



## PATIENT

Buffy Krulik

## SPECIES

Canine

## BREED

Puggle

## SEX

Spayed female

## AGE

15 years

## WEIGHT

21.1 lbs

## INTERPRETED BY

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

## IMAGING PERFORMED BY

Jessica Miller, RDMS

## HOSPITAL NAME

Andover AH

## REFERRING VET

Dr. Hummel

## INVOICE

42206

## DATE

12/19/22

## PRESENTING CLINICAL SIGNS

History: Seizure on 12/14/22. No current meds.  
Abnormal PE/Chem/CBC/UA Results: AST 305, ALT 1373, Alk Phos 734, BUN/Creat 33, BUN 46, Amylase 2114, precPSL 750, WBC 18.9

## 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 was noted. Ureteral papillae were normal.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. Corticomedullary mineralization was noted in both kidneys. The right kidney measured 4.9 cm. An anechoic cyst was noted in the dorsal cortex measuring 1.76 cm. The left kidney measured 5.22 cm.

### Adrenal Glands

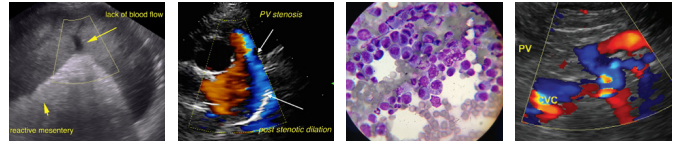
The **adrenal glands** appeared slightly enlarged and swollen. No evidence of focal capsular expansion or invasion into the phrenic veins was noted. No overt suspicion of neoplasia was noted. This is considered likely a hyperplastic change associated with stress or adrenal endocrinopathy (PDH). If isosthenuria is persistently present and the patient morphologically suggests Cushing's disease then ACTH testing would be indicated. The left adrenal gland measured 2.21 x 0.65 cm at the caudal pole and 0.79 cm at the cranial pole. The right adrenal gland measured 2.1 x 1.23 cm at the cranial pole and 0.81 cm at the caudal pole.

### Spleen

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. Occasional, hyperechoic lipogranuloma was noted. 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 was noted.

### Liver

The **liver** revealed an expansive, 6.4 cm parenchymal mass with areas of cavitation. This is suggestive for necrosis. Other nodular changes were noted in the liver. A slight amount of free fluid was noted around the left liver mass. This is suggestive for hemorrhage or inflammatory based fluid. The cranial liver, and right liver as well as portal hilus appeared unremarkable with only minor remodeling. The



**PATIENT** gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal.

Buffy Krulik

**SPECIES** *Gastrointestinal*

Canine

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.

**BREED**

Puggle

*Pancreas*

**SEX**

Spayed female

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

**AGE**

15 years

**ULTRASONOGRAPHIC FINDINGS**

**WEIGHT**

21.1 lbs

Left-sided precarious liver mass. Suspect carcinoma with the possibility of non-neoplastic granulomatous disease.

Bilateral adrenal hypertrophy, potential pituitary dependent hyperadrenocorticism.

Moderate degenerative renal changes.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The liver mass itself appears resectable as the cranial liver and right liver appeared unremarkable as does the portal hilus other than some remodeling. CT evaluation would be ideal in this patient in the abdomen and skull given the seizure activity followed by left liver lobectomy. IV fluid support is recommended to correct the minor azotemia. Blood pressure measurements are warranted as well. Assessment for potential underlying pituitary dependent Cushing's would be warranted and may be playing a role in the seizure activity.

**IMAGING PERFORMED BY**

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**ABOUT SONOPATH CT SERVICES:**

**REFERRING VET**

Dr. Hummel

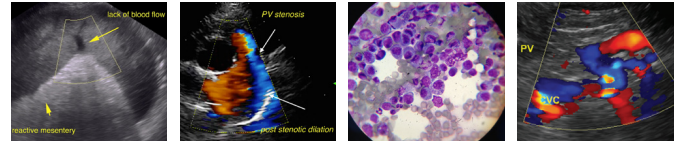
**SonoPath CT Services** are offered at the SonoPath Imaging and Veterinary Education Center, 141 Main St (rt 206), Andover, New Jersey, a 20-minute drive west on route 80/206 North from the route 80/287 interchange/Parsippany, New Jersey. More information can be found at <https://sonopath.com/services/sonopath-ct-services>

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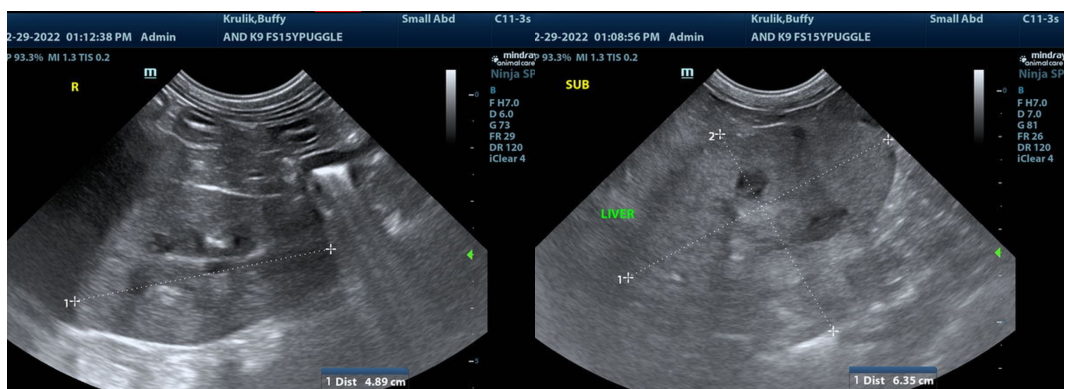
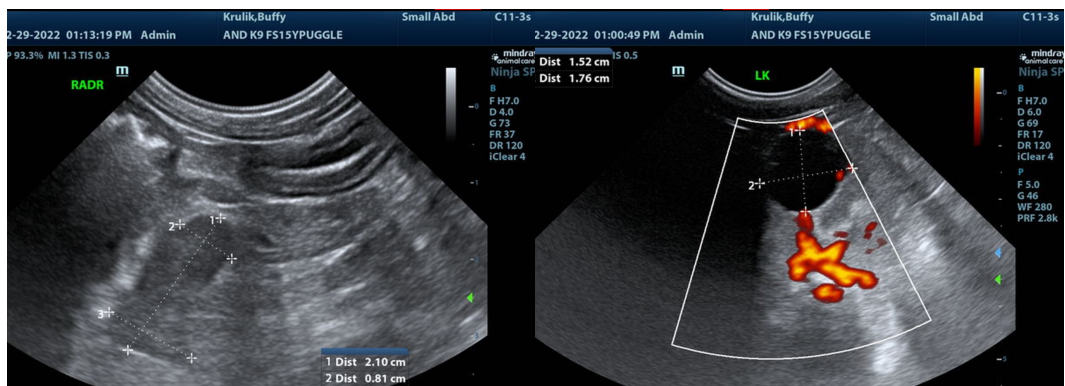
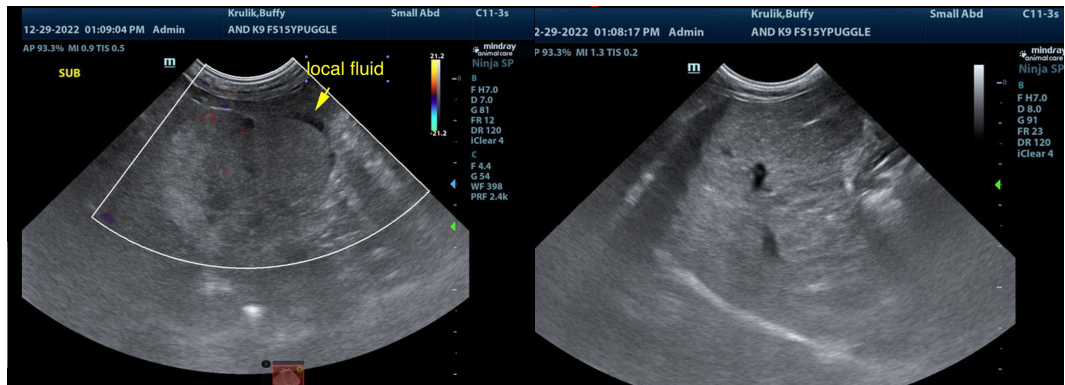
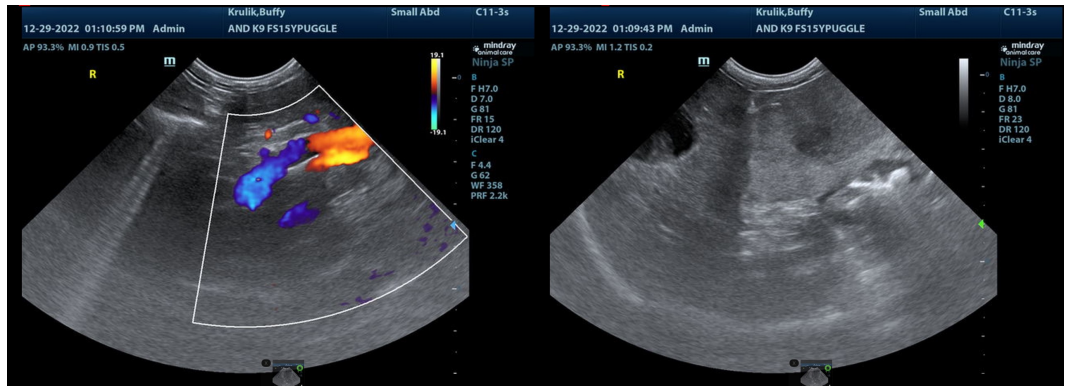
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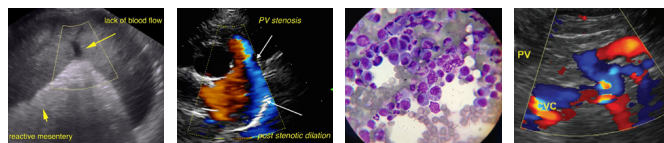
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Eric Lindquist**, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com  
info@SonoPath.com