



**PATIENT**

Hana Smith

**SPECIES**

Canine

**BREED**

Miniature Poodle

**SEX**

Spayed Female

**AGE**

12 Years

**WEIGHT**

5 Pounds

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Ruth Loomis

**HOSPITAL NAME**

Brookwood AC

**REFERRING VET**

Ruth Loomis

**INVOICE**

16737

**DATE**

8/5/22

**PRESENTING CLINICAL SIGNS**

History: P presented for screening as P maybe undergoing cataract surgery. Hx of elevated liver value  
Abnormal PE/Chem/CBC/UA Results: Alt 247 All else WNL including T4

**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 **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some minor 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. Both kidneys measured 4.0 cm.

**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 0.5 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 were noted. Caudal folding of the spleen was noted.

**Liver**

The **liver** presented heterogenous parenchyma with increased portal markings and coarse architecture. Slight undulating capsular contour was noted. This is a moderate change and consistent with chronic inflammatory hepatopathy.

The **gallbladder** was overdistended and rounding of the gallbladder noted. Excessive gallbladder debris was noted. This is consistent with emerging mucocele formation. The majority of the bile was immobile.

**Gastrointestinal**

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.

**Pancreas**



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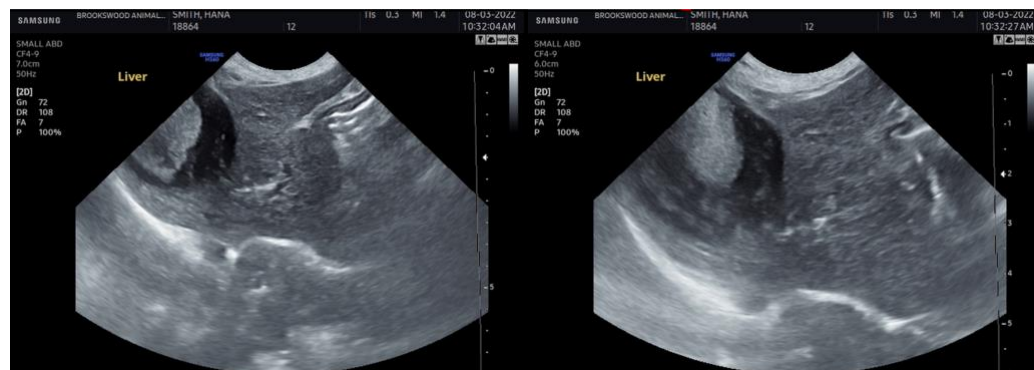
Diffuse hyperechoic changes were present in the area of the **pancreas**. The pancreatic remodeling was evident with multifocal to diffuse hyperechoic changes. These changes are consistent with fibrosis, amyloid, saponification of fat and may contain areas of low-grade chronic active inflammation especially if pain on imaging (+ Murphy sign) was present +/- focal subxyphoid palpation reveals pain response. No overt masses were noted. This is a moderate change.

**ULTRASONOGRAPHIC FINDINGS**

- Nonspecific chronic inflammatory hepatopathy with emerging gallbladder mucocele
- Age-related renal and pancreatic changes

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

A gallbladder motility study would be ideal in this patient, if immobile, then cholecystectomy is indicated. Ursodiol therapy over a 6-8 week period and recheck sonogram could be considered. Regarding the necessity for anesthesia, I recommend bile acid profile to assess for any dysfunction, as moderate degenerative parenchymal hepatic changes are present and the emerging mucocele may be impeding function. Ultrasound guided FNA of the liver could be considered to assess inflammatory cell type.





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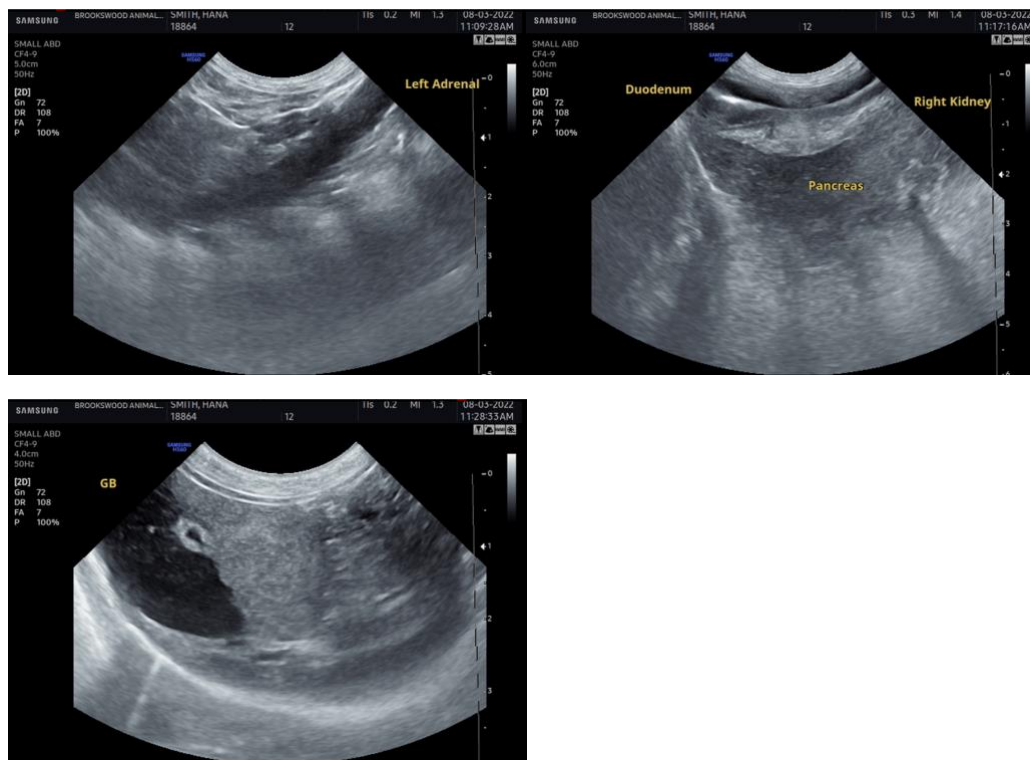
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**The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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