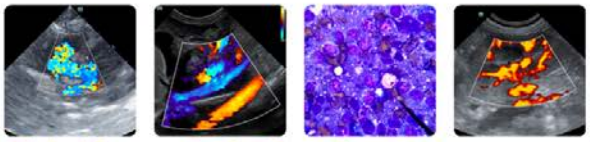


PATIENT

Mufla Garcia

SPECIES

Canine

BREED

Mini Schnauzer

SEX

Neutered Male

AGE

14 Years

WEIGHT

21.2 lbs

INTERPRETED BY

Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

IMAGING PERFORMED BY

Gabriel Ferrer, DVM

HOSPITAL NAME

Pulse: Pet Ultrasound

REFERRING VET

Dr. Juan Font

INVOICE

72324

DATE

12/4/25

PRESENTING CLINICAL SIGNS

Pt presented as a referral for an abdominal ultrasound to evaluate elevated enzymes after having routine BW panel done in rDVM. In 2022 and 2024, pt also had abdominal u/s performed for acute vomiting and was found to have possible gallbladder mucocele. P is on denamarin and hepatic diet.

Abnormal PE/Chem/CBC/UA Results: CBC: Baso 0.12 CHEM: SDMA 30, ALT 390, ALKP 1348, AMYL 1860, LIPA 3489 Bloodwork and previous abdominal u/s report is attached as supporting documents.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, or masses. In the dependent portion of the urinary bladder there are numerous small, hyperechoic shadowing structures, most consistent with small stones/mineralized sandy debris.

The prostate is normal in size (1.1 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (4.54 cm) with pinpoint non-obstructive mineralizations. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (5.28 cm) with pinpoint non-obstructive mineralizations. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

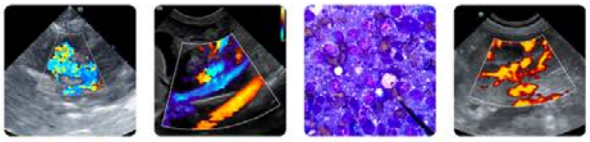
Adrenal Glands

The left adrenal gland is normal in size measuring 0.40 cm at the cranial pole and 0.49 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.45 cm at the cranial pole and 0.42 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size (1.38 cm), echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.



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Liver

The liver is large in size and irregular. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There are numerous poorly defined hypoechoic nodules/mass effects visualized within the parenchyma. An example on the left side measures 1.09 cm x 2.11 cm.

The gall bladder is large and distended, measuring 3.07 cm x 4.73 cm. The gallbladder wall appears thickened and somewhat poorly defined, measuring at approximately 0.48 cm. Within the lumen there is the appearance of somewhat laminated/layered debris, with a focal structure visualized at the gallbladder neck measuring 1.37 cm x 1.99 cm, concerning for a mass effect or focal debris. The bile duct appears severely dilated at 0.84 cm. It is visualized at the level of the duodenal papilla, which appears large and irregular, creating the impression of a mass effect, measuring approximately 1.26 cm x 1.21 cm, most consistent with a mass effect involving the duodenal papilla or a focal accumulation of debris in the dilated distal duct.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of 0.24 cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Duodenum wall measures 0.51 cm. Jejunum wall measures 0.47 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There is no significant lymphadenopathy. The omentum is of normal echogenicity.

ULTRASONOGRAPHIC FINDINGS

- Dependent mineralized debris/small stones visualized in the urinary bladder – Correlate with urinalysis, culture and radiographs.
- Age related changes visualized associated with both kidneys.
- Heterogeneous nodular liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. The hypoechoic nodules have the appearance most consistent with benign lesions, although early adenomas or carcinomas cannot be ruled out.

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- Large, distended gallbladder with abnormal layered/laminated appearance to the luminal contents, a thickened wall, and a possible mass effect at the gallbladder neck.
- Dilated, tortuous bile duct with a possible mass effect at the duodenal papilla – An alternate differential could be an accumulation of debris.

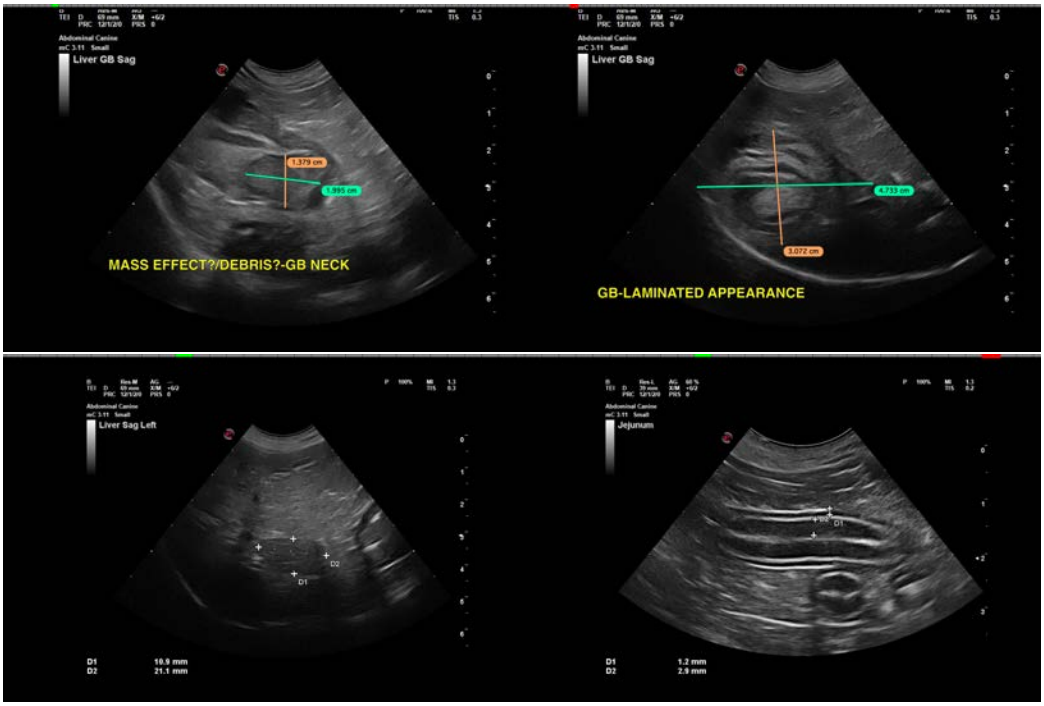
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The gallbladder is very large and irregular with a thickened wall and an atypical layered/laminated appearance to the gallbladder debris. Within the gallbladder there is a focal structure near the gallbladder neck, concerning for a possible mass effect. The bile duct is dilated and tortuous to the level of the duodenal papilla, which appears enlarged and abnormal. These changes are concerning for neoplastic changes, although inflammatory changes can have a similar appearance. Strongly recommend a contrast CT scan to further evaluate the gallbladder and bile duct to discuss surgical options. If this is not an option, recommend treatment for cholecystitis with Ursodiol, Denamarin, and antibiotics (4-6 weeks, then recheck).

The liver is large and heterogeneous with ill-defined nodules. Some of this could be a vacuolar hepatopathy, regenerative nodules, etc., although early neoplastic lesions cannot be ruled out.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement (disregard if this has already been done).

**Comparison to previous scan (4/9/24) shows likely progression of changes observed in the gallbladder.*



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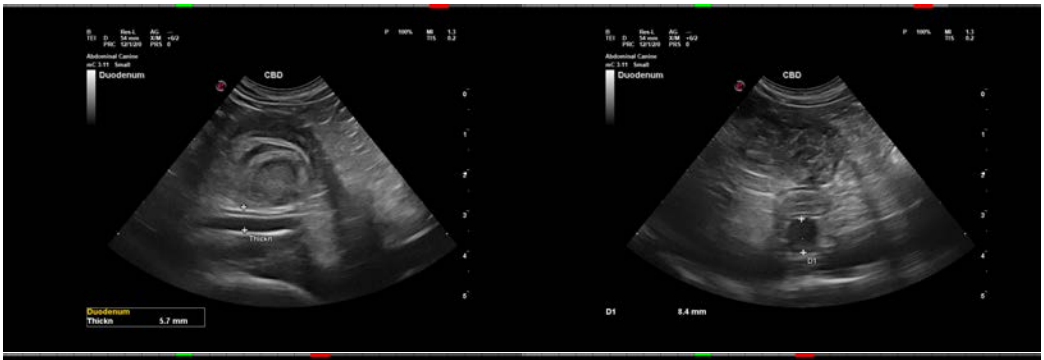

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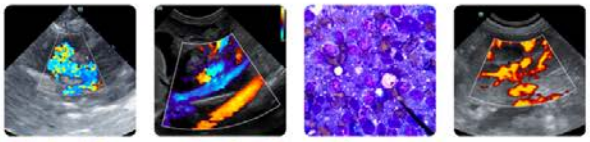

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)

info@sonopath.com