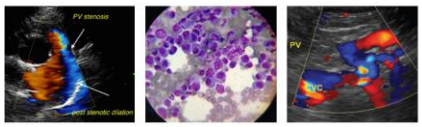
IMAGING PERFORMED BY
svsimaging.net 309-737-3070



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT
Lizzie Bowers

SPECIES
Canine

BREED
Golden Retriever

SEX
FS

AGE
10yr

WEIGHT
80lb

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

IMAGING PERFORMED BY
Sarah Pender CVT

HOSPITAL NAME
SVS Imaging QC

REFERRING VET
Dr. Bowers

INVOICE
11206ag

DATE
07/26/2022

PRESENTING CLINICAL SIGNS

History: Very general, non-specific symptoms. Seems to tire a little more easily lately, panting more with activity, not eating with quite as much excitement as she normally does. Still eating and drinking her normal amount, no v/d/c/s.

Abnormal PE/Chem/CBC/UA Results: Overall normal exam findings, CBC/Chem were mostly unremarkable - ALP mildly elevated at 355, 4Dx test was negative

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN AND HEART

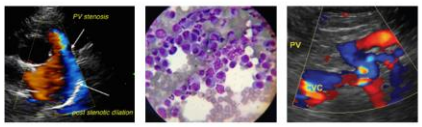
CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
PATIENT				1.37	43	76	0.5
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT** (kg)	**LA** 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	75	1.0	0.65		4.1	4.1	

Cardiac Presentation

The echocardiogram in this patient demonstrated normal left atrial size based on 3 separate methods of LA evaluation. The cranial and caudal mitral valve leaflets presented subtle thickening with normal extension in systole, and union in diastole with normal kinesis. Minor eccentric MR present on Doppler. 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 subtle thickening with normal kinesis. Minor TR was present on Doppler. 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, cystourethral junction, and visible pelvic urethra to a depth of 2 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 were noted.



PATIENT

Lizzie Bowers

SPECIES

Canine

BREED

Golden Retriever

SEX

FS

AGE

10yr

WEIGHT

80lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Sarah Pender CVT

HOSPITAL NAME

SVS Imaging QC

REFERRING VET

Dr. Bowers

INVOICE

11206ag

DATE

07/26/2022

Normal size and margination was 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 8.1 cm in length. The right kidney measured 7.4 cm in length.

The area of the aortic trifurcation was free of pathology.

Adrenal Glands

The left adrenal gland was uniform in size and contour with no evidence of adrenomegaly or tumors. The left adrenal gland measured 0.65 cm width at the caudal pole and 2.4 cm length.

The right adrenal gland exhibited a mild to moderately expansive nonhomogeneously hyperechoic nodule occupying the majority of the mid to cranial adrenal gland. The right adrenal gland measured 0.45 cm width at the caudal pole and 3.4 cm length. The right adrenal nodule to small mass measured 2.1 cm x 1.8 cm. No obvious evidence of vascular invasion or capsular escape was noted.

Spleen

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.

Liver

The liver presented enlarged in size. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with primarily anechoic luminal content. The cystic and common bile ducts were normal.

Gastrointestinal

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 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

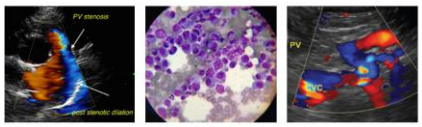
The parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.

Free Abdomen

No omental masses or peritoneal effusion was present.

Intermittent enlarged mesenteric and potential medial iliac lymph nodes were present. The lymph nodes were essentially isoechoic to adjacent omentum without evidence of peripheral inflammation and maintaining a normal width: length ratio (<0.5). An example measured 0.85 cm in diameter.

IMAGING PERFORMED BY
svsimaging.net 309-737-3070



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT

Lizzie Bowers

SPECIES

Canine

BREED

Golden Retriever

SEX

FS

AGE

10yr

WEIGHT

80lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Sarah Pender CVT

HOSPITAL NAME

SVS Imaging QC

REFERRING VET

Dr. Bowers

INVOICE

11206ag

DATE

07/26/2022

ULTRASONOGRAPHIC FINDINGS

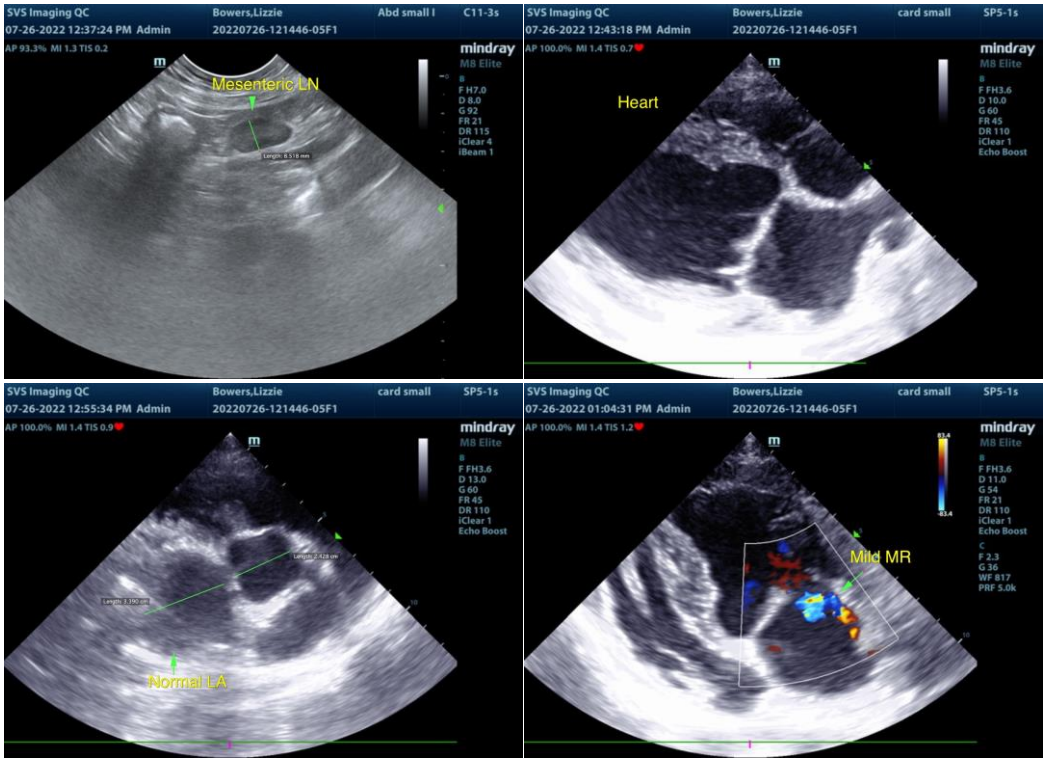
- Mild to moderately expansive nonhomogeneous right adrenal nodule/mass
- Mild chronic renal changes
- Vacuolar hepatopathy pattern-subjectively benign
- Intermittent mildly prominent subjectively benign mesenteric/medial iliac lymph nodes
- Overtly normal cardiac structure and function for age
- Mild MR/TR

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No evidence of significant structural or functional cardiomyopathy as an obvious cause of exercise intolerance was observed. The mild MR/TR are not considered clinically significant with minimal hemodynamic effect.

The primary abdominal finding is the right adrenal nodule to small mass. This mass may indicate functional vs nonfunctional adenomatous change, benign hyperplasia, granuloma with primary concern for neoplastic criteria given the expansive nature of the mass/nodule. Systemic BP suggested to assess for evidence of hypertension which may allude to a pheochromocytoma. Adrenal testing with LDDST is not overtly recommended given the lack of reported clinical signs which may suggest Cushing's syndrome. Ideally CT assessment of the right adrenal gland to rule out vascular invasion and for surgical planning with a right adrenalectomy warranted.

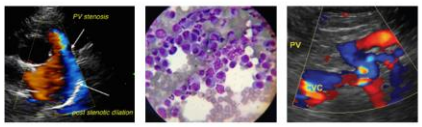
Hepatosupportive medications including Denamarin +/- Ursodiol may prove beneficial. Sonographic monitoring of the right adrenal gland would be a more conservative approach.



IMAGING PERFORMED BY

svsimaging.net 309-737-3070

SVS IMAGING



SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT

Lizzie Bowers

SPECIES

Canine

BREED

Golden Retriever

SEX

FS

AGE

10yr

WEIGHT

80lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Sarah Pender CVT

HOSPITAL NAME

SVS Imaging QC

REFERRING VET

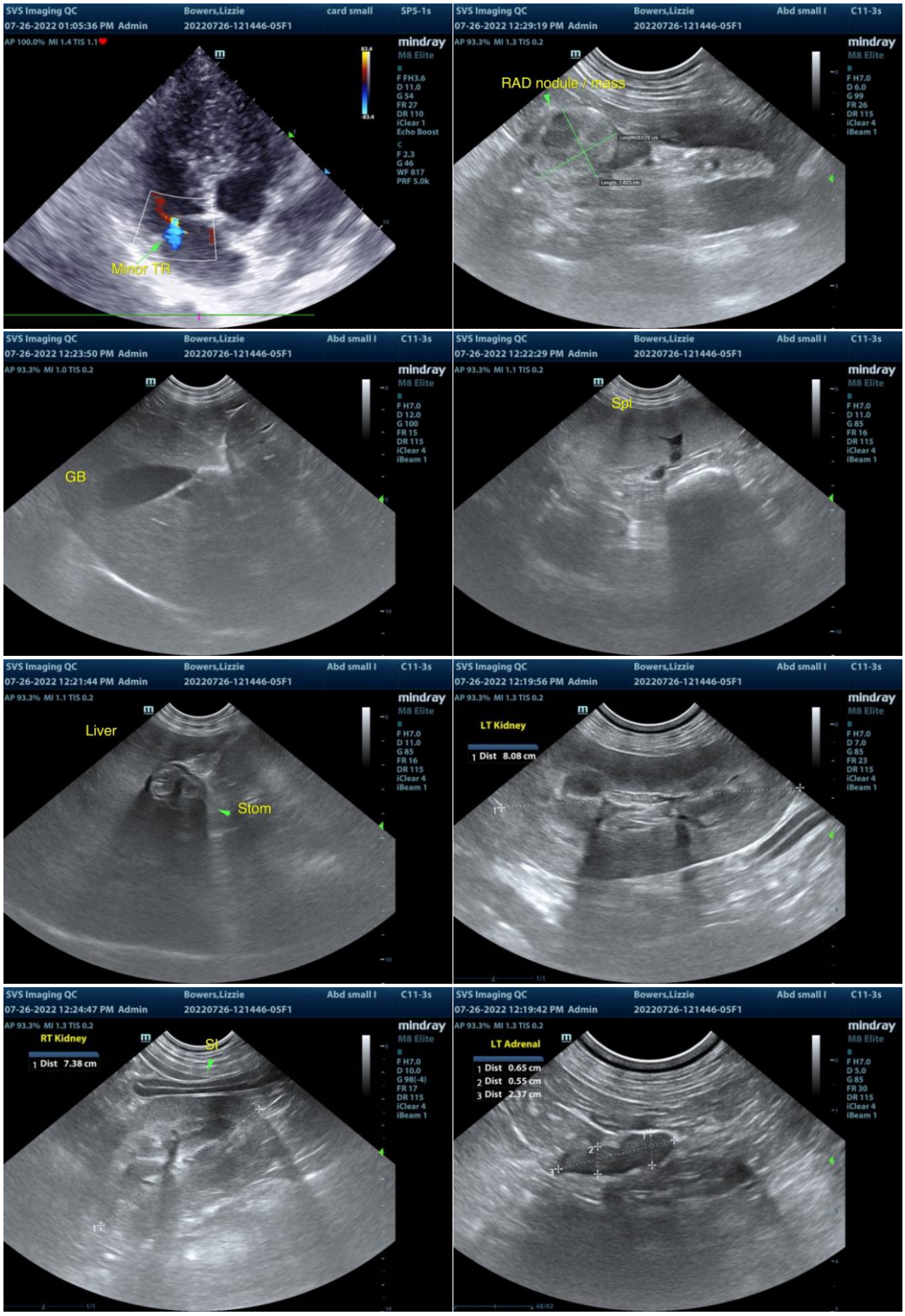
Dr. Bowers

INVOICE

11206ag

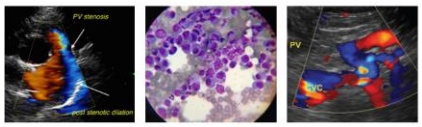
DATE

07/26/2022



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



PATIENT

Lizzie Bowers

SPECIES

Canine

BREED

Golden Retriever

SEX

FS

AGE

10yr

WEIGHT

80lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Sarah Pender CVT

HOSPITAL NAME

SVS Imaging QC

REFERRING VET

Dr. Bowers

INVOICE

11206ag

DATE

07/26/2022

can be of any further assistance please contact me.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

info@SonoPath.com