



PATIENT

Dakota Beveqi

SPECIES

Canine

BREED

Yorkshire Terrier

SEX

FS

AGE

11 yrs

WEIGHT

8.7 lbs.

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Westwood Regional
Veterinary Hospital

REFERRING VET

Dr. A. Gabriel

INVOICE

14954

DATE

9/23/22

PRESENTING CLINICAL SIGNS

Abdominal ascites/distention. Hx of atopy, food allergies, and hypothyroid. Had a prior echo 6/2021: cor pulmonale, TVI, trivial MVI, no pulm. HTN. Trouble breathing, episodes of cyanosis when stressed. In OI thyroxine2 chamder, getting cerenia, famotadine, unasyn, and L thyroxine. On HA diet and Cytopoint.

Abnormal PE/Chem/CBC/UA Results: CPL abnormal, CBC: WNL. ALT 133, BUN 74, creat. 1.0, Phos. 8.4.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

| | CANINE | MR | TR | LA/AO | LA/AO | FS | EF | EPSS |
|---------------------------|--------|----------------------|-------------------------|------------------------|----------------------------|---|---|---|
| CARDIAC PARAMETERS | | VMAX (m/s) | VMAX (m/s) | (Boon method) | (Heart Base; Swe) | (%) | (%) | (cm) |
| NORMAL PARAMETER | | 4.5-5.5 | <2.7 | 1.3 | <1.3 | 28-40 | 40-100 | <0.6 |
| PATIENT | | | 4.2 | 1.37 | 1.4 | 52.3 | 87.3 | 0.1 |
| 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 | | 115 | 1.0 | 0.6 | | 1.3 | 1.3 | |

Cardiac Presentation

The mitral valve exhibited mild thickening consistent with mild endocardiosis with likely trivial to minor MR. Normal to mildly reduced LA/LV volume was present without evidence of left heart overload. LV systolic function is adequate. Normal systolic flow velocity across the aortic valve is noted. Normal appearance to the aortic valve is noted. The main pulmonary artery is dilation compared to the aorta. Moderate to severe right atrial and ventricular enlargement is noted. The tricuspid valve is thickened with moderate TR. The measured TR velocity is consistent with moderate to possible severe pulmonary hypertension. Concurrent pulmonic insufficiency with end-diastolic velocity (~2.0 m/s). No overt evidence of aortic insufficiency was noted. No pericardial or overt pleural effusion was evident. No evidence of cardiac tumors was present.

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

The area of the aortic trifurcation was free of pathology.



PATIENT

Dakota Beveqi

SPECIES

Canine

BREED

Yorkshire Terrier

SEX

FS

AGE

11 yrs

WEIGHT

8.7 lbs.

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Westwood Regional
Veterinary Hospital

REFERRING VET

Dr. A. Gabriel

INVOICE

14954

DATE

9/23/22

Normal size and margination were present in the kidneys. Mild cortical hypertrophy with moderate loss of corticomedullary border demarcation were noted. Reduced medullary volume was present with bilateral mild to moderate pyelectasia. The left kidney measured 3.0 cm in length. The right kidney measured 3.6 cm in length.

Adrenal Glands

Mild parenchyma heterogeneity and mild capsule asymmetry was present in the bilateral adrenal glands without suspicion for overt neoplasia. The left adrenal gland measured 0.59 cm width in the cranial pole and 0.68 cm width in the caudal pole. The right adrenal gland was mildly enlarged in size measuring 0.78 cm width in the cranial pole and 0.99 cm width in the caudal pole.

Spleen

The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. The parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age-related remodeling with minor potential for inflammatory or neoplastic criteria.

Liver/ Gallbladder

The liver presented moderately enlarged in size with symmetrical yet swollen contour. The parenchyma exhibited conserved uniform parenchyma with normal echogenicity isoechoic to the spleen and falciform fat. Moderate to severe hepatic vein congestion was present, most notable at the level of the hepatic vein / caudal vena cava junction. Caudal vena cava diameter measured 0.92 cm. No overt evidence of thrombosis.

Gastrointestinal

The stomach presented intact yet mildly prominent wall layering, suggestive of gastric wall edema. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material.

Normal visible colon wall layers were present with apparent formed feces in lumen.

Pancreas

The pancreas was normal in size and contour with heterogeneous to mildly prominent, subtly hypoechoic parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia. This is likely consistent with mild pancreatic edema.

Free Abdomen

No overt lymphadenopathy or intraabdominal masses were present. Moderate to marked volume anechoic ascites was present. Generalized mild uniform hyperechoic mesentery was noted.



PATIENT

Dakota Beveqi

SPECIES

Canine

BREED

Yorkshire Terrier

SEX

FS

AGE

11 yrs

WEIGHT

8.7 lbs.

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Westwood Regional
Veterinary Hospital

REFERRING VET

Dr. A. Gabriel

INVOICE

14954

DATE

9/23/22

ULTRASONOGRAPHIC FINDINGS

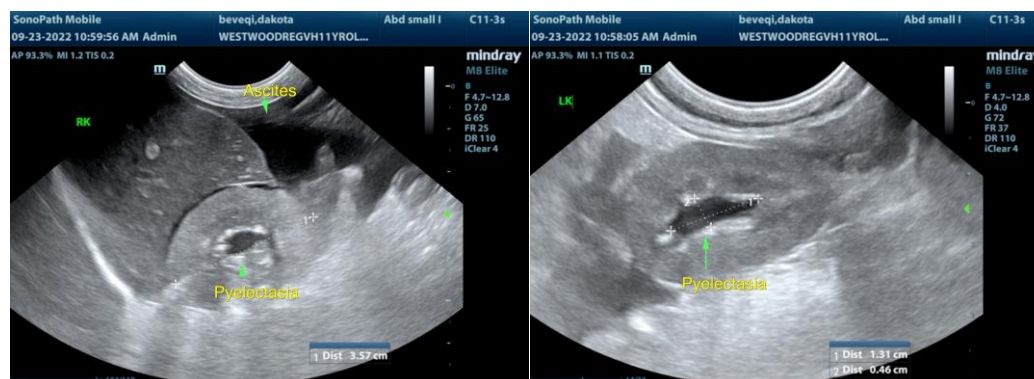
- Moderate to severe RA/RV enlargement - consistent with progressive cor pulmonale
- Moderate to severe pulmonary hypertension - estimated pulmonary pressure gradient based on TR velocity (~70 mmHg)
- Normal to mildly subnormal left heart volume
- Congestive hepatopathy with concurrent moderate to significant volume ascites
- Nonspecific moderate bilateral chronic renal changes with moderate pyelectasia
- Heterogeneous to mildly prominent pancreas - edema, potential for low-grade inflammation cannot be excluded
- prominent to irregular right adrenal gland - patient / age-related variant, adenomatous change, benign hyperplasia, potential for concurrent adrenal neoplasia thought less likely yet cannot be definitively excluded

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Unfortunately, the degree of RA/RV enlargement combined with moderate to severe pulmonary hypertension is consistent with cardiogenic hepatic congestion and secondary ascites.

Hospitalization with patient stabilization and as-needed oxygen therapy is recommended. Pimobendan 0.3 mg/kg PO BID, Spironolactone / Lasix combination, both 1.0-2.0 mg/kg PO BID, Sildenafil 1.0-2.0 mg/kg PO BID to TID with as-needed respiratory support is recommended. Close monitoring of renal parameters, given the evidence of mild azotemia, as well as an assessment of systemic BP is suggested. If evidence of hypertension, ACE inhibitor medication 0.5 mg/kg PO BID may be considered if BP > 130, (Not advised if BP < 130).

This patient is at high risk for potential sudden death. Exercise restriction is advised. Recheck echocardiogram is recommended in 4 weeks, sooner if persistent clinical signs. However, a very guarded to potential unfavorable long-term prognosis is indicated.





PATIENT

Dakota Beveqi

SPECIES

Canine

BREED

Yorkshire Terrier

SEX

FS

AGE

11 yrs

WEIGHT

8.7 lbs.

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Westwood Regional
Veterinary Hospital

REFERRING VET

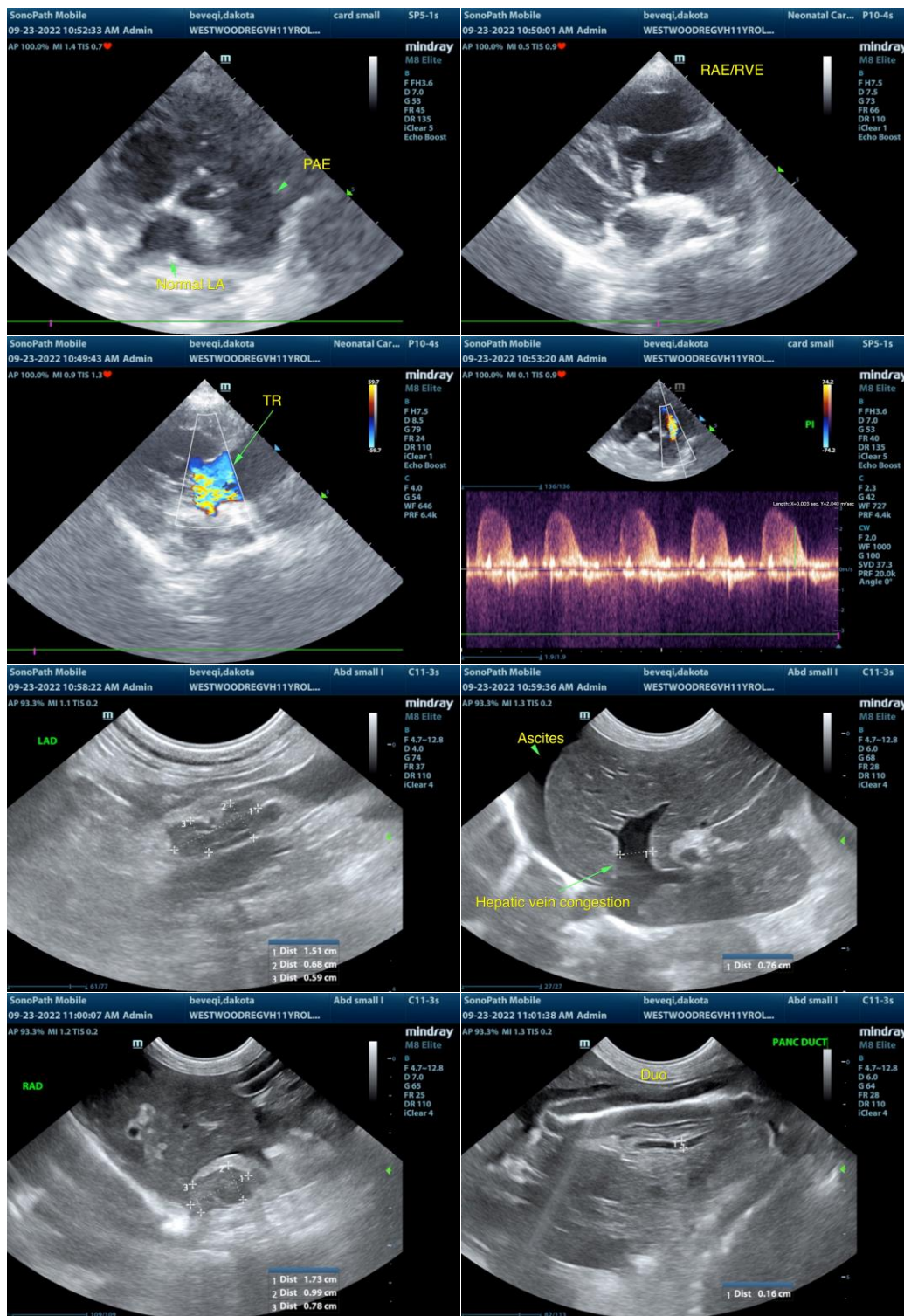
Dr. A. Gabriel

INVOICE

14954

DATE

9/23/22



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.



PATIENT

Dakota Beveqi

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.

SPECIES

Canine

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com

BREED

Yorkshire Terrier

SEX

FS

AGE

11 yrs

WEIGHT

8.7 lbs.

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

**IMAGING
PERFORMED BY**

Kelly Vazquez

HOSPITAL NAME

Westwood Regional
Veterinary Hospital

REFERRING VET

Dr. A. Gabriel

INVOICE

14954

DATE

9/23/22