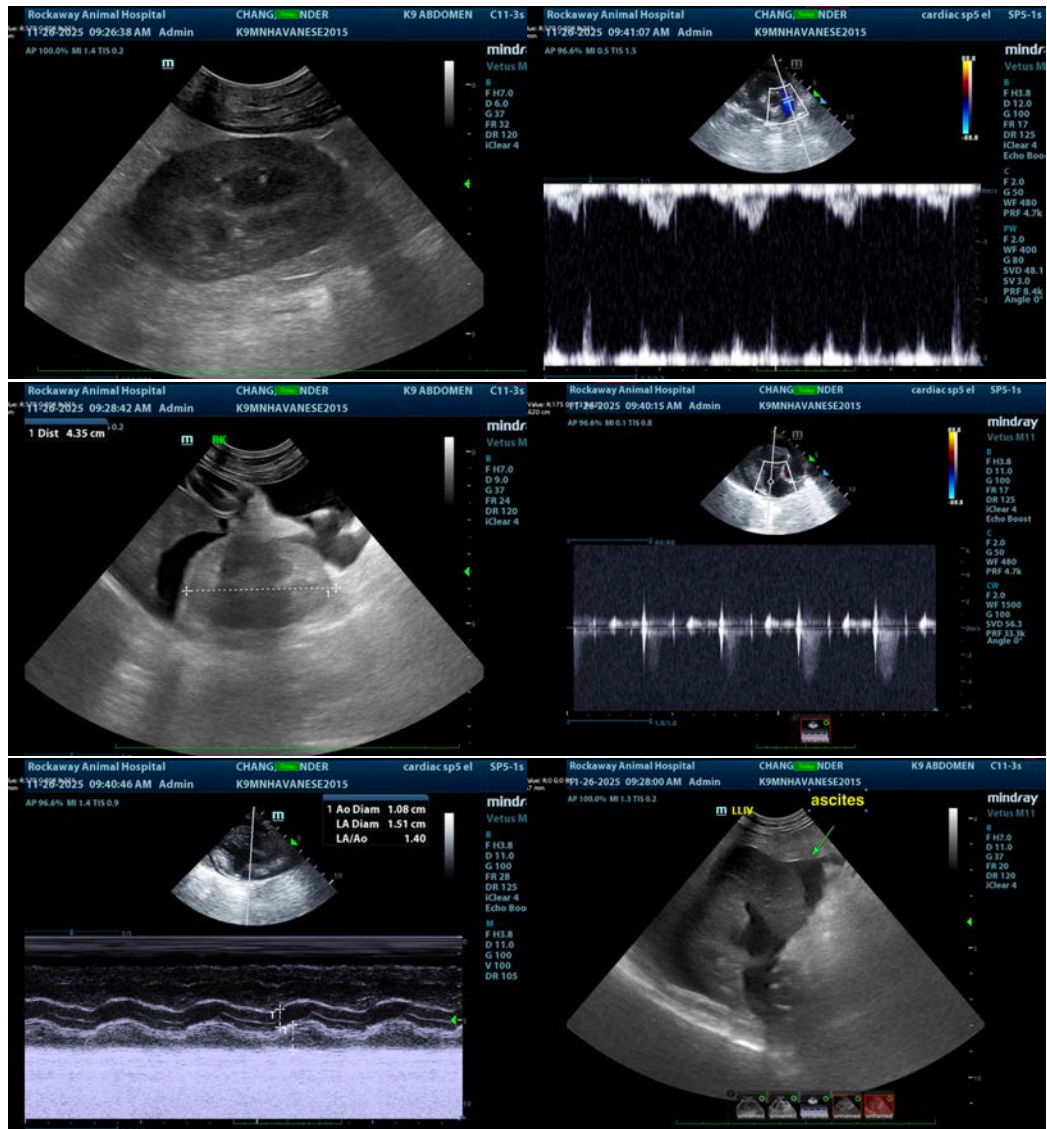
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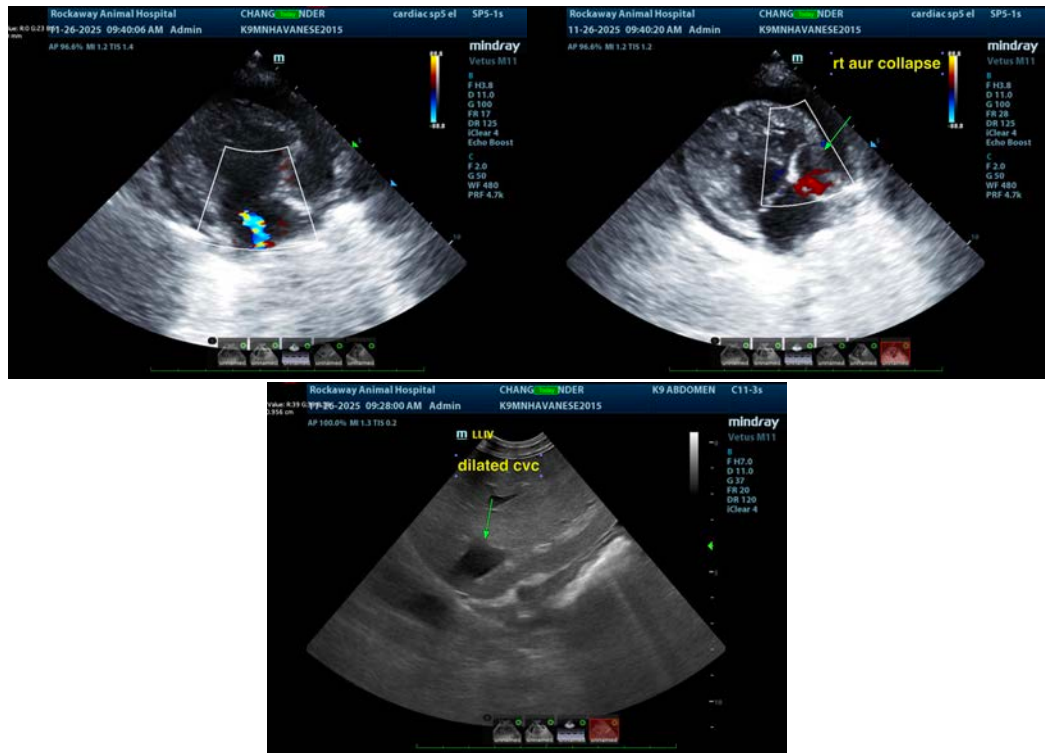
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP(CFM), Cert. IVUSS,
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