



**PATIENT**

Charlie Johnson

**SPECIES**

Canine

**BREED**

Yorkie

**SEX**

MN

**AGE**

14 years

**WEIGHT**

15.9 lbs.

**PRESENTING CLINICAL SIGNS**

Swollen/pot belly appearance to abdomen. No other significant findings.  
Abnormal PE/Chem/CBC/UA Results: Chronic elevated and increasing ALP. Normal ACTH stim.  
test done 7/1/22. Current Medications Denamarin 225 mg

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra exhibited normal tone to a depth of 3.0 cm. Mild nonuniform thickening of the urinary bladder wall was present. Multiple, dependent hyperechoic focal echogenicities with distal acoustic shadowing were present in the dependent lumen. An example of an echogenicity measured 0.80 cm diameter. Suspect concurrent regional dorsal cystitis was noted. Anechoic urine was present otherwise.

The residual prostate exhibited mild prominent size given the patient size with maintained symmetrical capsule contour. Mild nonhomogeneous parenchyma with pinpoint parenchymal hyperechoic foci were present. The residual prostate measured 1.3 cm in diameter.

The area of the aortic trifurcation was free of pathology.

**INTERPRETED BY**

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

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. Multiple small cortical cysts were present along with pinpoint to focal medullary mineral. No evidence of pelvic dilation was present. The left kidney measured 5.6 cm in length. The right kidney measured 5.5 cm in length.

**IMAGING PERFORMED BY**

Sara Hansen

**Adrenal Glands**

The left adrenal gland exhibited asymmetrical enlargement with subjective maintained capsule integrity. Variably hypoechoic parenchyma was noted with no evidence of parenchymal mineralization was noted. The left adrenal gland measured 3.3 cm length x 1.5 cm width at the cranial pole and 0.87 cm width at the caudal pole.

**HOSPITAL NAME**

Pleasant Hill AH

The right adrenal gland was mildly prominent in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The right adrenal gland measured 3.2 cm length x 0.9 cm width in the caudal pole. No evidence of parenchymal mineralization was noted.

**REFERRING VET**

Dr. Supan

**INVOICE**

14226

**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

**DATE**

7/6/22



**PATIENT**

Charlie Johnson

**SPECIES**

Canine

**BREED**

Yorkie

**SEX**

MN

**AGE**

14 years

**WEIGHT**

15.9 lbs.

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Sara Hansen

**HOSPITAL NAME**

Pleasant Hill AH

**REFERRING VET**

Dr. Supan

**INVOICE**

14226

**DATE**

7/6/22

parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age-related remodeling with minor potential for inflammatory or neoplastic disease.

**Liver/ Gallbladder**

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 containing anechoic content with moderate, nondependent to congealed yet nonorganized mildly hyperechoic gallbladder debris. The gallbladder walls were sonographically normal without evidence of inflammatory changes. No evidence of peripheral gallbladder inflammation was noted. 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 pancreas base and right pancreatic limb was hyperechoic to adjacent omental fat with diffuse parenchyma remodeling. The capsule of the pancreas was mildly asymmetrical in contour without evidence of peripancreatic inflammation. These changes may suggest chronic inflammation, fibrosis, or saponification if previous history of pancreatitis. No overt signs of pancreatic neoplasia.

**Free Abdomen**

No overt lymphadenopathy or peritoneal effusion was present.

**ULTRASONOGRAPHIC FINDINGS**

- Cystic calculi with probable regional mild dorsal cystitis
- Mildly prominent residual prostate exhibiting pinpoint hyperechoic parenchyma foci
- Enlarged to variably hypoechoic left adrenal gland
- Concurrent prominent right adrenal gland
- Subjective vacuolar hepatopathy pattern - benign
- Moderate nondependent to congealed gallbladder debris - possible emerging gallbladder mucocele



**PATIENT**

- Chronic pancreatitis pattern - potential for pancreatic fibrosis

Charlie Johnson

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**SPECIES**

Urine culture and sensitivity on a sterile urine sample Is recommended.

Canine

The prostatic presentation may indicate patient or age-related variant, given the pinpoint hyperechoic residual prostatic foci which may indicate pinpoint areas of emerging mineralization. The possibility of emerging prostatic pathology cannot be excluded. Sonographic monitoring of the residual prostate for evidence of progressive parenchymal changes or enlargement Is suggested.

**BREED**

Yorkie

**SEX**

Considerations for the bilateral adrenal glands may include functional / nonfunctional adenomatous change, and benign hyperplasia, with potential for neoplastic criteria primarily associated with the left adrenal gland.

MN

**AGE**

14 years

If clinical signs consistent with Cushing's Syndrome are present, recheck adrenal testing with LDDST, given higher propensity for increased false negative with ACTH Stimulation test, and systemic blood pressure to assess for evidence of hypertension which may allude to a left pheochromocytoma, could be considered. Likewise, sonographic monitoring of the left adrenal gland for evidence of progressive enlargement is recommended.

**WEIGHT**

15.9 lbs.

**INTERPRETED BY**

The addition of Ursodiol to current hepatosupportive medications may prove beneficial.

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

**IMAGING PERFORMED BY**

Sara Hansen

**HOSPITAL NAME**

Pleasant Hill AH

**REFERRING VET**

Dr. Supan

**INVOICE**

14226

**DATE**

7/6/22





**PATIENT**

Charlie Johnson

**SPECIES**

Canine

**BREED**

Yorkie

**SEX**

MN

**AGE**

14 years

**WEIGHT**

15.9 lbs.

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Sara Hansen

**HOSPITAL NAME**

Pleasant Hill AH

**REFERRING VET**

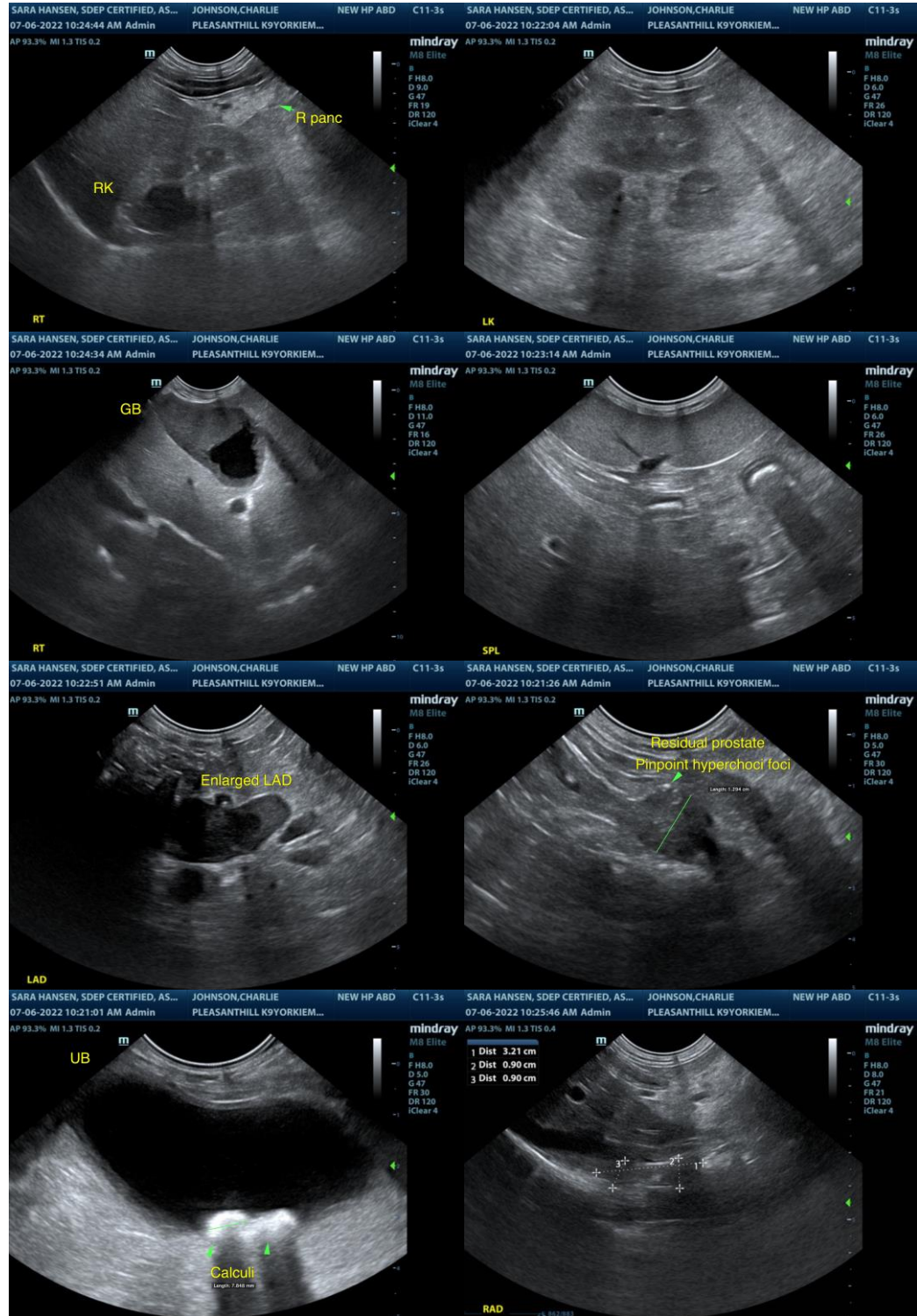
Dr. Supan

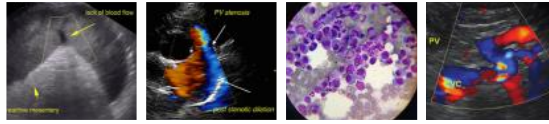
**INVOICE**

14226

**DATE**

7/6/22





**PATIENT**

Charlie Johnson

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.

**SPECIES**

Canine

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.

**BREED**

Yorkie

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

**SEX**

MN

For an additional charge, internal medicine consult can be utilized through SonoPath.com. You can select the internal medicine drop down at <http://spa.sonopath.com/>.

**AGE**

14 years

One of the world's top internists & SonoPath associate Dr. Remo Lobetti BVSc, MMedVet, PhD, DECVIM can evaluate your case through SonoPath. <https://sonopath.com/resources/sonopath-services/internal-medicine-teleconsultation-services>

**WEIGHT**

15.9 lbs.

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Sara Hansen

**HOSPITAL NAME**

Pleasant Hill AH

**REFERRING VET**

Dr. Supan

**INVOICE**

14226

**DATE**

7/6/22