



PATIENT PRESENTING CLINICAL SIGNS

Jojo Kinder

SPECIES

Canine

BREED

Pomeranian Cross

SEX

Spayed Female

AGE

11 years

WEIGHT

11.63 lbs

INTERPRETED BY

Eric Lindquist, DMV,
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

West Eugene AH

REFERRING VET

Dr. Larsen

DATE

5/23/22

Invoice
30636

Summary: *** 5/23/22 -- O reported pet had a seizure last night - does not sound like a gran mal Exam 12/9 MP- coughing for 2 weeks. mainly with excitement. gr4 murmur. 12/13 diagnostics. MS: Rads showed narrowed trachea, mild heart enlargement, no effusion. offered cough tabs. recommend echo - owner declined echo. cough tabs sent home. treating as tracheal collapse. 1/20/22 - owner called, wants to know next step. cough tabs not helping per owner 2/10/22 - vomit and poop all over the house Exam 2/11 - vomiting 4-5x weekly, straining to poop. diarrhea once but no blood on it. around farm animal, eats hooves and animal feces. Rads, Cerenia accepted, dec BW. rads showed some SI inflammation, colon with stool that had a couple of small opacities in it. 2/14/22 - owner said patient got very wobbly and fell over "mini stroke" happened about 2w ago as well. wants to know why she didn't get Amoxi. 2/21/22 - BW performed, now a full 10 days after the exam, 2 and 1/2 months past when MP requested BW. BW showed liver concerns. ALT (141), ALP (464), TBil (0.6), Glu (213), Ca (11.7) 2/24/22 - additional diagnostics recommended (chest rads, abd US) and liver support in the mean time. 3/1/22 - owner not happy, wants to treat for reflux, wants a phone call 3/2/22 - liver support still not picked up, no diagnostics scheduled. CTO - LMOM, no return call from owner.

Abnormal PE/Chem/CBC/UA Results: Current Medications Denamarin, intermittent Gabapentin (25mg) 2/21/22 -- ALT (141), ALP (464), TBil (0.6), Glu (213), Ca (11.7) Heart Rate and Respiratory Rates 130, 50

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 LA max measurement is the most accurate in this patient. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Minor prolapse of the anterior mitral valve leaflet was noted. 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** 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.



PATIENT

Jojo Kinder

SPECIES

Canine

BREED

Pomeranian Cross

SEX

Spayed Female

AGE

11 years

WEIGHT

11.63 lbs

INTERPRETED BY

Eric Lindquist, DMV,
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

West Eugene AH

REFERRING VET

Dr. Larsen

DATE

5/23/22

Invoice
30636

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	5.5	2.5	1.5	2.0	33	64	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	113	1.13		11.63 lbs	3.9	3.25	

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The pelvic urethra was imaged 3.0 cm beyond the cystourethral junction. 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 normal size and structure, corticomodullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The right kidney measured 4.59 cm. The left kidney measured 4.02 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 1.56 x 0.51 cm at the caudal pole and 0.37 cm at the cranial pole. The right adrenal gland measured 1.65 x 1.2 cm at the cranial pole and 0.52 cm at the caudal pole.



PATIENT

Spleen

Jojo Kinder

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.

SPECIES

Canine

BREED

Liver

Pomeranian Cross

The **liver** revealed slight coarse architecture with mildly increased portal markings. The gallbladder and common bile duct were unremarkable. The size and vascularity was normal.

SEX

Spayed Female

Gastrointestinal

AGE

11 years

The **stomach** presented mild mucosal hypertrophy without loss of mural detail. Anechoic fluid filled lumen noted, most consistent with gastritis or non-specific GI upset. The small intestine and colon were unremarkable with normal uniform curvilinear patterns. No loss of mural detail and unremarkable. lumen. The small intestine and colon were unremarkable.

WEIGHT

11.63 lbs

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.

INTERPRETED BY

Eric Lindquist, DMV,
DABVP, Cert. IVUSS

ULTRASONOGRAPHIC FINDINGS

IMAGING PERFORMED BY

Sara Hansen

Stage B2 valvular disease with volume overload of the left atrium.

Mitral and tricuspid insufficiency.

Mild gastritis pattern.

HOSPITAL NAME

West Eugene AH

Likely reactive hepatopathy owing to underlying low-grade GI insult.

Age related pancreas.

REFERRING VET

Dr. Larsen

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

DATE

5/23/22

I recommend Pimobendan at 0.3 mg/kg b.i.d., Spironolactone at 1-2 mg/kg b.i.d. +/- ace inhibitor at 0.5 mg/kg s.i.d. progressing to b.i.d.

The heart has some volume overload and is working to compensate for the valvular insufficiency. Target respiratory rate is < 20 resp/minute after therapy. After initiating therapy, I recommend recheck on the

Invoice
30636



PATIENT

Jojo Kinder

clinical exam, BUN, Creatinine, USG, Chest radiographs & Blood pressure in 5-7 days. Recheck echo in 1 month. Earlier if clinical decompensation is occurring. I do not recommend anesthesia at this time until stabilization has occurred on the recommended medications. Repeat preanesthetic echo is ideal if anesthesia is eventually necessary

SPECIES

Canine

Seizure activity may be completely incidental or possibly induced by cerebral hypoxia. I recommend treating the cardiac presentation and reassessment of the clinical signs. However, brain CT would be appropriate along with GI protocol given the gastric presentation. Blood pressure measurements are indicated to rule out concurrent hypertension. FNA of the liver is ideal especially if bilirubin elevations are progressive. However, structurally the liver appears largely innocuous, which is consistent with low-grade inflammatory hepatopathy.

BREED

Pomeranian Cross

SEX

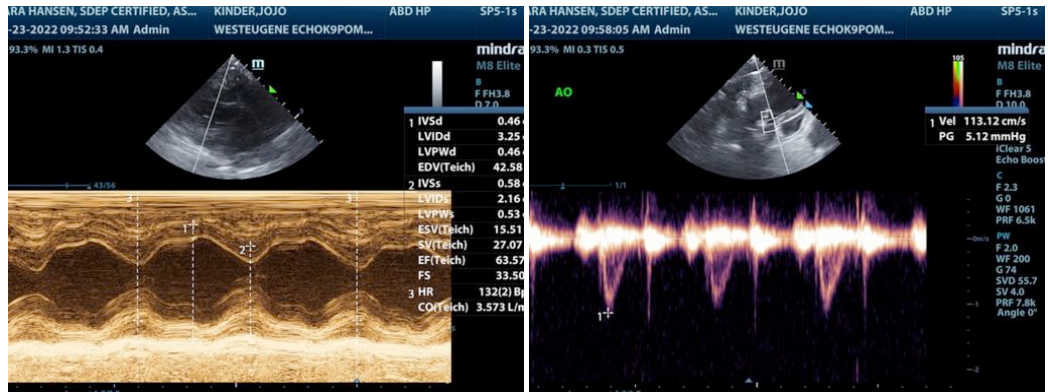
Spayed Female

AGE

11 years

WEIGHT

11.63 lbs

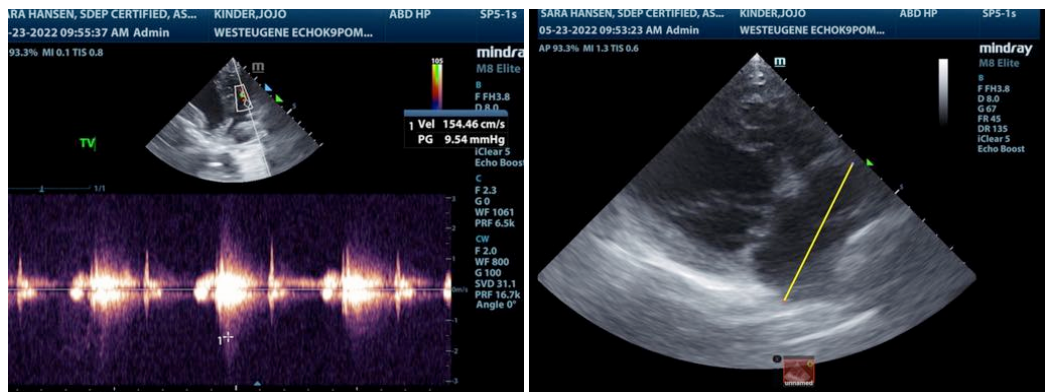


INTERPRETED BY

Eric Lindquist, DMV, DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Sara Hansen



HOSPITAL NAME

West Eugene AH

REFERRING VET

Dr. Larsen

DATE

5/23/22

Invoice
30636



PATIENT

Jojo Kinder

SPECIES

Canine

BREED

Pomeranian Cross

SEX

Spayed Female

AGE

11 years

WEIGHT

11.63 lbs

INTERPRETED BY

Eric Lindquist, DMV,
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

West Eugene AH

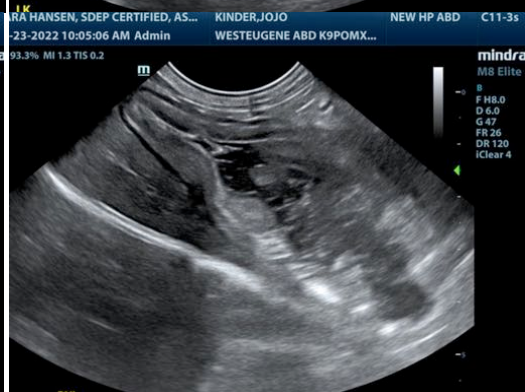
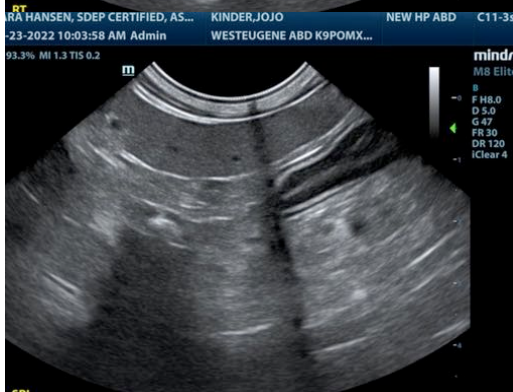
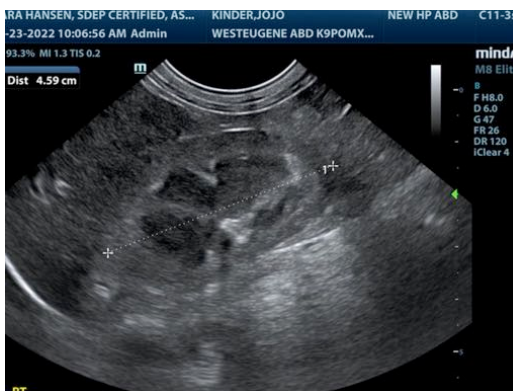
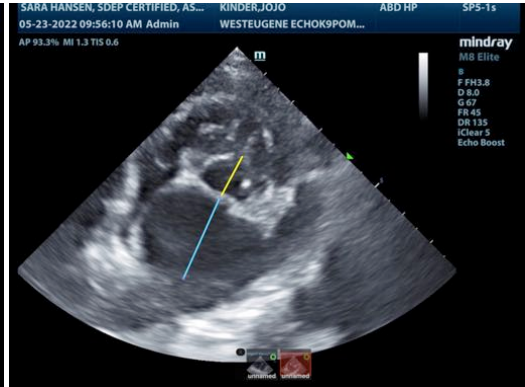
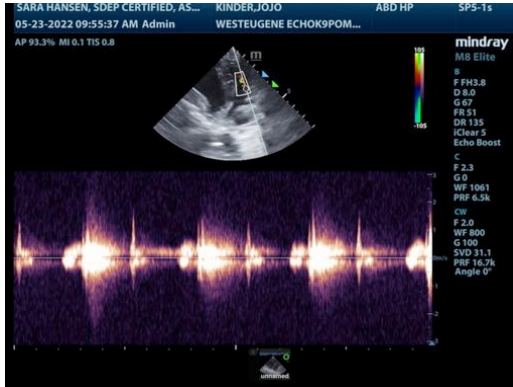
REFERRING VET

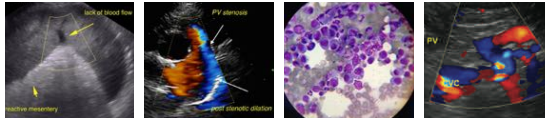
Dr. Larsen

DATE

5/23/22

Invoice
30636





PATIENT

Jojo Kinder

SPECIES

Canine

BREED

Pomeranian Cross

SEX

Spayed Female

AGE

11 years

WEIGHT

11.63 lbs

INTERPRETED BY

Eric Lindquist, DMV,
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

West Eugene AH

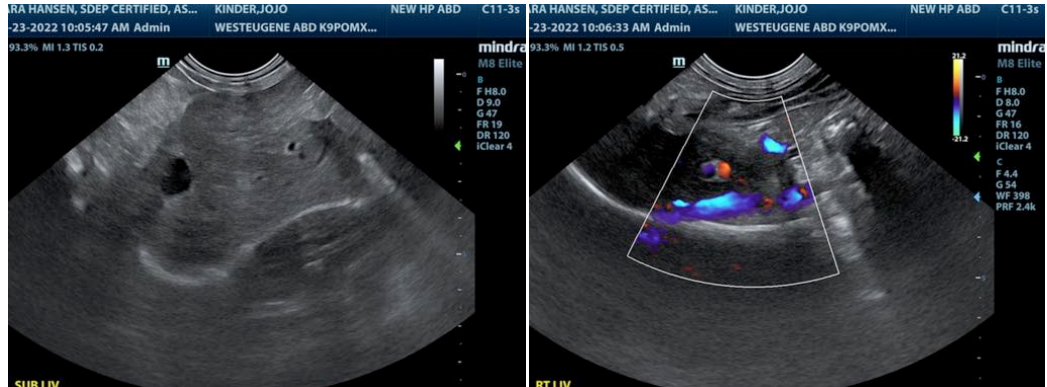
REFERRING VET

Dr. Larsen

DATE

5/23/22

Invoice
30636



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, Cert. IVUSS

CEO of Sonopath.com

Eric.Lindquist@SonoPath.com