



**PATIENT PRESENTING CLINICAL SIGNS**

Cookie Sheppard

History: - last 2 weeks owner has noticed she had been loosing weight and has been having a frantic appetite too Also does vomit 2-3 times a week - Has been diagnosed with a heart murmur before and oral resorptive lesions - Hyperthyroidism meds: tapazole

**SPECIES**

Feline

Abnormal PE/Chem/CBC/UA Results: Her total proteins are also a little low which could be related to some reduced production , decreased ingestion or loss through urine or gastrointestinal tract Cookie's liver enzymes are very elevated and this is the part that concerns me a little more , her ALT is sitting at 707 U/L where the normal high end is 158 U/L besides this her Bilirubin is also very high which could sometimes indicate some reduced liver function Cookie's TT4 is also very high sitting at 212 (normal being between 10-60 nmol/L) which is consistent with hyperthyroidism In regards to her urinalysis the urine concentration is normal which fits with adequate renal function at this time , there is presence of red blood cells which could be related to the sampling method (cystocentesis) and her urine protein Creatinine ratio is a little elevated sitting at 0.6 (Normal 0-0.2) which means that Cookie is in fact loosing some protein through her urine therefore causing her albumin blood values to be low.

**BREED**

Domestic Shorthair

**SEX**

Spayed Female

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**AGE**

6 years

**Urinary System**

Urinary bladder is adequately 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.

**WEIGHT**

7.7 lbs

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia, mineral or infarcts observed. The left kidney measured 3.82 cm and the right kidney measured 3.99 cm.

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**Adrenal Glands**

**IMAGING PERFORMED BY**

Kelly Reshny, RVT

Left adrenal gland is normal in size (0.31 cm), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

Kelly Reshny, RVT

Right adrenal gland is normal in size (0.2 cm), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

**HOSPITAL NAME**

South Side Pet Hospital

**Spleen**

**REFERRING VET**

Dr. Velez

Spleen is generally normal in size and shape with a smooth capsular contour. Parenchyma is diffusely nodular in appearance characterized by small discrete hypoechoic nodules. Splenic vasculature appears normal.

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**Liver**

**DATE**

7/8/22

Liver is subjectively enlarged (swollen contour) without disruption of architecture. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen and falciform fat. No focal



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lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

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Gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. The cystic duct appears to be mildly tortuous and mildly dilated measuring 0.59 cm. There was no evidence of intralobar biliary distension. There is no evidence of cystic or common bile duct dilation.

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**Gastrointestinal**

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

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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 empty with no evidence of obstruction, foreign material or infiltrative disease.

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6 years

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

**WEIGHT**

7.7 lbs

**Pancreas**

The observed pancreas is prominent (enlarged) in size, hypoechoic to surrounding tissue and irregular in shape with a swollen undulating contour. Pancreatic duct dilation is noted. Enhanced hyperechoic ill-defined surrounding fat is noted.

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DACVIM

**Free Abdomen**

There is no evidence of peritoneal effusion or apparent lymphadenopathy noted in these images.

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Kelly Reshny, RVT

**ULTRASONOGRAPHIC FINDINGS**

**HOSPITAL NAME**

South Side Pet Hospital

**PRIMARY FINDINGS:**

**Mild acute pancreatitis.**

**Hyperechoic hepatomegaly (feline)** – This appearance is most consistent with benign hepatic lipidosis. Infiltrative disease such as amyloidosis or round cell neoplasia, such as mast cell tumor or less likely, lymphoma, is also possible.

**Splenic micronodular hyperplasia pattern** – This nodular change is often associated with benign aging nodular hyperplasia. Infiltrative neoplasia, however, including both early hemangiosarcoma as well as round cell neoplasia cannot be ruled out.

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**Mild decrease in corticomedullary distinction of kidneys.** Rule out normal aging variant versus early emerging kidney disease.

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**Mildly dilated tortuous cystic duct.** Given this patient's increased liver enzymes and bilirubin this could be suggestive of an obstruction with the obstructing object being a stone, nodule, stricture, etc. not



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being visible in these images or secondary to chronic smoldering with an acute flare up of pancreatitis or indicative of cholangitis/cholangiohepatitis/triaditis.

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The majority of this patient's clinical signs including part of the ALT increase are believed to be attributed to the reportedly newly diagnosed hyperthyroidism. Therefore, recommendations include:

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1. Managing the hyperthyroidism with close monitoring of weight, appetite, ALT, etc. for improvement.
2. Blood pressure measurements are recommended if not recently evaluated.
3. Given the increased bilirubin combined with the mildly dilated cystic duct concurrent management of cholangitis/pancreatitis with broad spectrum antibiotics, anti-emetics, gastroprotectants, appetite stimulants and fluid therapy as needed along with Ursodiol can be considered as well.
4. Gastrointestinal tract appears grossly normal in these images; however, given the weight loss a gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.
5. Ultimately if management of suspected cholangitis/pancreatitis and hyperthyroidism do not result in an improvement then a FNA of the liver if the patient's coagulation status is appropriate is implicated.

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**HOSPITAL NAME**

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**REFERRING VET**

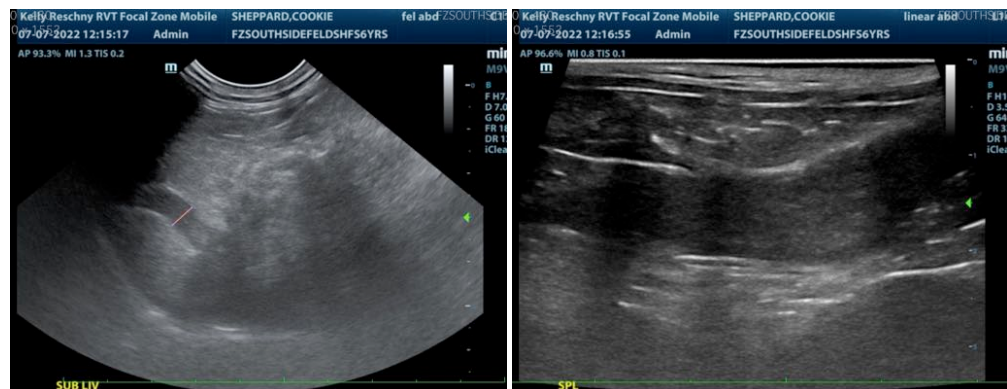
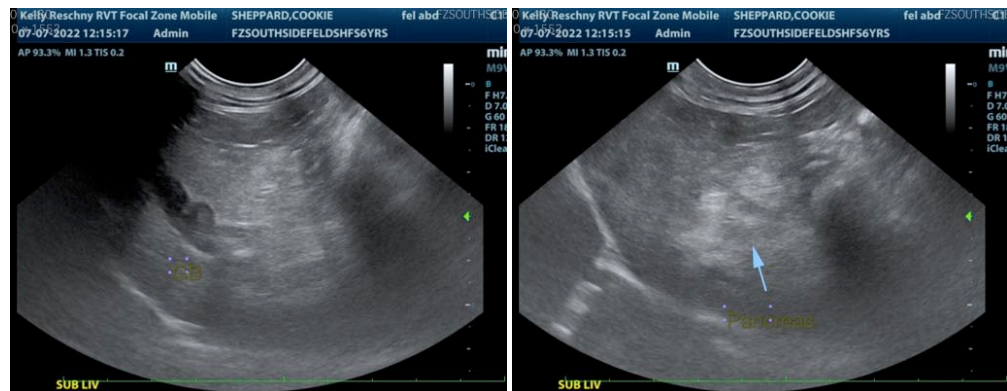
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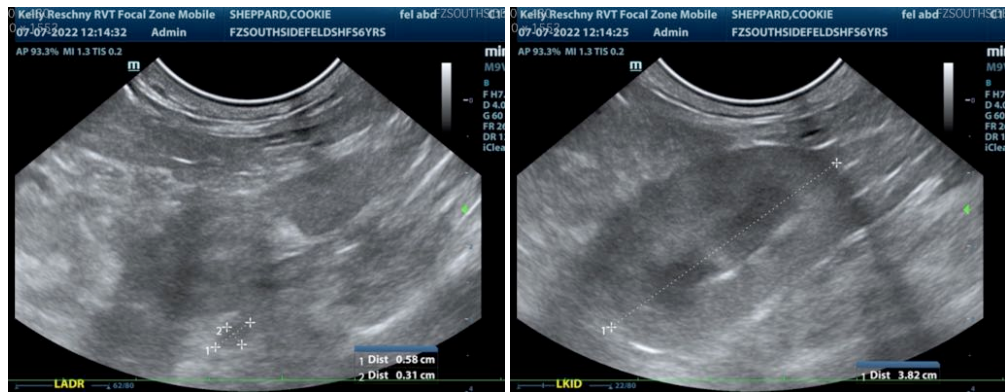
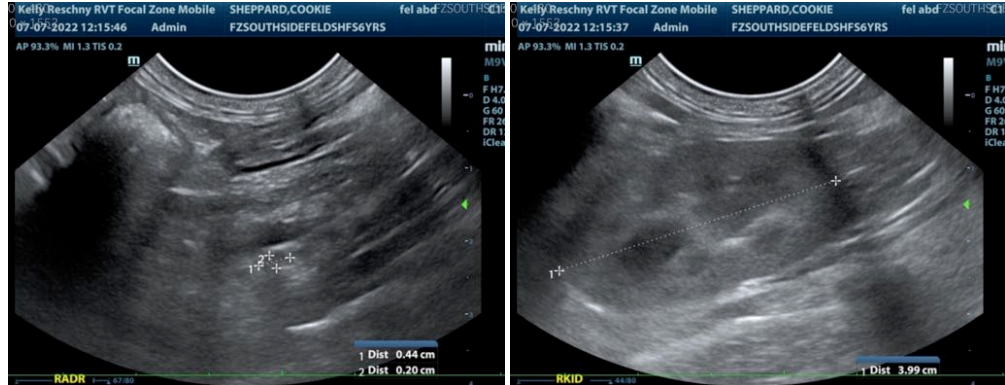
Spayed Female

**AGE**

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**WEIGHT**

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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

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