



PATIENT

Luma Sunrise Snyder

SPECIES

Canine

BREED

Australian Shepherd
Mix

SEX

Spayed Female

AGE

10 years

WEIGHT

31.8 lbs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Green

HOSPITAL NAME

Healing Spirit

REFERRING VET

Dr. Green

INVOICE

96738

DATE

3/9/22

PRESENTING CLINICAL SIGNS

History: Presented due to abnormal behavior described as 'staring off into space', appears uncomfortable. Single episode of vomiting undigested food last night shortly after eating. No known dietary indiscretion or exposure to toxins. History of severe subaortic stenosis, currently on Atenelol 12.5 mg BID

Abnormal PE/Chem/CBC/UA Results: sensitive on abdominal palpation, grade iii/vi holosystolic murmur **CHEMISTRY:** Ca=7.3 (8.6-11.8) mg/dL, Na=111 (138-160) mmol/L, K=3.3 (3.7-5.8) mmol/L, TP=4.9 (5.4-8.2) g/dL, globulin=2.2 (2.3-5.2) g/dL

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.

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 and no evidence of pelvic dilation was present. Corticomedullary calculi were noted and non-obstructive. The left kidney measured 5.0 cm. The right kidney measured 5.0 cm.

Adrenal Glands

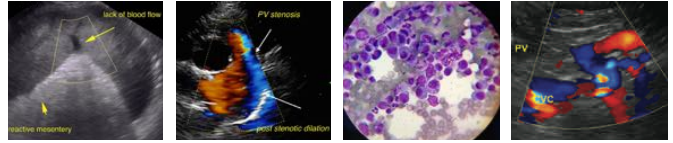
Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 0.6 cm. The right adrenal gland measured 0.8 cm at the cranial pole and 0.5 cm at the caudal pole.

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 was noted.

Liver

Minimal **liver** was visible owing to gastric artifact.



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Gastrointestinal

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The **stomach** was over distended with chyme. The small intestines and colon were unremarkable.

SPECIES

Pancreas

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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 EXAMINATION OF THE HEART

AGE

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The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The **mitral valve** was thickened. 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. **Aortic insufficiency** was noted. Turbulence was noted at the left ventricular outflow tract and mitral valve. 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	5.6		NM		35		0.1
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				31.8 lbs	2.6	2.8	



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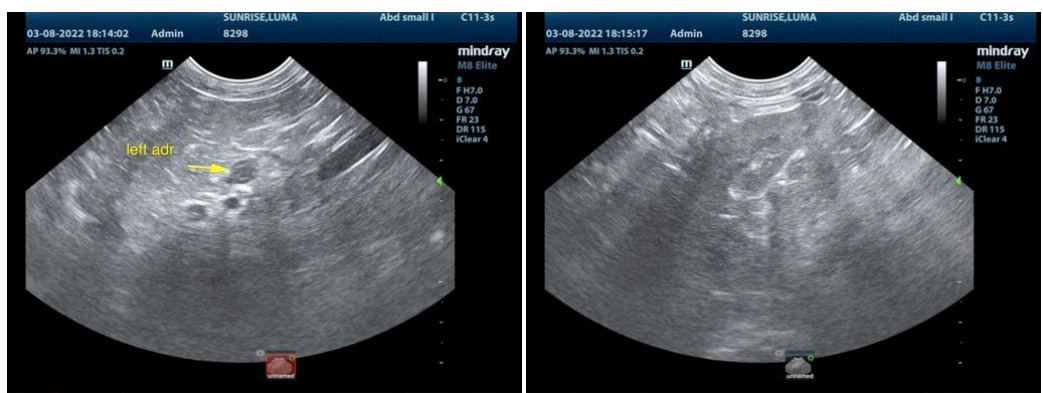
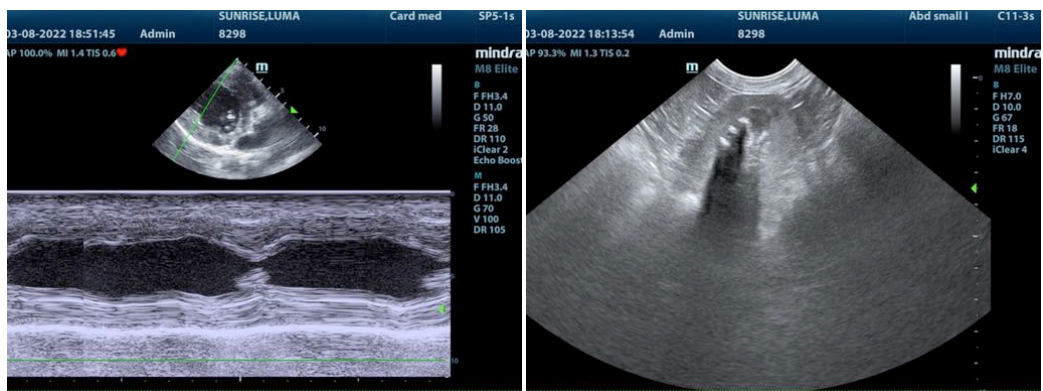
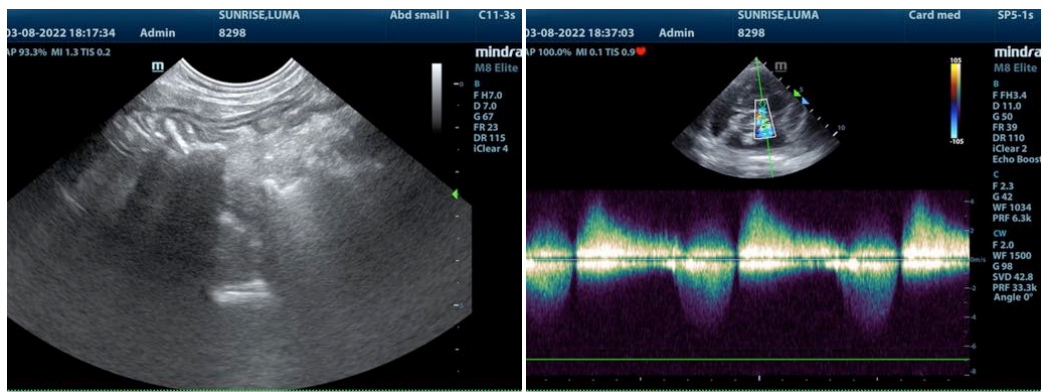
ULTRASONOGRAPHIC FINDINGS

Compensated subaortic stenosis at this time with concurrent mitral insufficiency.

Moderate degenerative renal changes with non-obstructive calculi.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Blood pressure measurements are recommended. No cardiac medications are warranted. There was no evidence of significant disease. CT evaluation of the CNS is warranted given the patient's history.



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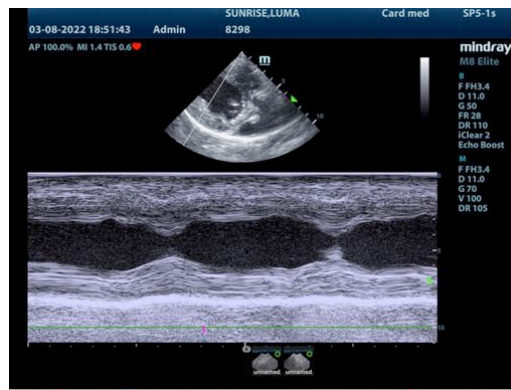
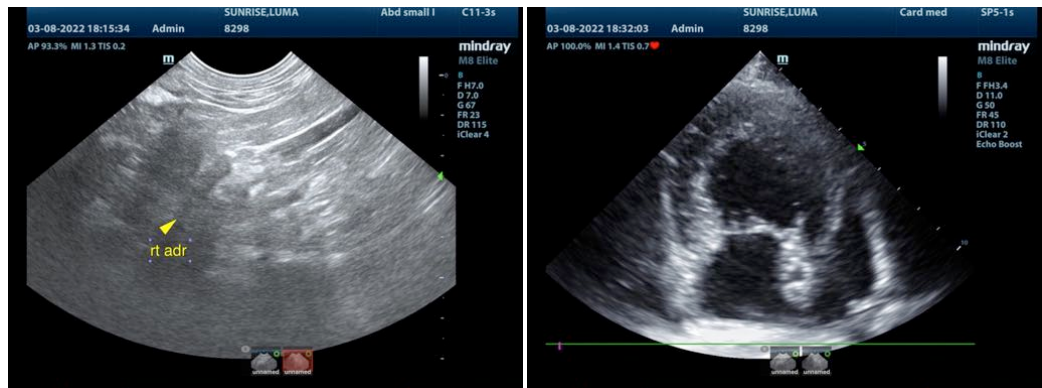
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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

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