



**PATIENT PRESENTING CLINICAL SIGNS**

Honey Dolak

**SPECIES**

Canine

**BREED**

King Charles Cavalier

**SEX**

Intact Female

**AGE**

2 years

**WEIGHT**

10.28 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Wymard

**HOSPITAL NAME**

Brookwood AC

**REFERRING VET**

Dr. Wymard

**INVOICE**

42851

**DATE**

12/5/22

History: P presented as a NP wellness exam on 11-29-22 w/ no O concerns. P does drink a lot of water but O notes she has always done this. Otherwise no CS of kidney dz. At previous clinic - In November of 2021, BW showed azotemia - BUN (43), creatinine (1.5), SDMA (33). No USG was performed at this time and the other USG was taken during a UTI so falsely elevated. Lepto PCR was negative. P was treated for UTI using C/S results but no recheck cultured performed. AUS was scheduled to look at kidneys but O did not take P in for this as she was asymptomatic the entire time. O does report P drinks a lot of water but isn't quite sure what normal is. P CBC at this time also showed macrothrombocytopenia (71) and congenital condition was discussed w/ O d/t breed. At the time, previous DVM did not feel comfortable spaying pet w/ both conditions. Disc'd results and highly rec'd rechecking BW + AUS to follow pending results. O approved.

Abnormal PE/Chem/CBC/UA Results: 11-29-22: BUN (47), creatinine (2.1), SDMA (35.1), PLT (60) w/ giant platelets present, USG (1.013), trace proteinuria; all other values WNL O would like to get P spayed. Highly rec'd AUS to evaluate kidneys + coag panel to evaluate clotting ability prior to OVH surgery.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. A minimal amount of urine was present at the time of the sonogram. 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 uterus was mildly thickened. This is consistent with active estrus. The uterus measured 1.0 cm in width. The lumen was not fluid filled.

The left **kidney** was irregular in contour with disrupted architecture and was subnormal in size. The left kidney measured 3.3 cm. Blood flow appeared subjectively subnormal. Cortical collapse was noted at the cranial pole. The right kidney was significantly subnormal in size and measured 2.5 cm. Thin, irregular cortex was noted cranial and dorsally with cortical collapse and disrupted architecture. This is most consistent with primary renal dysplasia with secondary degenerative changes.

**Adrenal Glands**

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 0.4 cm. The right adrenal gland was subnormal in size and measured 0.3 cm.

**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 was noted.



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**Liver**

The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

**Gastrointestinal**

The **stomach** revealed a fluid filled lumen with hyperperistalsis. Low-grade irritation is possible owing to azotemia. The small intestines and colon were unremarkable.

**Pancreas**

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.

**ULTRASONOGRAPHIC FINDINGS**

Dysplastic kidneys with subjectively subnormal right adrenal gland, normal left adrenal gland.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The macrothrombocytopenia is consistent with congenital history and is not likely playing a role. Primary renal dysplasia is suspected. Screening for concurrent Addison's is warranted with baseline cortisol or ACTH stimulation. 48-hour IV fluid protocol and correction of the azotemia with GI protectants followed by ovariohysterectomy and renal biopsy can be considered; however, the surgery should be done rapidly to arrive at a definitive diagnosis. Ovariohysterectomy is warranted in order to ensure that this patient is not reproducing and passing on the probable renal dysplasia genetically. Renal biopsy can be taken at that time to confirm dysplasia. However, regardless, the long term prognosis is very guarded depending upon the ability of the kidneys to rebound from the current azotemia. If the patient is able to be stabilized from the current azotemia then surgery would carry a mild risk, but would be useful for the reasons listed above. Blood pressure measurements are warranted as well as urine culture if any inflammatory sediment is present.



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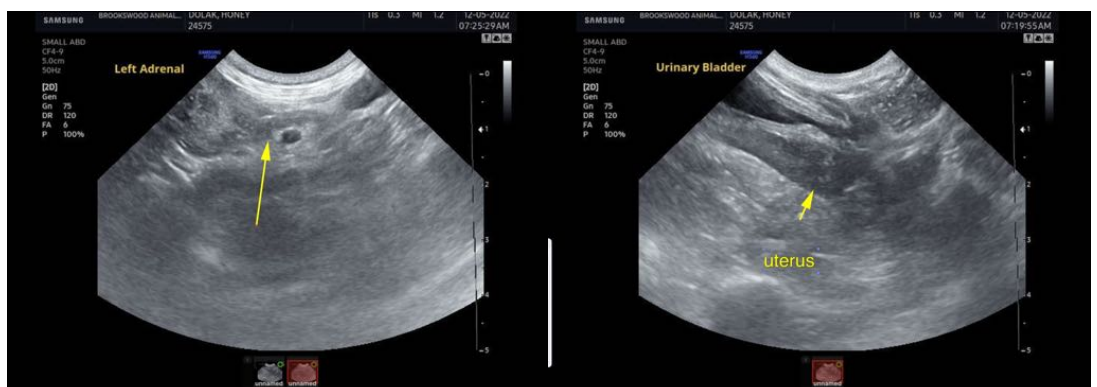
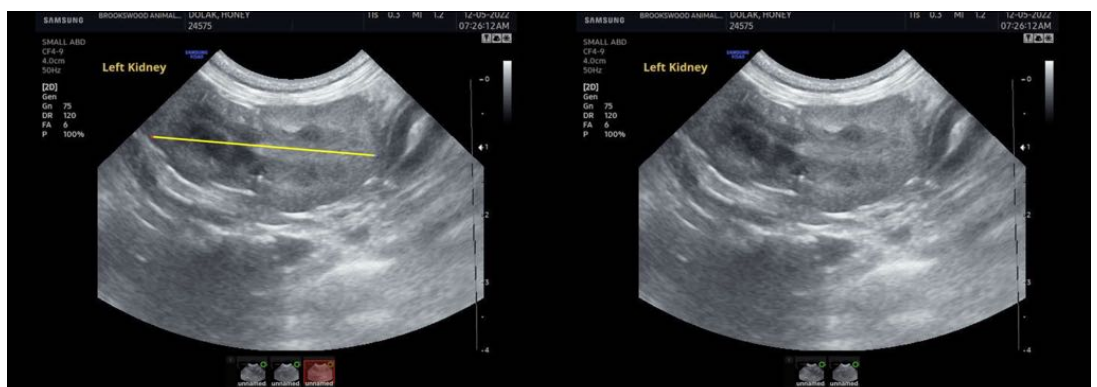
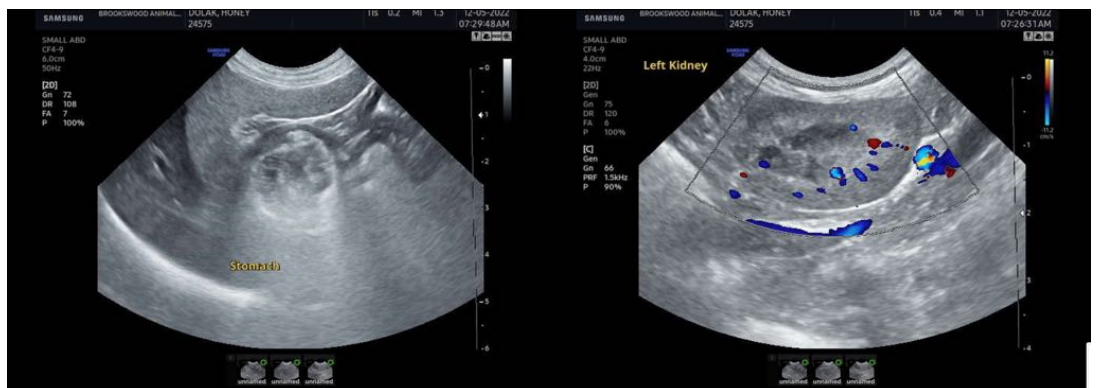
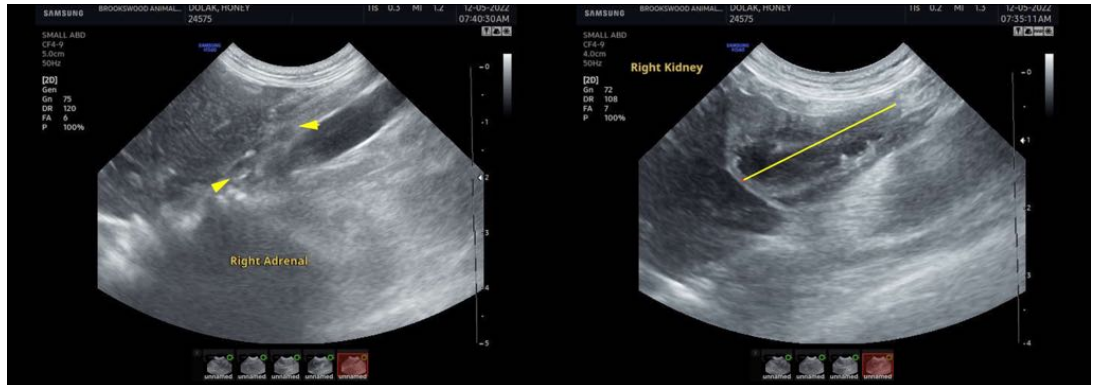
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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  
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