



**PATIENT**

Zoe Protomastro

**PRESENTING CLINICAL SIGNS**

History: 10 yo FS Yorkie. History of PLN, hypertension, urinary incontinence. On telmisartan, plavix, incurin,

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

**BREED**

Yorkie

The **bladder** in this patient was mildly thickened with slight echogenic mural changes. Wall thickness measured up to 0.34 cm. No calculi or masses were noted. Slight micropolypoid changes were noted. Polyp measured 0.3 cm at maximum width. This is a frequent finding in older animals and may be linked to a history of chronic urinary tract infection or active urinary tract infection. Urinalysis would be recommended with culture if any evidence of inflammatory sediment is present. The region of the trigone and visible pelvic urethra were normal.

**SEX**

Spayed Female

**AGE**

10 years

The **kidneys** revealed non-specific increased cortical echogenicity. The right kidney measured 4.33 cm with slight pyelectasia noted. The left kidney measured 4.55 cm.

**Adrenal Glands**

**WEIGHT**

18.6 lbs

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 0.47 cm at the caudal pole and 0.6 cm at the cranial pole. The left adrenal gland measured 0.61 cm at the caudal pole and 0.5 cm at the cranial pole.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**Spleen**

**IMAGING PERFORMED BY**

Dr. Petrone

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.

**HOSPITAL NAME**

Long Branch AH

**Liver**

**REFERRING VET**

Dr. Petron

Exam of the cranial abdomen demonstrated excessive **liver** size and swollen contour. Mild, coarse architecture was noted with increased portal markings and minor parenchymal remodeling is suggestive of an inflammatory component. The gallbladder was mildly over distended with suspended and dependent debris, yet not to the level of emerging mucocele. However, the sludge appears to be mildly excessive. No adjunctive inflammation was noted.

**INVOICE**

30438

**Gastrointestinal**

**DATE**

5/17/22

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



**PATIENT** Zoe Protomastro demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

**SPECIES** *Pancreas*

Canine 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.

**BREED** Yorkie

**SEX** Spayed Female **ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

**AGE** 10 years The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. 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.

**WEIGHT** 18.6 lbs

**INTERPRETED BY** Eric Lindquist, DMV DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Petrone

**HOSPITAL NAME**

Long Branch AH

**REFERRING VET**

Dr. Petron

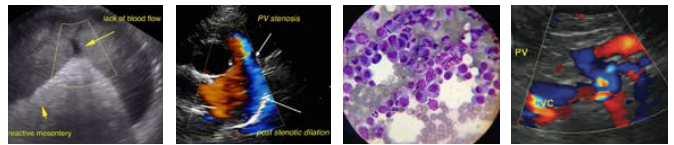
**INVOICE**

30438

**DATE**

5/17/22

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	<1.3	28-40	40-100	<0.6
PATIENT			1.1	1.2			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			0.9	18.6 lbs	2.84	2.34	



**PATIENT**

Zoe Protomastro

**SPECIES**

Canine

**BREED**

Yorkie

**SEX**

Spayed Female

**AGE**

10 years

**WEIGHT**

18.6 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Petrone

**HOSPITAL NAME**

Long Branch AH

**REFERRING VET**

Dr. Petron

**INVOICE**

30438

**DATE**

5/17/22

**ULTRASONOGRAPHIC FINDINGS**

Stage B1 valvular disease. Mitral insufficiency is trivial.

Moderate chronic degenerative renal changes, non-specific.

Benign hepatopathy, non-specific.

Minor bladder thickening.

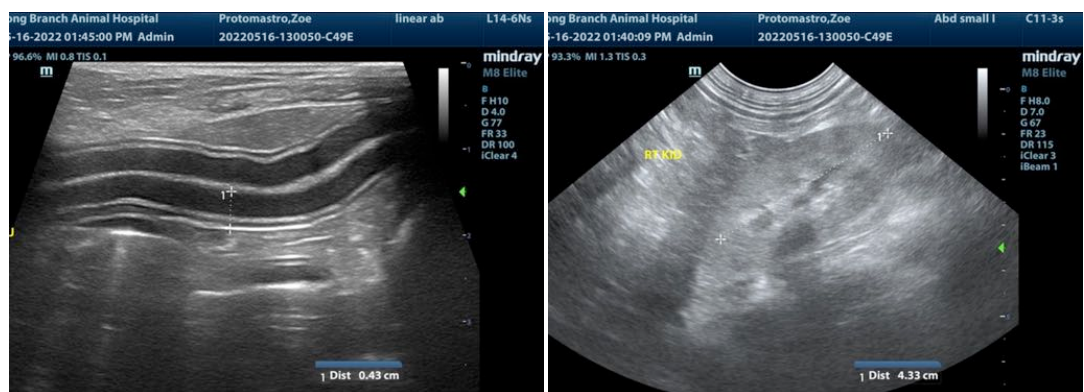
Slight polypoid changes in the cystourethral junction. These should be monitored for any progressive growth.

Gallbladder sludge.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

B1: The heart is stable without clinical disease. No overt contraindication for anesthesia of brief to moderate duration. I suggest Torbutrol premed, Propofol induction, Isoflurane 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.

The urinary incontinence may be owing to underlying UTI. The remainder of the abdomen appears stable.





**PATIENT**

Zoe Protomastro

**SPECIES**

Canine

**BREED**

Yorkie

**SEX**

Spayed Female

**AGE**

10 years

**WEIGHT**

18.6 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUS

**IMAGING PERFORMED BY**

Dr. Petrone

**HOSPITAL NAME**

Long Branch AH

**REFERRING VET**

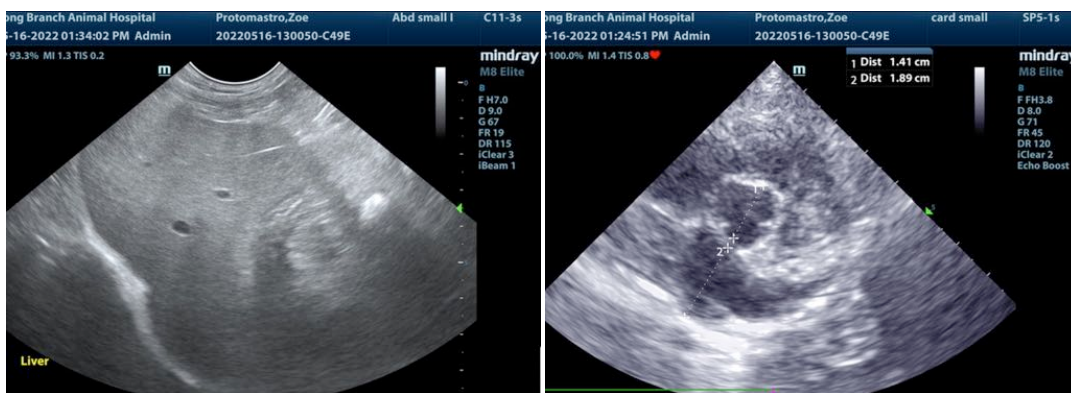
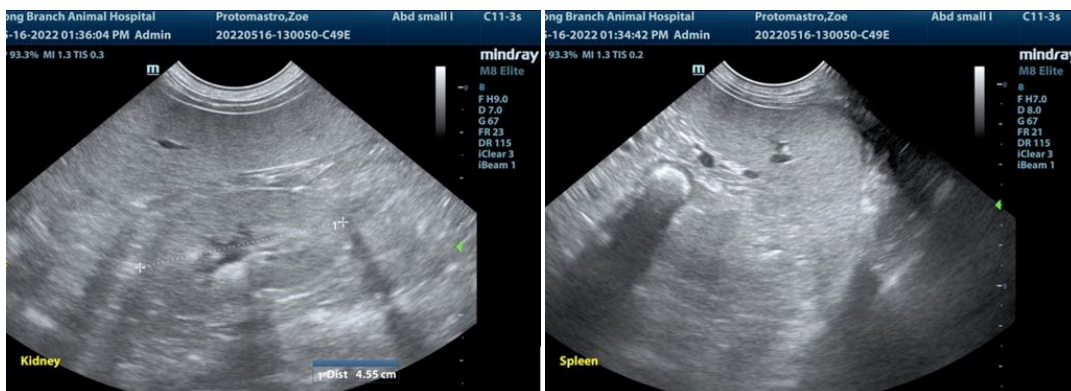
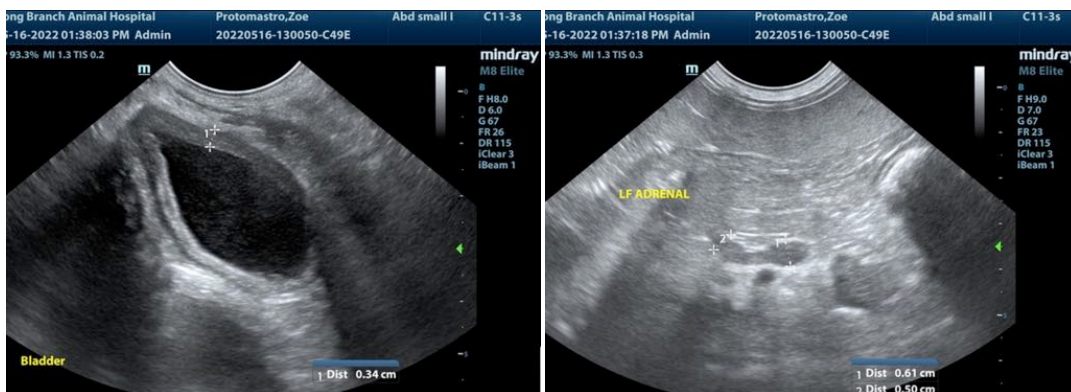
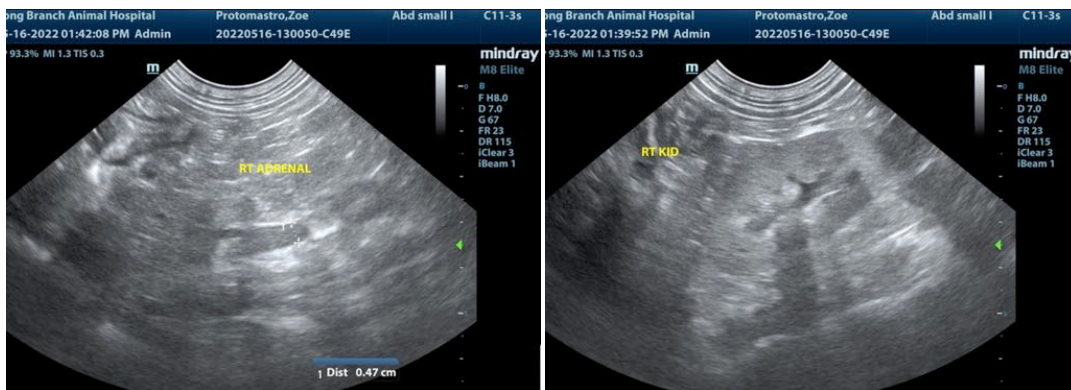
Dr. Petron

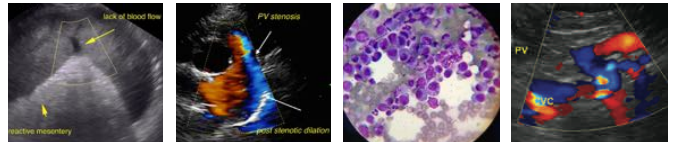
**INVOICE**

30438

**DATE**

5/17/22





**PATIENT**

Zoe Protomastro

**SPECIES**

Canine

**BREED**

Yorkie

**SEX**

Spayed Female

**AGE**

10 years

**WEIGHT**

18.6 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUS

**IMAGING PERFORMED BY**

Dr. Petrone

**HOSPITAL NAME**

Long Branch AH

**REFERRING VET**

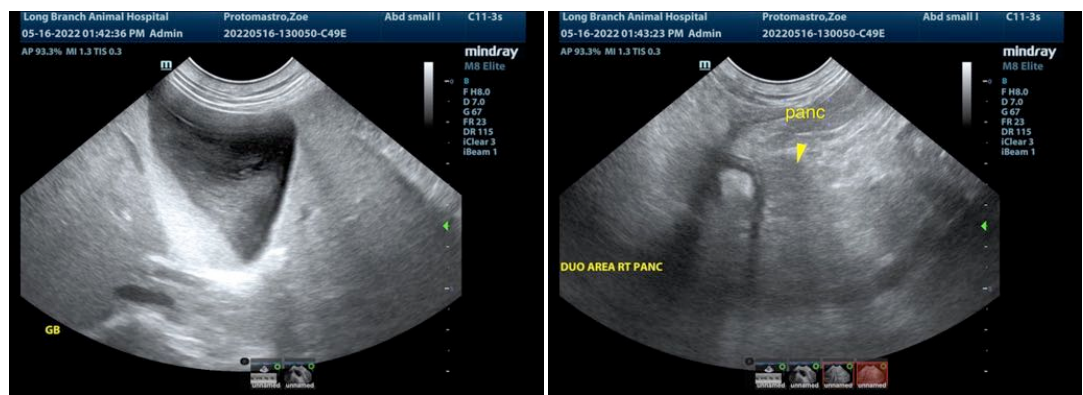
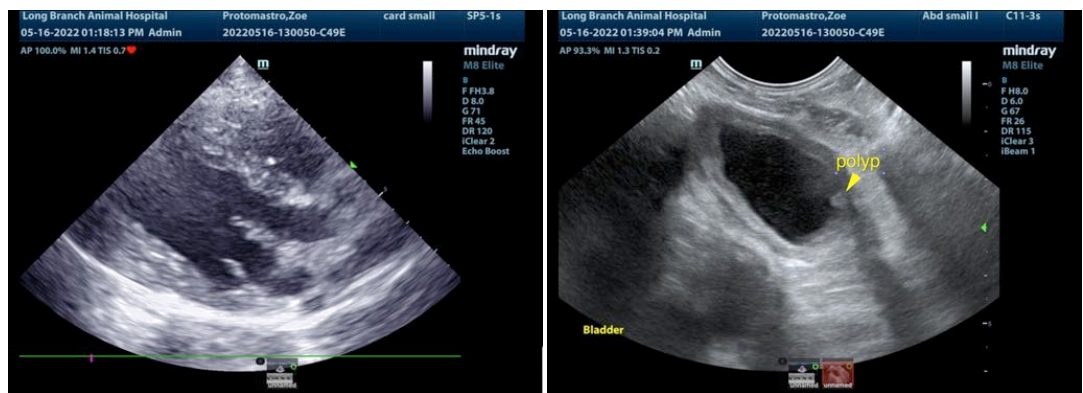
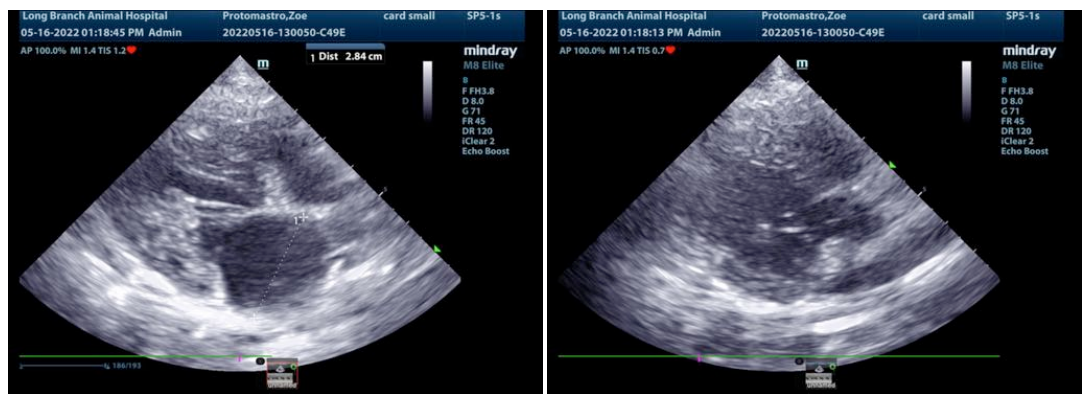
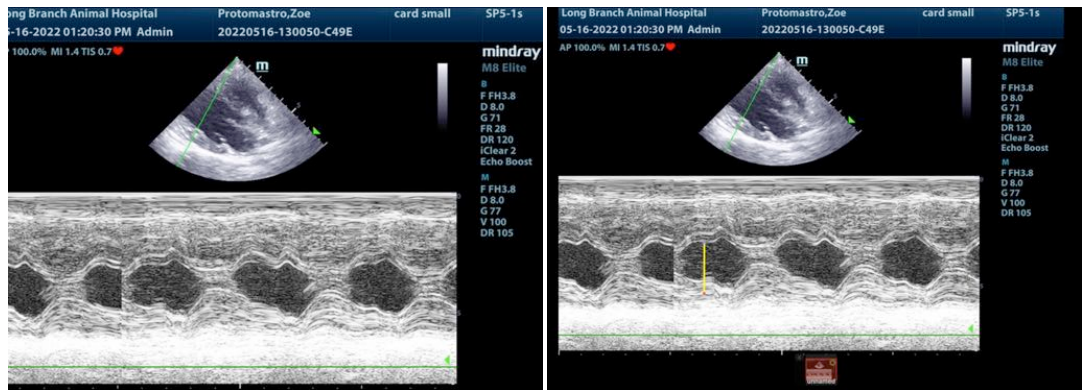
Dr. Petron

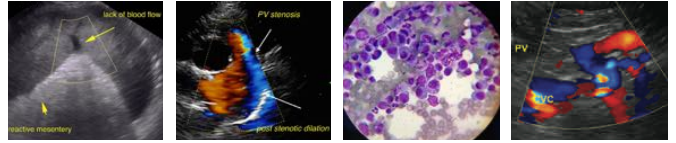
**INVOICE**

30438

**DATE**

5/17/22





**PATIENT**

Zoe Protomastro

**SPECIES**

Canine

**BREED**

Yorkie

**SEX**

Spayed Female

**AGE**

10 years

**WEIGHT**

18.6 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING  
PERFORMED BY**

Dr. Petrone

**HOSPITAL NAME**

Long Branch AH

**REFERRING VET**

Dr. Petron

**INVOICE**

30438

**DATE**

5/17/22

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