



## PATIENT

Abby Ezzi

## SPECIES

Feline

## BREED

DSH

## SEX

FS

## AGE

15 years

## WEIGHT

5.6 lbs.

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Jessica Miller

## HOSPITAL NAME

Blairstown AH

## REFERRING VET

Dr. Harker

## INVOICE

15548

## DATE

11/22/22

## PRESENTING CLINICAL SIGNS

Weight loss, gallop heart sounds and intermittent grade 2 murmur. Current meds: Amlodipine 0.625mg PO SID

Abnormal PE/Chem/CBC/UA Results: Stage 2 CKD. UASG: 1.015

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm)	LVIDd (cm)	LVWd (cm)	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT		142	0.41	1.4	0.44	55	87
FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART BASE (Sisson)	LA 2D 4-chamber long axis AS to FW (Sisson) (cm)	LVOT VEL. (m/s)	RVOT VEL. (m/s)	IVRT (m/)	
NORMAL PARAMETER	<1.5	0.88-1.79	0.7-1.7	<1.6	<1.3	40-60	
PATIENT	1.2	1.2	1.2	1.1	0.91	NM	
Adapted from June Boon, Veterinary Echocardiography, 1998							
Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705							

## Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate LA measurements. The cranial and caudal **mitral** valve leaflets presented normal linear structure and kinetics. No MR was noted on Doppler. The **left ventricle** presented normal thicknesses with areas of minor a-linear myocardium without evidence of LV dilated or restricted. The **myocardium** presented normal echogenicity with evidence of minor myocardial remodeling. **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 and angles of the myocardium. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. Normal measured LVOT velocity was noted. 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 and kinetics. Trace TR was present on Doppler (not considered to be clinically significant). 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). Normal RVOT velocity was noted. No visible **pericardial** or free pleura fluid was noted or extra cardiac pathology in the visible planes. The cranial **mediastinum and pericardial regions** were free of masses in the visible window.



**PATIENT**

**Urinary System**

Abby Ezzi

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.

**SPECIES**

Feline

**BREED**

The area of the aortic trifurcation was free of pathology.

DSH

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 3.1 cm in length. The right kidney measured 3.5 cm in length.

**SEX**

FS

**AGE**

**Adrenal Glands**

15 years

The bilateral adrenal glands were normal in to mildly prominent size without evidence of neoplastic criteria. The mildly prominent adrenal glands are likely consistent with patient variant. Pinpoint areas of mineralization were present without capsular distortion or overt tumors. This is an age-related finding and not pathological. The left adrenal gland measured 0.46 width and the right adrenal gland measured 0.52 width.

**WEIGHT**

5.6 lbs.

**INTERPRETED BY**

**Spleen**

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

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. 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. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted. The spleen measured 0.82 cm width at the level of the hilus.

**IMAGING PERFORMED BY**

Jessica Miller

**Liver/ Gallbladder**

**HOSPITAL NAME**

Blairstown AH

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and mild parenchymal remodeling. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

**REFERRING VET**

Dr. Harker

**Gastrointestinal**

**INVOICE**

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material. The pylorus wall width measured 0.28 cm.

15548

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. The duodenum wall measured 0.26 cm width. The jejunum wall measured 0.20 cm width.

**DATE**

11/22/22

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



## PATIENT

Abby Ezzi

## SPECIES

Feline

## BREED

DSH

## SEX

FS

## AGE

15 years

## WEIGHT

5.6 lbs.

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Jessica Miller

## HOSPITAL NAME

Blairstown AH

## REFERRING VET

Dr. Harker

## INVOICE

15548

## DATE

11/22/22

## Pancreas

The left limb, right limb, and base of the pancreas presented hypoechoic to heterogeneous echogenicity compared to adjacent omental fat. Mild asymmetrical capsule margination was present with mild variable parenchymal swelling and mild peripancreatic reactivity / inflammation. No overt evidence of neoplasia.

## Free Abdomen

No omental masses, lymphadenopathy, or evidence of peritoneal free fluid were noted.

## ULTRASONOGRAPHIC FINDINGS

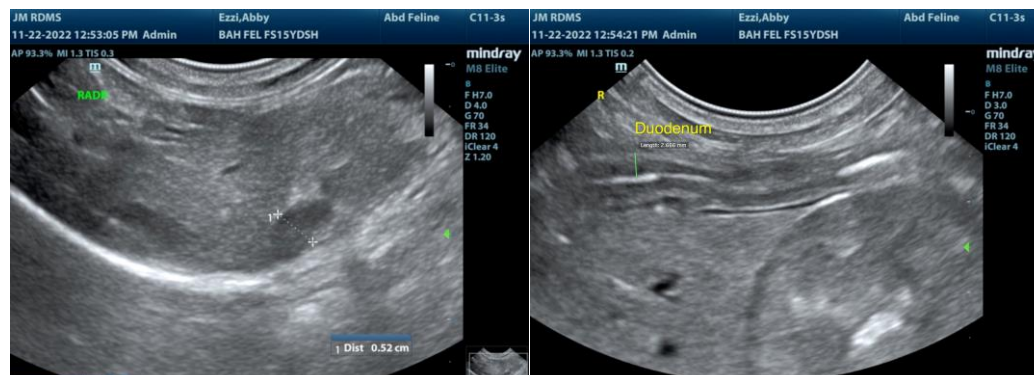
- Normal echocardiogram - probable benign physiologic/flow murmur
- Bilateral chronic renal changes
- Mild chronic active pancreatitis pattern
- Overtly normal gastrointestinal tract

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered. Assessment for evidence of cranial abdominal or subxiphoid discomfort associated with the pancreas is recommended. A GI panel to include PLI/TLI/Cobalamin/Folate is suggested for further assessment of the pancreas, as well as assessment of nonstructural intestinal disease as a contributing factor to the patient's weight loss.

Three-view chest radiographs are recommended, if not done, to rule out occult thoracic pathology as a contributing factor.

Recheck echocardiogram is recommended in 6 months, sooner if murmur intensity increases or clinical signs consistent with heart disease arise. ECG assessment may be considered if detectable arrhythmia.





**PATIENT**

Abby Ezzi

**SPECIES**

Feline

**BREED**

DSH

**SEX**

FS

**AGE**

15 years

**WEIGHT**

5.6 lbs.

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Jessica Miller

**HOSPITAL NAME**

Blairstown AH

**REFERRING VET**

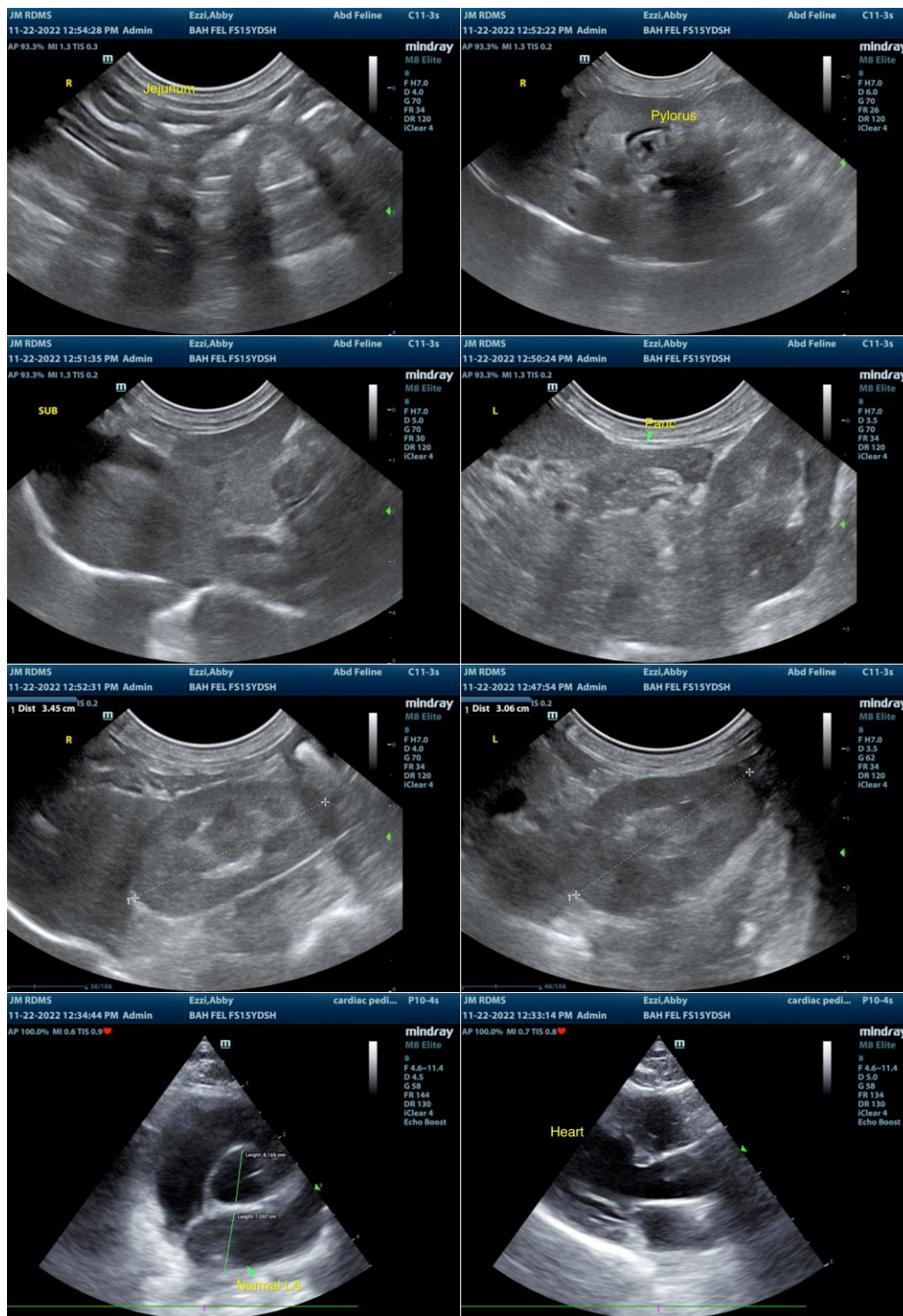
Dr. Harker

**INVOICE**

15548

**DATE**

11/22/22





**PATIENT**

Abby Ezzi

**SPECIES**

Feline

**BREED**

DSH

**SEX**

FS

**AGE**

15 years

**WEIGHT**

5.6 lbs.

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Jessica Miller

**HOSPITAL NAME**

Blairstown AH

**REFERRING VET**

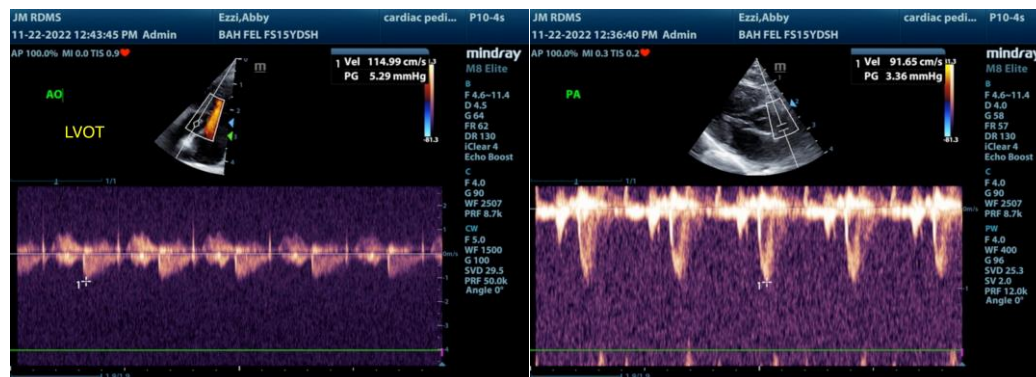
Dr. Harker

**INVOICE**

15548

**DATE**

11/22/22



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.

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