

**PATIENT PRESENTING CLINICAL SIGNS**

Richard Speck  
History: 10 yr old feline with elevated liver enzymes, icterus, reported to be an acute onset of dark urine and vomiting, started 8/6/21. RDVM has been treating with IV fluids, Cerenia, ampicillin.  
Abnormal PE/Chem/CBC/UA Results: CBC - lymphopenia. Chem - increase in the following: globulin, ALT, SAP, GGT, Total Bili (9.7), cholesterol, and lipase.

**SPECIES**

Feline

**BREED**

Domestic longhair

**SEX**

Male, neutered

**AGE**

10 Yrs.

**WEIGHT**

10.6 lbs.

**INTERPRETED BY**

Andrea Nicastro, DVM,  
Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**IMAGING PERFORMED BY**

Harold Mike Beard

**HOSPITAL NAME**

West Prince AH

**REFERRING VET**

Dr. Greg Hartman

**INVOICE**

11858

**DATE**

8/11/21

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

*Urinary System*

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended. A small amount of aggregated echogenic debris is observed within the lumen. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

The left kidney is normal in size (4.01 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

The right kidney is normal in size (4.39 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

*Adrenal Glands*

The region of the left adrenal gland is evaluated. No obvious pathology is observed.

The right adrenal gland is normal in size (0.41 cm width). Normal shape and glandular echogenicity. The phrenicoabdominal vein and surrounding vasculature are normal.

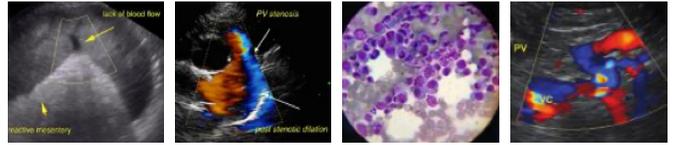
*Spleen*

The spleen is normal in size (0.63 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

*Liver*

The liver is subjectively enlarged with slightly swollen peripheral contours. The parenchyma is hyperechoic relative to the spleen and diffusely homogeneous in appearance. No distinct focal lesions are observed. Vascular and biliary tracts are of normal volume with no evidence of congestion. The gall bladder lumen is moderately distended. A bi-lobed confirmation is suspected. The wall is thickened (up to 0.22 cm), irregular and hyperechoic. A moderate amount of suspended echogenic debris is observed within the lumen. The cystic and common bile ducts are moderately dilated (up to 0.29 cm). Their walls are diffusely thickened (up to 0.22 cm). The common bile duct can be followed to the level of the duodenal papilla which is thickened (0.67 cm). There is no obvious evidence of a luminal obstruction.

*Gastrointestinal*



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The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive disease is noted.

**SPECIES**

Feline

***Pancreas***

The pancreas is diffusely enlarged and edematous particularly in the left limb/body. The peripheral margins are irregular. The parenchyma is hypoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is borderline dilated (0.22 cm in diameter). The surrounding mesenteric fat is hyperechoic to saponified. Peripancreatic effusion is present.

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***Free Abdomen***

**SEX**

Male, neutered

The mesentery in the cranial abdomen is hyperechoic to saponified. A 0.55 cm hypoechoic lymph node is observed in the left cranial quadrant.

**AGE**

10 Yrs.

**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings:**

**WEIGHT**

10.6 lbs.

- Severe, acute pancreatitis. Regional peritonitis with saponification of fat is present.
- The gallbladder and cystic/common bile duct changes are most consistent with cholecystitis/cholangitis. Ductal dilation is evident; however, an intraluminal obstruction is not identified. Extraluminal obstruction (i.e., secondary to pancreatitis) is suspected.
- Hepatic changes are non-specific and could be consistent with hepatic lipodosis, inflammatory/infectious disease, infiltrative neoplasia, or other hepatopathy.
- The cranial abdominal lymphadenopathy is likely reactive (i.e., secondary to pancreatitis/liver/gallbladder pathology) with a lower possibility of infiltrative neoplasia.

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**Secondary Findings:**

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- Bilateral age-related renal changes with dystrophic mineralization.
- Urinary bladder debris.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**REFERRING VET**

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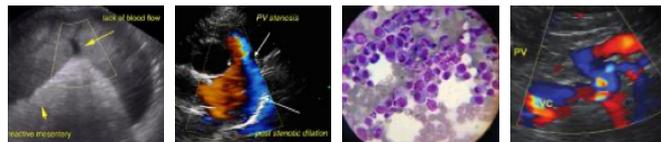
- Aggressive supportive care for acute pancreatitis is recommended including fluid therapy, antiemetics, gastric protectants, pain medication and fresh frozen plasma.
- Supportive care for acute cholecystitis/cholangitis (i.e., Amoxicillin clavulanic acid +/- Metronidazole) is also recommended.
- A fine needle aspirate of the liver can also be considered (if clotting status is appropriate). A 25-gauge needle should be used.
- Nutritional support (i.e., via temporary feeding tube) is strongly encouraged to help prevent/treat hepatic lipodosis.

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- Three-view thoracic radiographs are recommended to evaluate cardiopulmonary status as severe pancreatitis can result in systemic inflammatory response syndrome (SIRS).

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- Serial sonographic monitoring of the pancreas and bile ducts is recommended to assess for progressive disease (i.e., pancreatic abscessation, complete extraluminal bile duct obstruction). Bloodwork, particularly the total bilirubin, should also be closely monitored. If there is evidence of worsening extrahepatic bile duct obstruction, surgical intervention may be warranted.

### BREED

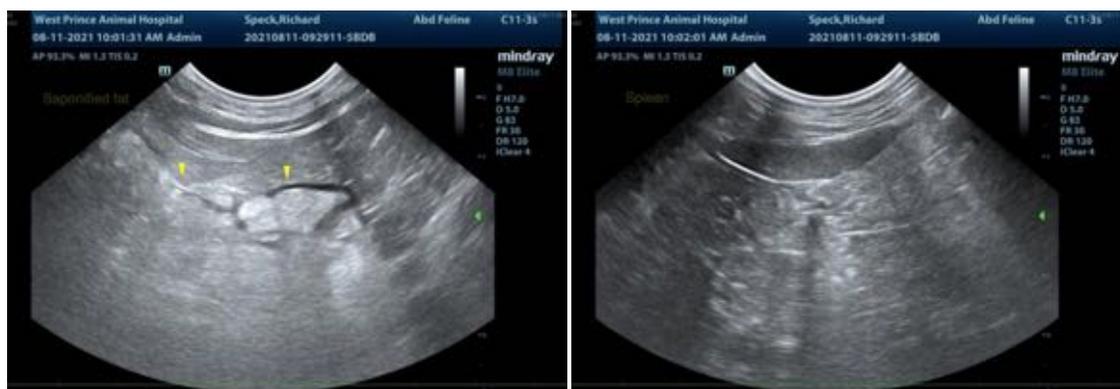
Domestic longhair

### SEX

Male, neutered

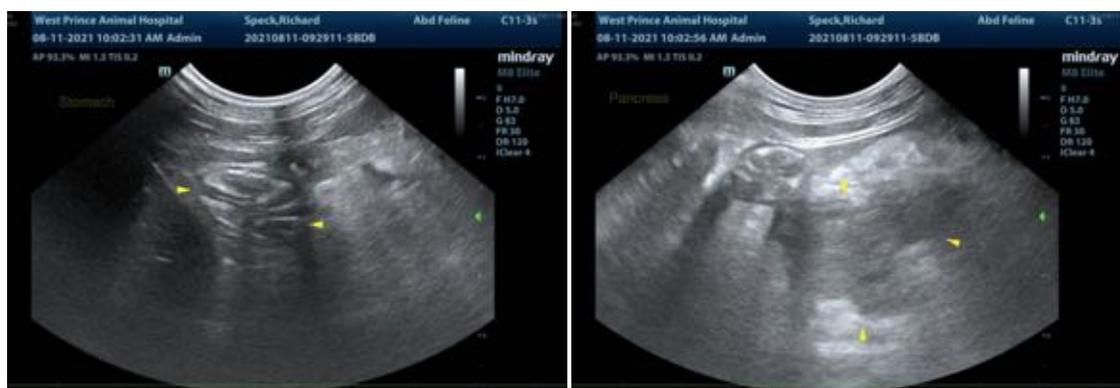
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10 Yrs.



### WEIGHT

10.6 lbs.

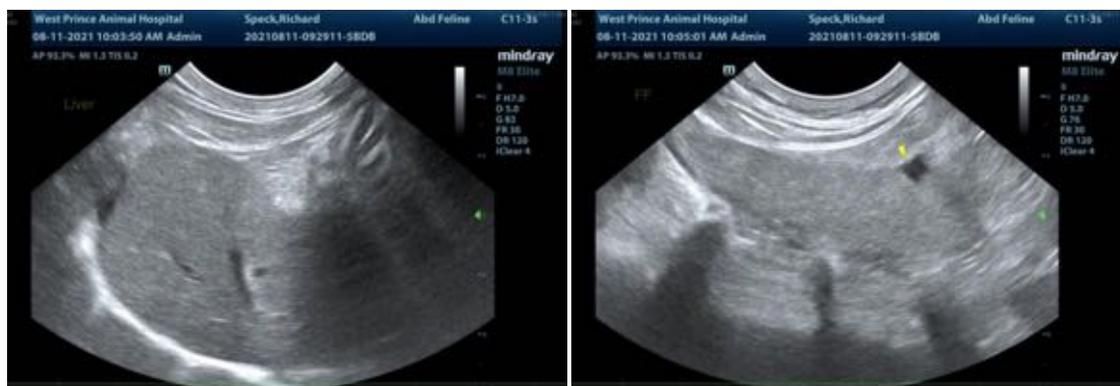


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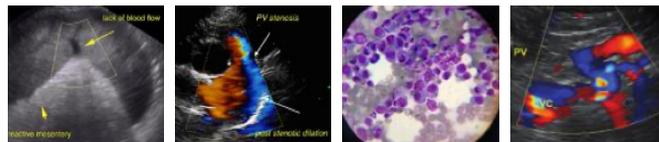
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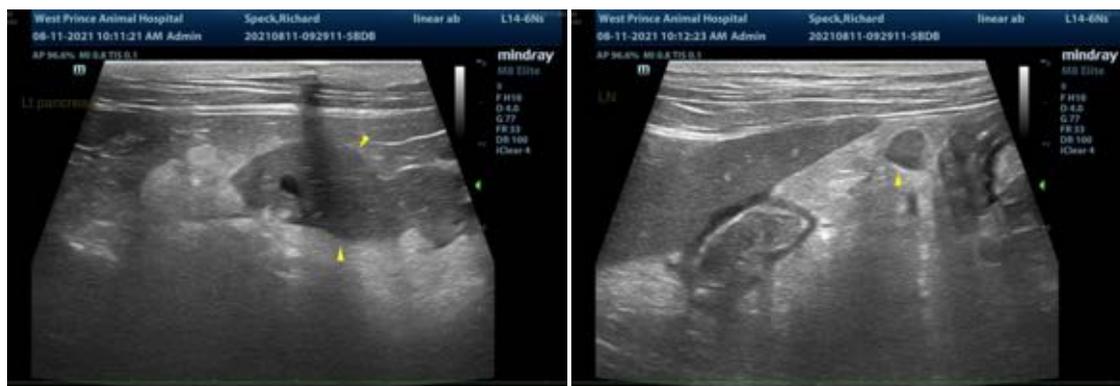
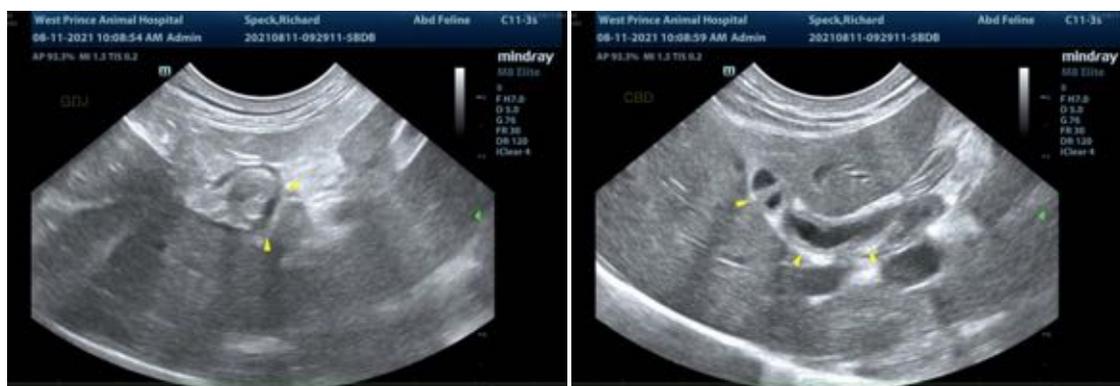
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)

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