



PATIENT

Mandu Shimek

SPECIES

Feline

BREED

Domestic Longhair

SEX

Neutered male

AGE

17 years

WEIGHT

12.1 lbs

INTERPRETED BY

Dr. Alicia Angosto
Guerrero

IMAGING PERFORMED BY

Grace Jayne CVT

HOSPITAL NAME

Ark AH

REFERRING VET

Dr. Penraat

INVOICE

69434

DATE

12/9/25

PRESENTING CLINICAL SIGNS

History: Geriatric cat Hydration status wnl HX IBD and heart dz. Dental dz Renal values normal last week - however reported hx of renal dz Hx of cholecystectomy 5 years ago Treated for constipation last week - colon empty today appears resolved On 2.5 mg prednisolone sid for IBD Mirtaz apply 1.5 inch to inner pinna daily as appetite stimulant. Prednisolone 2.5 mg SID Work on supportive care - appetite stimulant - monitor hydration status - monitor periodontal dz possible ab treatment - insure IBD prednisolone is given daily. Return for recheck if symptoms do not improve or worsen

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The bladder lumen is normally distended, and the urinary bladder wall appears thin and smooth. The urine is anechoic. The proximal urethra and vesicoureteral junction appear normal. No calculi or evidence of inflammatory or neoplastic changes are observed.

The left kidney is normal in shape and size: 3.56 x 2.45 cm, with a cortical thickness of 0.41 cm in the sagittal plane. The cortex is isoechoic compared to the liver parenchyma, with a normal corticomedullary ratio and preserved corticomedullary definition. No pyelectasia, nephroliths, or hydronephrosis are identified. Color Doppler shows a normal pattern.

The right kidney is normal in shape and size: 3.90 x 2.53 cm, with cortical thickness not provided in the sagittal plane. The cortex is isoechoic compared to the liver parenchyma, with a normal corticomedullary ratio and preserved corticomedullary definition. No pyelectasia, nephroliths, or hydronephrosis are observed. Color Doppler shows a normal pattern.

Adrenal Glands

The adrenal glands could not be adequately visualized for evaluation.

Spleen

The spleen appears decreased in size and measured 0.48 cm in splenic thickness. The parenchyma demonstrates normal echogenicity and a fine, homogeneous echotexture without focal abnormalities. The splenic capsule is smooth and regular.

Liver

The liver is subjectively normal in size, with sharp edges and a regular contour. The parenchyma appears uniform and isoechoic relative to the falciform fat, with a normal echotexture. No hepatic lymphadenopathy is observed.

The gallbladder could not be evaluated due to prior cholecystectomy. In the region of the hepatic hilus, the extrahepatic bile duct shows mild dilation, measuring approximately 0.75–1.24 cm in diameter. The



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appearance is consistent with post-cholecystectomy biliary dilation. Multiple intrahepatic bile ducts contain echogenic sediment with moderate acoustic shadowing throughout the intrahepatic biliary tree.

Gastrointestinal

The stomach is empty and folded, with intraluminal gas. Mural thickness is 2.32 mm with preserved wall layering.

Pylorus: 3.33 mm. Duodenum: 1.46 mm. Jejunum: 2.62 mm. Ileum: 1.81 mm. All segments exhibit normal wall layering. The ileocecal junction was not clearly visualized. No signs of inflammation, ileus, or other abnormalities are identified.

Colon: 0.81 mm, containing formed feces in the descending segment.

Pancreas

The right pancreatic limb measures 0.96 cm; the body and left limb measure 0.91 cm and appear normal. The pancreatic parenchyma is slightly hypoechoic to the adjacent omental fat, with a very small focal hyperechoic area of 1-2 mm which may represent focal fibrosis or benign age-related change. The pancreatic duct diameter varies from 2.68-3.44 mm depending on the pancreatic branch evaluated. No signs of active peripancreatic inflammation are evident.

Peritoneal Cavity

No abdominal effusion or peritonitis is observed. Cranial mesenteric lymph nodes are not visualized, but their surrounding regions appear unremarkable. Ileocecal lymph nodes measure 4.65 mm. Normal shape and echogenicity.

The iliac trifurcation is normal.

ULTRASONOGRAPHIC FINDINGS

PRIMARY FINDINGS

- Post-cholecystectomy extrahepatic bile duct dilation.
- Multiple intrahepatic bile ducts containing echogenic sediment with moderate acoustic shadowing.
- Mild pancreatic parenchymal hypoechogenicity with mild of the pancreatic duct. 1-2 mm hyperechoic pancreatic foci.

SECONDARY FINDINGS

- Splenic size decreased (splenic thickness 0.48 cm), with normal parenchymal echotexture.



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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The biliary system demonstrates expected post-cholecystectomy changes, including mild dilation of the extrahepatic bile duct. In addition, multiple intrahepatic bile ducts contain echogenic sediment that produces moderate acoustic shadowing. This material is most consistent with intrahepatic biliary sludge or inspissated bile, potentially containing microliths (biliary sand) rather than true ductal mineralization, as the echogenic material is luminal rather than associated with the duct wall.

This finding can occur for several reasons:

- Pre-existing biliary disease at the time of cholecystectomy (If the gallbladder was removed due to chronic cholecystitis or cholelithiasis, residual biliary debris or microliths may persist within the intrahepatic tree).
- Chronic biliary stasis following cholecystectomy: Removal of the gallbladder alters bile storage dynamics. Some cats develop functional cholestasis over time, allowing bile to become more inspissated within the intrahepatic ducts, especially in older patients or those with concurrent intestinal disease.
- Age-related changes: Elderly cats often accumulate biliary sludge due to decreased hepatocellular bile secretion, decreased hydration, and slower biliary transit.

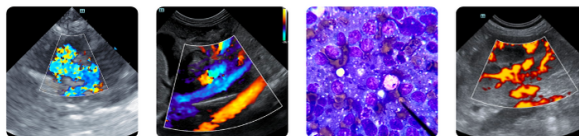
Despite the presence of intrahepatic biliary material, there is no ultrasonographic evidence of acute extrahepatic biliary obstruction or cholangitis—no ductal wall thickening, no pericholangial inflammation, and no hepatic parenchymal changes typically associated with acute inflammatory disease. The biliary findings may contribute to intermittent nausea or reduced appetite, but currently appear chronic and relatively stable, consistent with long-standing biliary stasis rather than an emergent process.

There is mild pancreatic duct dilation and slight parenchymal hypoechogenicity, which may represent early or chronic pancreatopathy, or functional alteration secondary to previous biliary surgery. The absence of peripancreatic inflammation makes acute pancreatitis less likely, though low-grade or chronic pancreatitis cannot be excluded.

The spleen is subjectively small but otherwise normal in echotexture. In geriatric cats, splenic size reduction can be incidental, related to age, chronic disease, or corticosteroid therapy.

Recommendations

- Consider measuring feline-specific pancreatic lipase to further evaluate for possible chronic or low-grade pancreatopathy,
- Recommend symptomatic management as directed by the attending veterinarian, based on clinical signs such as nausea, appetite changes, or gastrointestinal discomfort.
- Periodic abdominal ultrasound rechecks are advised to monitor the intrahepatic biliary sludge and pancreatic duct diameter,
- Regular monitoring of hepatic and biliary enzymes is recommended to assess for progression or resolution of the biliary findings.
- Correlate ultrasonographic findings with ongoing clinical evaluations and laboratory data to guide case management.



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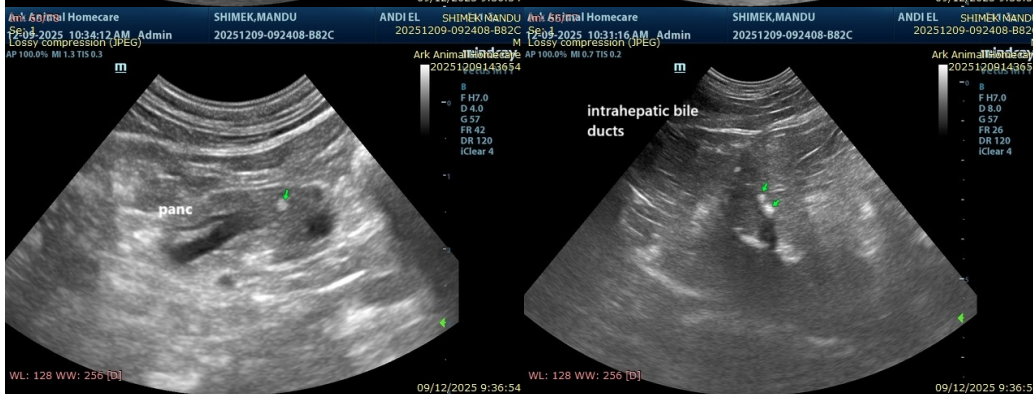
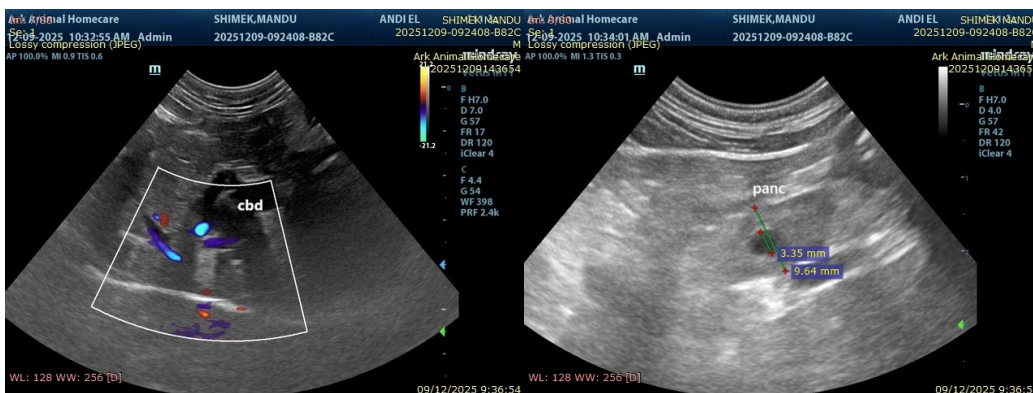
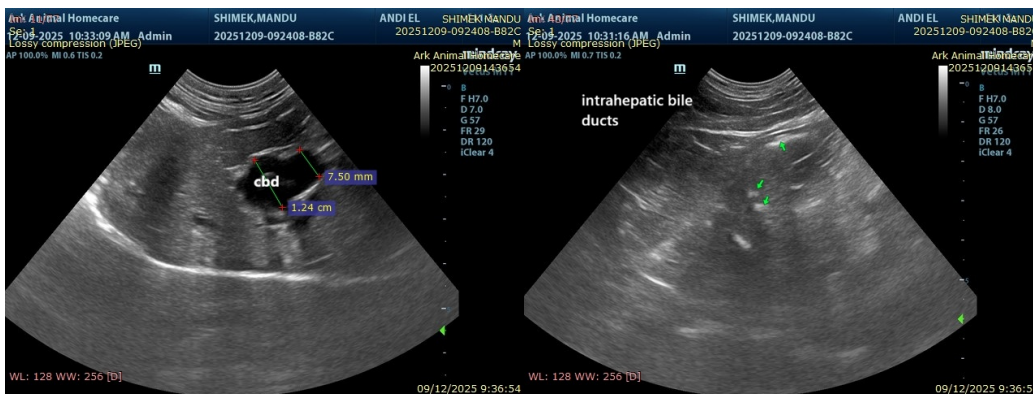
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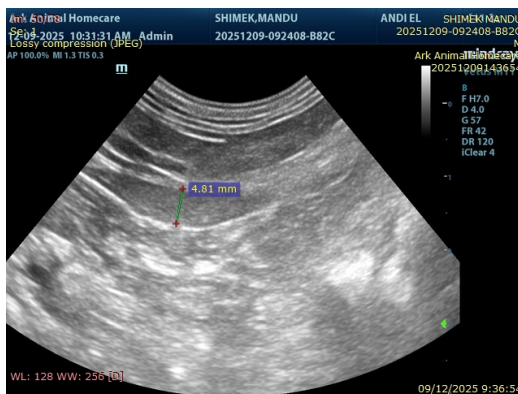
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Alicia Angosto Guerrero, DMV, PgDip, MSc.

MV Esp Ultrasound in Domestic and Wild Animals

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