



PATIENT PRESENTING CLINICAL SIGNS

Zeus Pechthold

History: Patient with history of Early stage B1 valvular disease, compensated, and mild, non-specific vacuolar hepatopathy with inflammatory component seen on previous ultrasound, presents for recheck double cavity. Patient is doing well.

SPECIES

Canine

Abnormal PE/Chem/CBC/UA Results: Creat. 1.6, ALP 619, lipase 251, creat. kinase 283. USG: 1.048, urine protein 3+.

BREED

Pomeranian

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

SEX

Neutered male

The echocardiogram in this patient demonstrated persistent **mitral** valve insufficiency with eccentric moderate insufficiency jet on color flow assessment. All four chamber sizes were normal. Contractility was adequate and compensatory. The left atrial measurements were within normal limits with no evidence of volume overload. 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). Pericardial and pleural spaces were unremarkable.

AGE

6 years

WEIGHT

19.9 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Vazquez, CVT

HOSPITAL NAME

Marsh Hospital for Animals

REFERRING VET

Dr. Milwicki

INVOICE

42347

DATE

11/4/22

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	5.8		1.3	1.4	30	59	0.1
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (lbs)	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	BELOW	BELOW	BELOW	BELOW
PATIENT	100	1.56	1.03	19.9	2.36 max	2.37	

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 residual prostate was uniform and measured 0.64 cm.



PATIENT

Zeus Pechthold

SPECIES

Canine

BREED

Pomeranian

SEX

Neutered male

AGE

6 years

WEIGHT

19.9 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Vazquez, CVT

HOSPITAL NAME

Marsh Hospital for
Animals

REFERRING VET

Dr. Milwicki

INVOICE

42347

DATE

11/4/22

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. Blood flow to the kidneys were adequate. The right kidney measured 4.6 cm. The left kidney measured 4.6 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 right adrenal gland measured 2.02 x 0.6 cm at the caudal pole and 0.54 cm at the cranial pole. The left adrenal gland measured 1.81 x 0.56 cm at the caudal pole and 0.47 cm at the cranial pole.

Spleen

The **spleen** in this patient was mildly enlarged with uniform parenchyma and was folded upon itself cranially. This is a positional variant and is not pathological. There was no evidence of significant disease.

Liver

The **liver** was slightly enlarged with minor coarse architecture and slightly increased portal markings. 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

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.

ULTRASONOGRAPHIC FINDINGS

Persistent, stage B1 valvular disease.

Benign hepatopathy normal variant or history of inflammatory hepatopathy is likely, yet appears subjectively stable.

Otherwise, unremarkable abdominal presentation.



PATIENT

Zeus Pechthold

SPECIES

Canine

BREED

Pomeranian

SEX

Neutered male

AGE

6 years

WEIGHT

19.9 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Vazquez, CVT

HOSPITAL NAME

Marsh Hospital for
Animals

REFERRING VET

Dr. Milwicki

INVOICE

42347

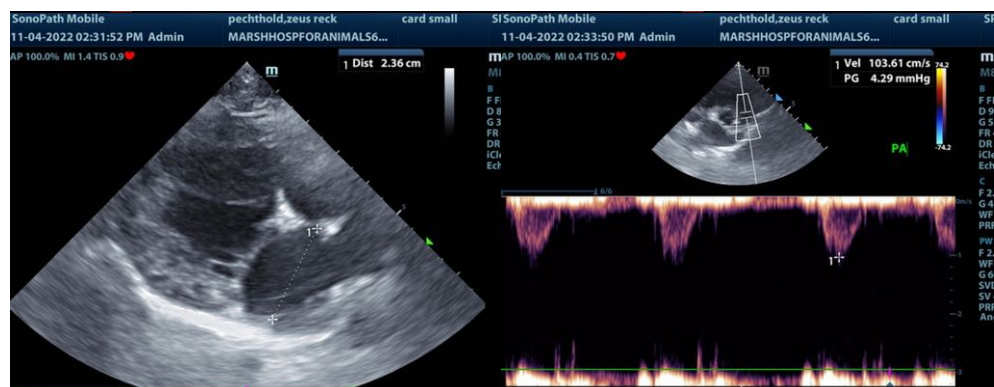
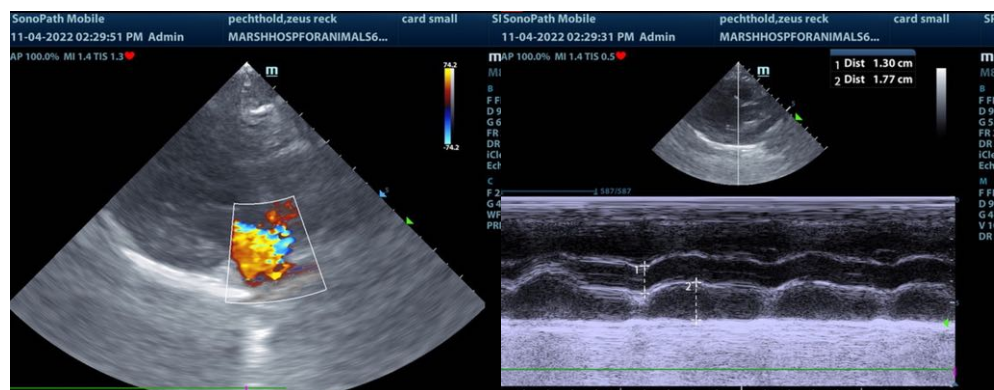
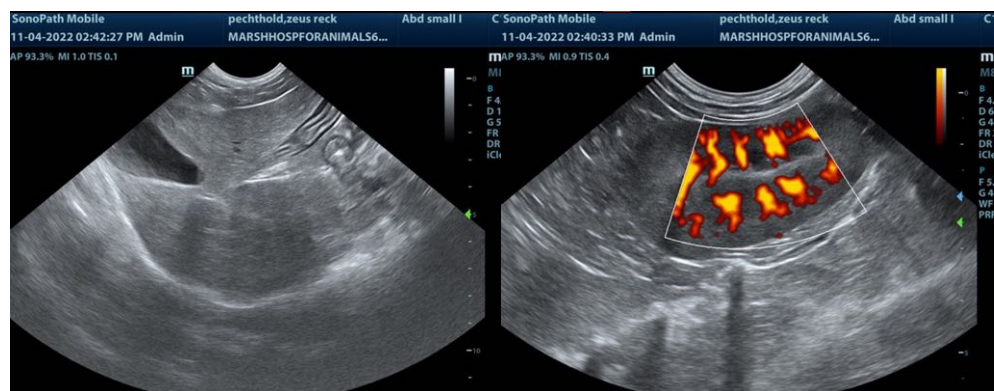
DATE

11/4/22

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of proteinuria is not structurally evident.

The heart is stable without clinical disease. No overt contraindication for anesthesia of brief to moderate duration. I suggest Torbutrol premed, Propofol induction, Isoflo maintenance or similar protocol if anesthesia is desired. Blood pressure recommended if not already performed and target white coat negative systolic pressure of < 160 mmHg. If higher than this ACE-inhibitor is suggested to reach this level. Recheck echocardiogram is recommended in 6 months, earlier if murmur grade increases or clinical signs initiate.





PATIENT

Zeus Pechthold

SPECIES

Canine

BREED

Pomeranian

SEX

Neutered male

AGE

6 years

WEIGHT

19.9 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Vazquez, CVT

HOSPITAL NAME

Marsh Hospital for
Animals

REFERRING VET

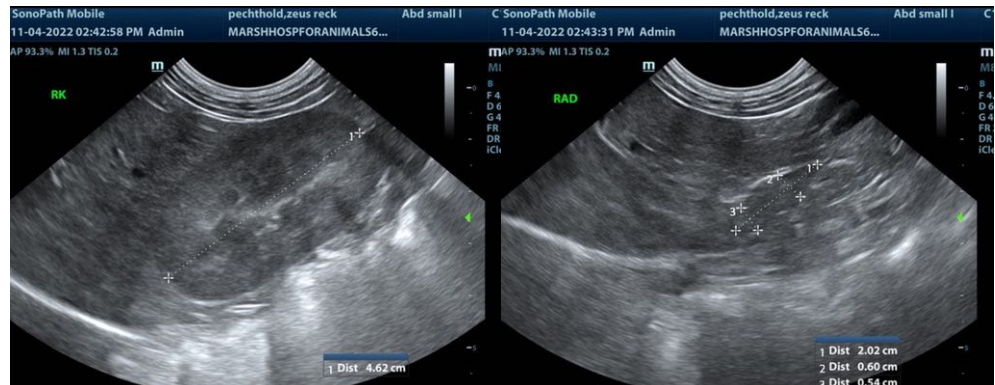
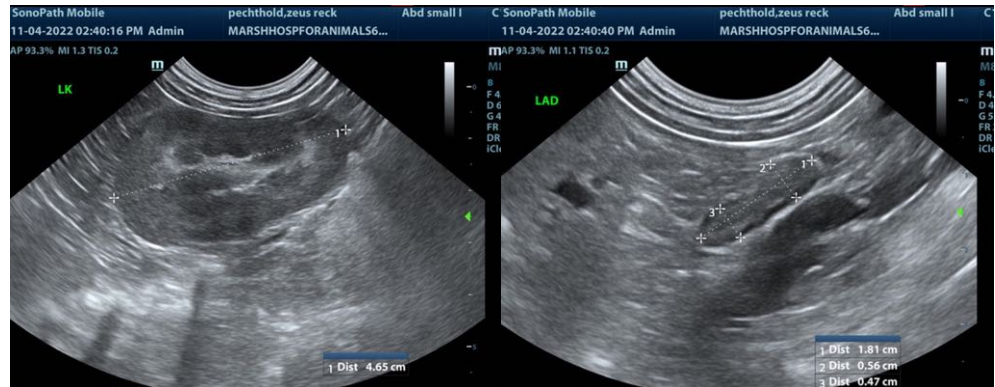
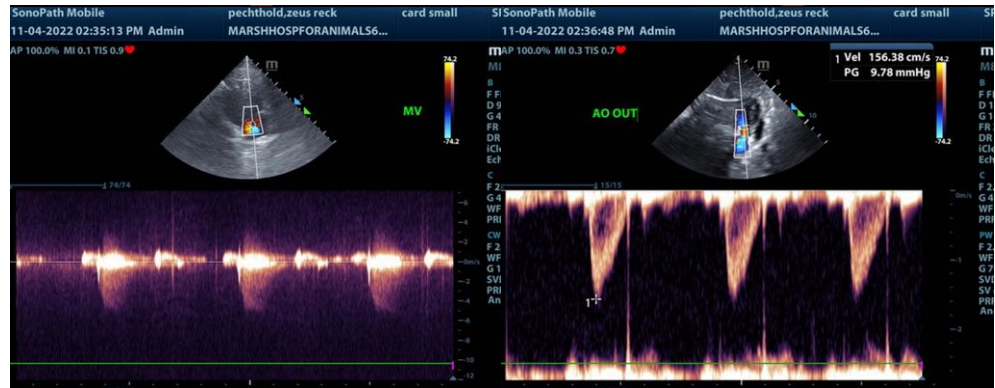
Dr. Milwicki

INVOICE

42347

DATE

11/4/22





PATIENT

Zeus Pechthold

SPECIES

Canine

BREED

Pomeranian

SEX

Neutered male

AGE

6 years

WEIGHT

19.9 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Vazquez, CVT

HOSPITAL NAME

Marsh Hospital for
Animals

REFERRING VET

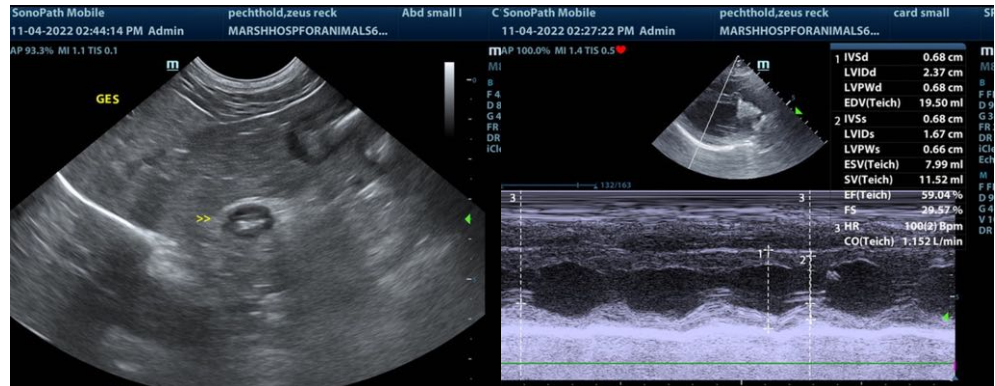
Dr. Milwicki

INVOICE

42347

DATE

11/4/22



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

Info@SonoPath.com