



## PATIENT

Zeus Hernandez

## PRESENTING CLINICAL SIGNS

History: seizures, gums white bleeding from nose

## SPECIES

Canine

## BREED

Husky

## SEX

Neutered Male

## AGE

1

## WEIGHT

59

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

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	--	--	1.0	1.02	35	90	0.1
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	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	--	--	.87	--	3.1	2.7	--

### Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. Trivial mitral insufficiency was noted, not clinically significant. 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. **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). No visible **pericardial** or free pleura fluid was noted. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window.

### 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 normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen.

## INTERPRETED BY

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

## IMAGING PERFORMED BY

Jenn

## HOSPITAL NAME

Rockaway AH

## REFERRING VET

Dr. Maniar

## INVOICE

21831

## DATE

4/3/23



**PATIENT**

Zeus Hernandez

Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The left kidney measured 6.34 cm. The right kidney measured 6.7 cm.

**SPECIES**

Canine

**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 2.52 cm x 0.6 cm at the caudal pole and 0.65 cm at the cranial pole. The right adrenal gland measured 3.04 cm x 1.49 cm at the cranial pole and 0.54 cm at the caudal pole.

**BREED**

Husky

**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.

**SEX**

Neutered Male

**AGE**

1

**Liver**

The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

**WEIGHT**

59

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**Gastrointestinal**

The **stomach** was overdistended with fluid. No overt evidence of obstruction, however, delayed outflow or gastritis is likely. The small intestine and colon were unremarkable.

**IMAGING PERFORMED BY**

Jenn

**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.

**HOSPITAL NAME**

Rockaway AH

**ULTRASONOGRAPHIC FINDINGS**

**REFERRING VET**

Dr. Maniar

- Essentially normal echocardiogram with trivial mitral insufficiency, not clinically significant
- Gastric stasis- no overt evidence of foreign body, however it cannot be completely ruled out

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The cause of seizures is unclear. Skull CT is indicated. Baseline cortisol is indicated. GI protectants are indicated. Diagnosis is open. Toxin exposure should be investigated.

**INVOICE**

21831

**DATE**

4/3/23



**PATIENT**

Zeus Hernandez

**SPECIES**

Canine

**BREED**

Husky

**SEX**

Neutered Male

**AGE**

1

**WEIGHT**

59

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Jenn

**HOSPITAL NAME**

Rockaway AH

**REFERRING VET**

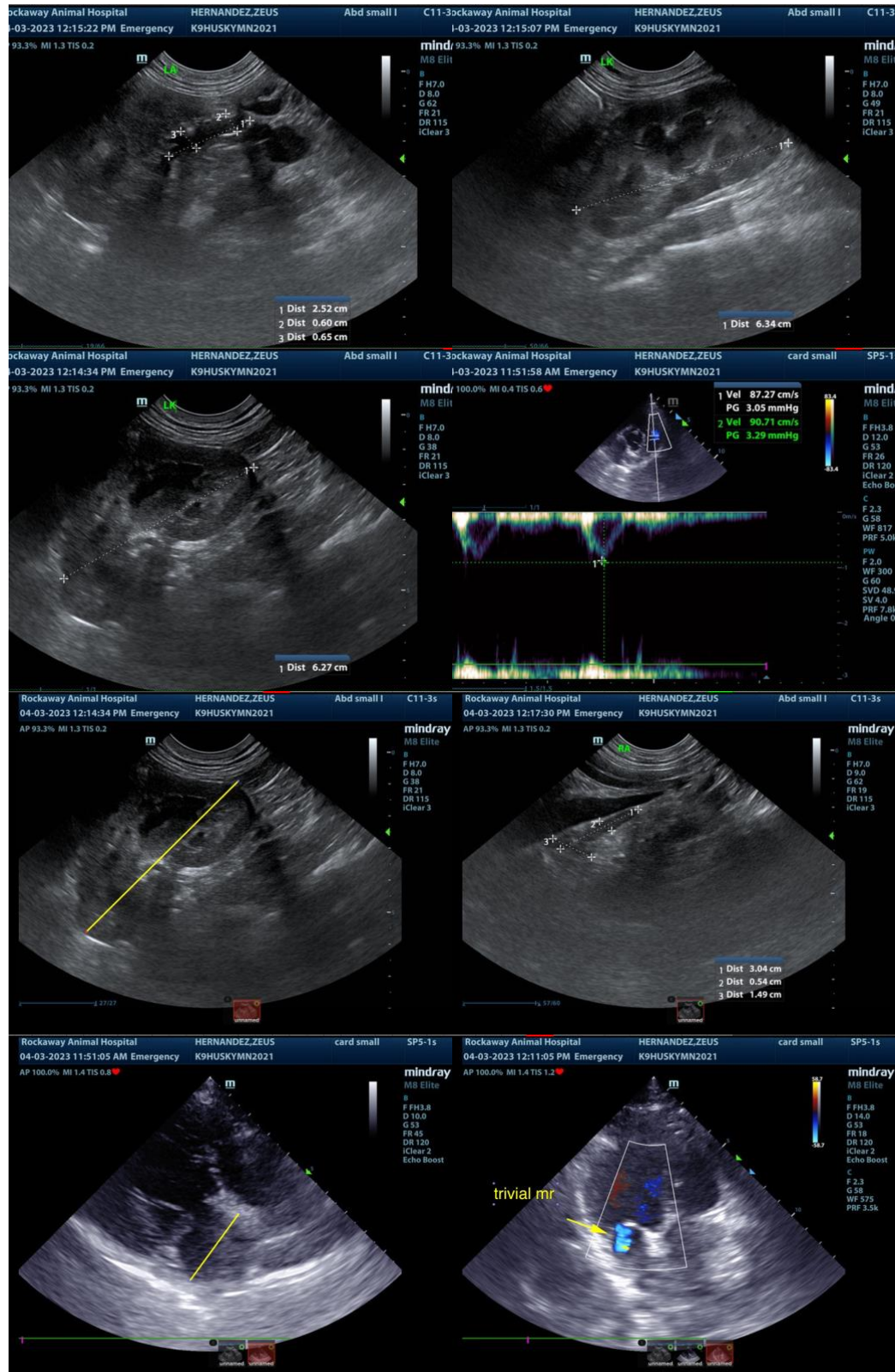
Dr. Maniar

**INVOICE**

21831

**DATE**

4/3/23





**PATIENT**

Zeus Hernandez

**SPECIES**

Canine

**BREED**

Husky

**SEX**

Neutered Male

**AGE**

1

**WEIGHT**

59

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING  
PERFORMED BY**

Jenn

**HOSPITAL NAME**

Rockaway AH

**REFERRING VET**

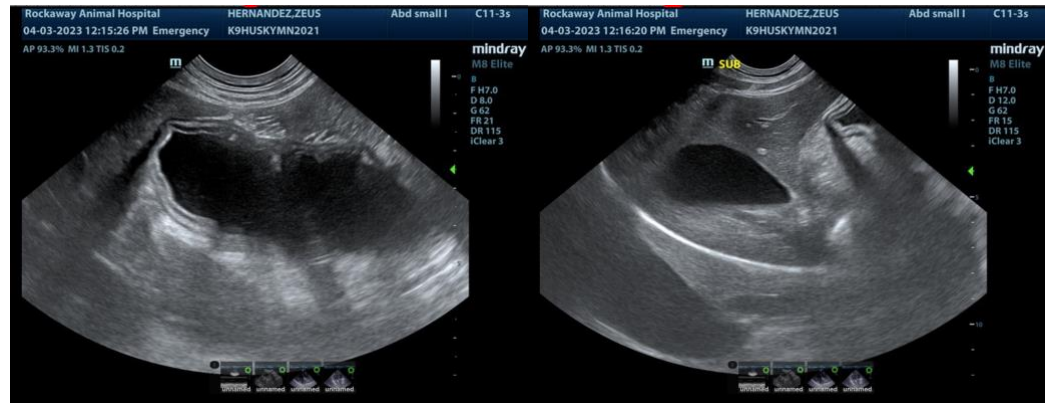
Dr. Maniar

**INVOICE**

21831

**DATE**

4/3/23



The information and recommendations provided are based on the images presented by the referring veterinarian. 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