



PATIENT PRESENTING CLINICAL SIGNS

Jasper Gray

Coughing for 1 week, weight loss, and inappetence P started on Kenalog, Convenia, Hycodan syrup
Abnormal PE/Chem/CBC/UA Results: Anemia, Leukocytosis

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

BREED

Chihuahua

SEX

Neutered Male

AGE

9 Years

WEIGHT

5.5 Pounds

| 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 | Up to 1.6 | 28-40 | 40-100 | <0.6 |
| PATIENT | | | 1.83 | 2.1 | 55 | 87 | 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 | BELOW | BELOW | BELOW | BELOW |
| PATIENT | -- | 1.28 | 0.53 | | 2.9 | 2.89 | |

INTERPRETED BY

Eric Lindquist, DMV

DABVP, Cert. IVUSS

Cardiac Presentation

The echocardiogram for this patient presented excessive **left atrial size** expressed both in the LA/AO and LA max measurements Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable insufficiency. Prolapse of the anterior mitral valve leaflet noted. 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.

IMAGING PERFORMED BY

Kathleen Byrnes

HOSPITAL NAME

Parker Vet Hospital

REFERRING VET

Dr. White

INVOICE

44485

DATE

8/4/23

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



PATIENT

Jasper Gray

was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal.

SPECIES

Canine

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. 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 3.66 cm. The left kidney measured 3.5 cm.

BREED

Chihuahua

Adrenal Glands

SEX

Neutered Male

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 1.03 cm x 0.32 cm. The right adrenal gland measured 1.25 cm x 0.25 cm at the caudal pole and 0.32 cm at the cranial pole.

AGE

9 Years

Spleen

WEIGHT

5.5 Pounds

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.

INTERPRETED BY

Eric Lindquist, DMV

Liver

DABVP, Cert. IVUSS

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.

IMAGING PERFORMED BY

Kathleen Byrnes

Gastrointestinal

HOSPITAL NAME

Parker Vet Hospital

There was some residual chyme and gas was noted in the **stomach**, yet not pathological. This is consistent with end post prandial presentation. Transit of chyme into the small intestine was normal. Curvilinear patterns were maintained throughout the GI tract. No evidence of pathology. 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.

REFERRING VET

Dr. White

Pancreas

INVOICE

44485

The **pancreas** was hypoechoic and mildly irregular in the right limb.

DATE

8/4/23

ULTRASONOGRAPHIC FINDINGS

- Mitral insufficiency, mild left atrial enlargement, early Stage B2 valvular disease
- Full stomach with minor gas accumulation

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS



PATIENT

It is unlikely that the cough is cardiogenic in this patient. Primary respiratory disease is suspected.

Jasper Gray

Pimobendan may be initiated at 0.3 mg/kg BID, assuming vertebral heart score is excessive on radiographs.

SPECIES

Canine

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 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. There is moderate anesthetic risk for this patient. I recommend cardiac treatment prior to sedation unless only light opioids are utilized which would have minimal effect on heart function.

BREED

Chihuahua

SEX

Neutered Male

The cause of weight loss is unclear. Maldigestion panel, three view chest radiographs and full CNS examination is recommended to examine for occult disease that could be responsible for the weight loss. Evaluation for competitive eating environments should also be considered.

AGE

9 Years

WEIGHT

5.5 Pounds

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Kathleen Byrnes

HOSPITAL NAME

Parker Vet Hospital

REFERRING VET

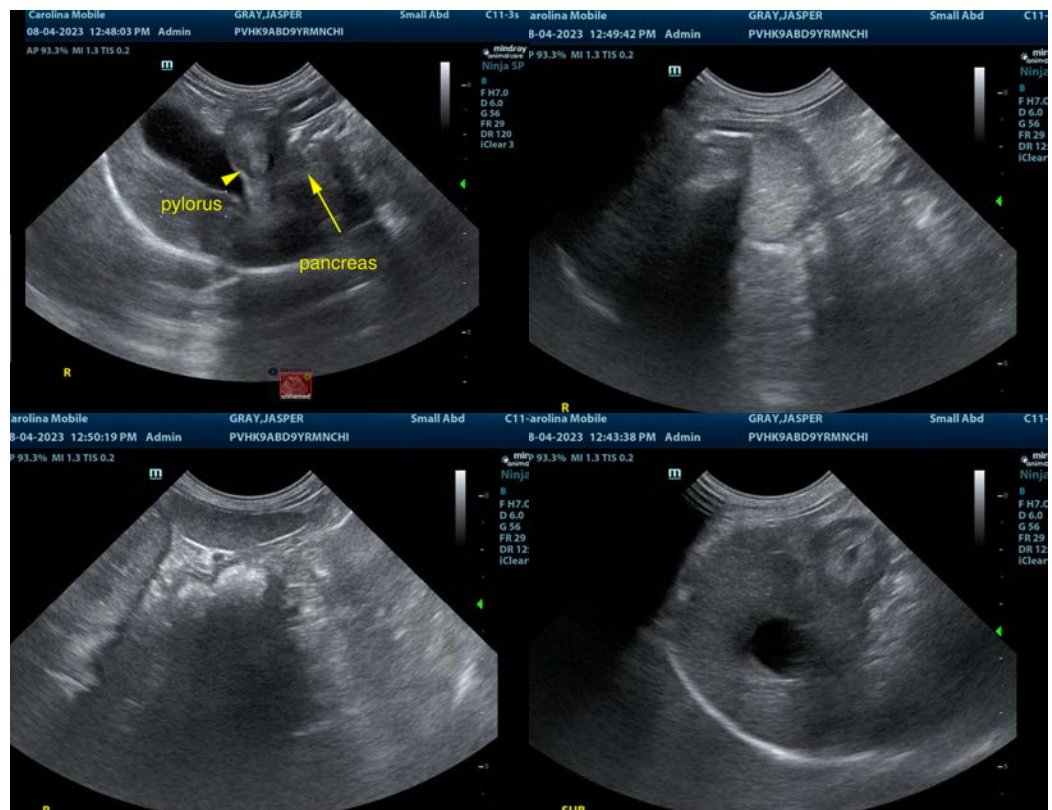
Dr. White

INVOICE

44485

DATE

8/4/23





PATIENT

Jasper Gray

SPECIES

Canine

BREED

Chihuahua

SEX

Neutered Male

AGE

9 Years

WEIGHT

5.5 Pounds

INTERPRETED BY

Eric Lindquist, DMV

DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Kathleen Byrnes

HOSPITAL NAME

Parker Vet Hospital

REFERRING VET

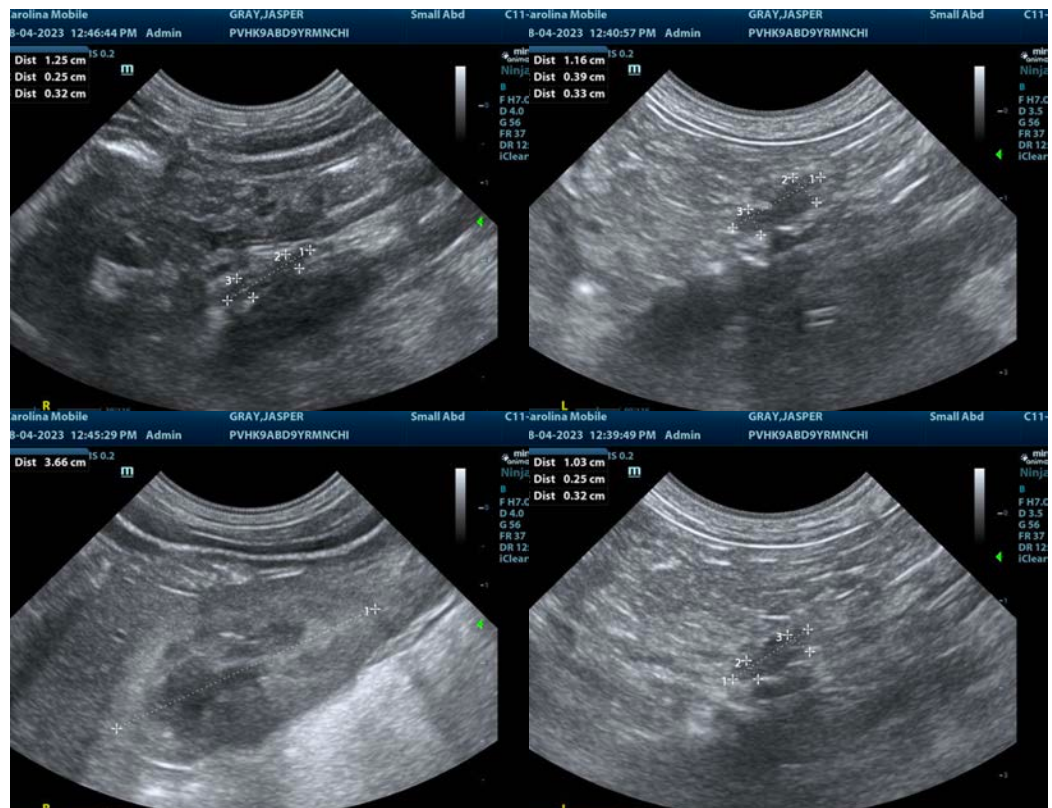
Dr. White

INVOICE

44485

DATE

8/4/23



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