



**PATIENT**

Annie Biggs

**SPECIES**

Canine

**BREED**

Mini Schnauzer

**SEX**

Spayed Female

**AGE**

12 Years

**WEIGHT**

6.6 kg

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Erin Wicks

**HOSPITAL NAME**

Shores VEC

**REFERRING VET**

Dr. Lupole

**INVOICE**

13878

**DATE**

2/11/22

**PRESENTING CLINICAL SIGNS**

History: Presented at our hospital for vomiting and lethargic. P wasn't eating very well last week so went to rDVM on Tuesday for SQ fluids and Cerenia inj. Second visit Thur AM for more SQ fluids. Wasn't eating well again on Wednesday. P vomited once before visit to rDVM and then twice more with male O at home and then an additional two more times with female O at home. P has been belching a lot and when P was out going to the bathroom, was very gassy. Possible softer stool, last BM ended a bit softer than normal. Previous Health Concerns: Cushing and Renal Disease Current Medications: Omeprazole (started Tuesday, one dose today), Denamarin, Vetoryl

Abnormal PE/Chem/CBC/UA Results: Results of Diagnostics: EPOC – BUN > 120, Creat 3.4, Glu 155, Cl 128; Radiographs – sig renal calcification noted bilat 1/21/22 rdvm urine results show no UTI, crystals, etc. The urine is dilute (hx of CKD and Cushing's), but that's chronic for her.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**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 pelvic urethra was imaged 2.0 cm beyond the cystourethral junction.

The **kidneys** revealed moderate degenerative changes with corticomedullary mineralization and echogenic fibrotic cortices. The calculi were nonobstructive at the time of the sonogram. The right kidney measured 4.13 cm. The left kidney measured 4.0 cm.

**Adrenal Glands**

The **adrenal glands** appeared slightly enlarged and swollen. No evidence of focal capsular expansion or invasion into the phrenic veins were noted. No overt suspicion of neoplasia was noted. This is considered likely a moderate hyperplastic change associated with stress or adrenal endocrinopathy (PDH). If isosthenuria is persistently present and the patient morphologically suggests Cushing's disease then ACTH testing would be indicated. The left adrenal gland measured 2.13 cm x 0.79 cm at the cranial pole and 0.76 cm at the caudal pole. The right adrenal gland measured 0.8 cm at the cranial pole and 0.5 cm at the caudal pole.

**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.

**Liver**

The **liver** presented heterogenous parenchyma with increased portal markings and coarse architecture. Slight undulating capsular contour was noted. The gallbladder and common bile duct were unremarkable. This is consistent with chronic inflammatory hepatopathy.

**Gastrointestinal**



## PATIENT

Annie Biggs

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. 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.

## SPECIES

Canine

## Pancreas

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Some mild parenchymal remodeling, however, with mild deviation from curvilinear normalcy was observed. Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxyphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

## BREED

Mini Schnauzer

## SEX

Spayed Female

## ULTRASONOGRAPHIC FINDINGS

- Moderate degenerative renal changes. The patient may have passed a calculus recently.
- Bilateral adrenal hypertrophy
- Hepatopathy
- Age-related renal changes

## AGE

12 Years

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The kidneys do not appear end stage but do appear to be 50-60% compromised. Complicating factors such as toxin exposure, infectious disease, UTI and hypertension should all be considered. 72-hour IV fluid protocol and GI protectants would be warranted. Treatment for UTI, if any inflammatory sediment is present.

## WEIGHT

6.6 kg

## INTERPRETED BY

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

## IMAGING PERFORMED BY

Erin Wicks

## HOSPITAL NAME

Shores VEC

## REFERRING VET

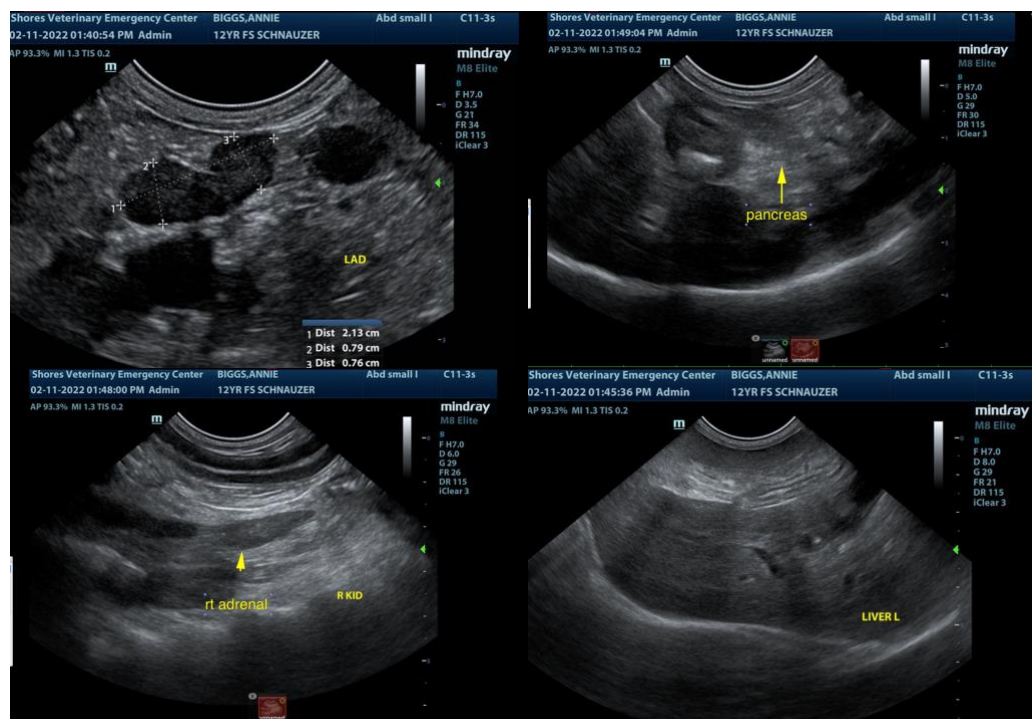
Dr. Lupole

## INVOICE

13878

## DATE

2/11/22





**PATIENT**

Annie Biggs

**SPECIES**

Canine

**BREED**

Mini Schnauzer

**SEX**

Spayed Female

**AGE**

12 Years

**WEIGHT**

6.6 kg

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Erin Wicks

**HOSPITAL NAME**

Shores VEC

**REFERRING VET**

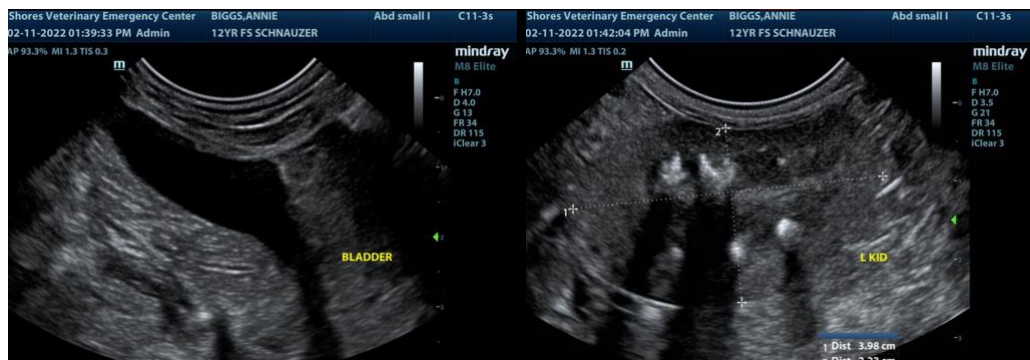
Dr. Lupole

**INVOICE**

13878

**DATE**

2/11/22



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