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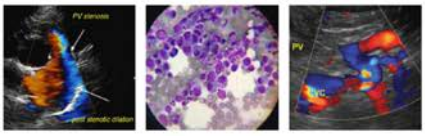

SonoPath
Clinical Sonography & Telecytology
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1-800-838-4268 info@sonopath.com SonoPath.com

**PATIENT**

Abby Hieb

**SPECIES**

Canine

**BREED**

Lab

**SEX**

Spayed Female

**AGE**

4 Years

**WEIGHT**

74 Pounds

**INTERPRETED BY**

Beth Johnson, DVM DACVIM

**IMAGING PERFORMED BY**

Amy Mayhew, LVT

**HOSPITAL NAME**

SVS Imaging MI

**REFERRING VET**

Dr. Joe Hendricks

**INVOICE**

44821

**DATE**

2/7/23

## PRESENTING CLINICAL SIGNS

History of liver changes on ultrasound. Repeat scan. No current clinical signs.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is normal in size (8.0 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

The left kidney is normal in size (8.35 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

### *Adrenal Glands*

The right adrenal gland is normal in size (0.89 cm at the cranial pole and 0.84 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.74 cm at the cranial pole and 0.71 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

### *Spleen*

The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

### *Liver*

There are no discrete nodules or masses observed in this study compared to previous studies. However, the liver is starting to appear subjectively small in size with a markedly undulating or scalloped, almost nodular contour. Patchy ill-defined areas of increased echogenicity are present with reduced visualization of vessels. Visible vasculature and biliary tree appear normal without distention or congestion.

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

### *Gastrointestinal*

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease.

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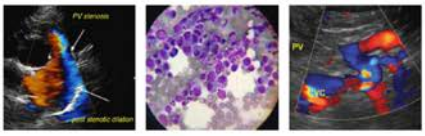

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The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

### *Pancreas*

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

### *Free Abdomen*

There is no evidence of free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

## ULTRASONOGRAPHIC FINDINGS

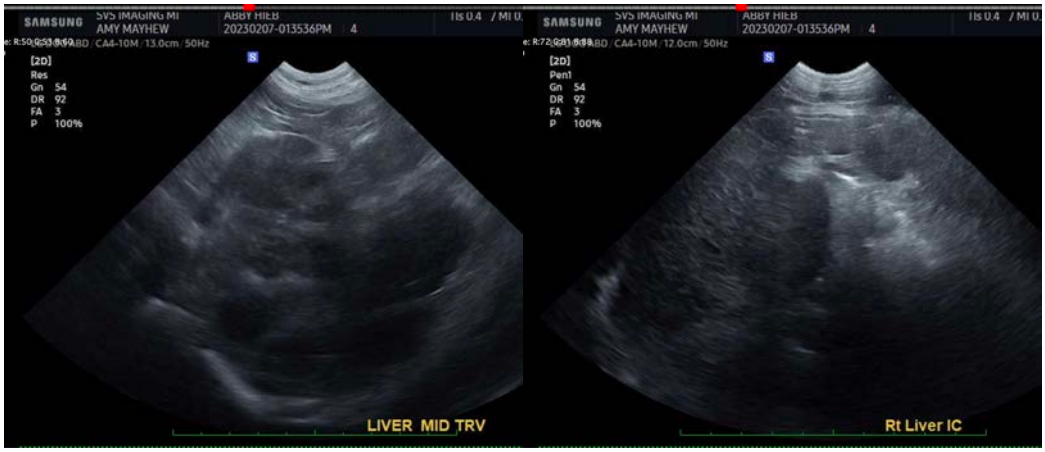
- **Hepatic Fibrosis Pattern –** This appearance is most consistent with chronic hepatitis with fibrosis and/or early cirrhosis. These changes can occasionally be seen with resolved past inflammatory episodes and should therefore be interpreted in combination with clinical signs and/or associated laboratory changes (including bile acids).

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The appearance of the liver compared to previous studies is concerning for progression, and if not very recently evaluated, bile acid testing is recommended to further assess liver function if total bilirubin is normal.

Beyond that, recommendations depend in part on what diagnostics have been done previously and what the results of those diagnostic were, as well as current laboratory values, etc., as the appearance of the liver could in part be scarring secondary to the historical and resolved liver abscesses.

Therefore, since the patient feels well, and if everything else is normal, continued monitoring may be appropriate. However, if there is any laboratory abnormalities and/or any clinical signs, liver sampling is strongly suspected, potentially beginning with a fine needle aspirate if patient's coagulation status is appropriate, but ultimately a liver biopsy, being sure to include copper level assessment, is likely warranted in this patient.



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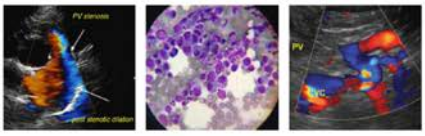

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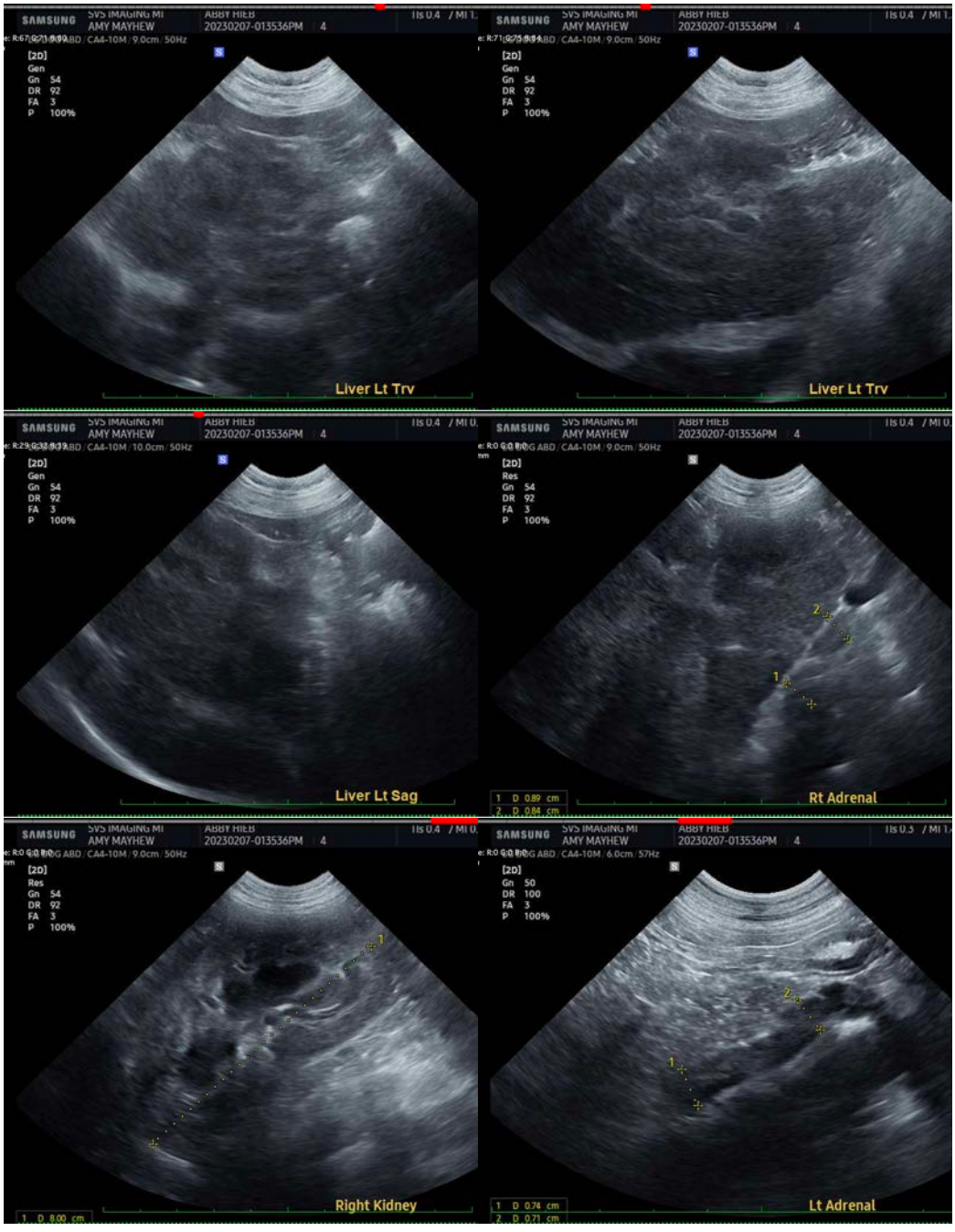

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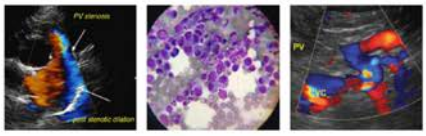

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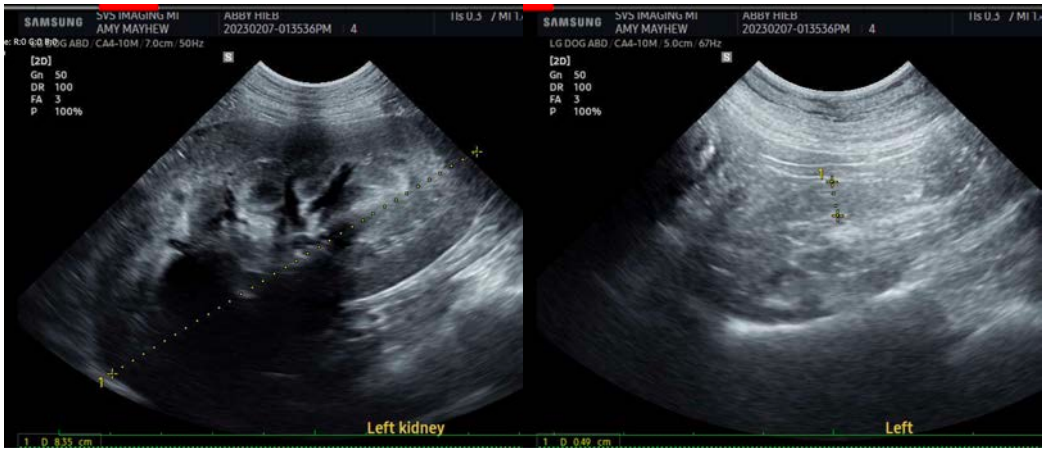


**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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.

**Beth Johnson**, DVM, DACVIM
Beth.Johnson@sonopath.com