



PATIENT	PRESENTING CLINICAL SIGNS
Tabatha Gonzalez	Presented as a referral for an abdominal ultrasound. Patient has a history of hepatic enzymes elevation that had been stable until 10/14/2022, clinical signs started after dietary change.
SPECIES	Abnormal PE/Chem/CBC/UA Results: PE: Non provided. The following abnormal values were observed on chemistry panel: ALP 1425u/L, ALT 420u/L, BUN 30mg/dL, Glucose 124mg/dL
Canine	
BREED	ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN
Schnauzer	Urinary System
SEX	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.
Spayed Female	The right kidney is normal in size (4.25 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.
AGE	The left kidney is normal in size (4.55 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.
12 Years	
WEIGHT	Adrenal Glands
11.1 Pounds	The right adrenal gland is normal in size (1.44 cm long x 0.42 cm at the caudal pole and 0.90 cm at the cranial pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.
INTERPRETED BY	The left adrenal gland is normal in size (1.87 cm long x 0.47 cm at the cranial pole and 0.44 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.
Beth Johnson, DVM DACVIM	
IMAGING PERFORMED BY	Spleen
Dr. G. Ferrer	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). Multifocal well-demarcated hyperechoic homogenous nodules are noted. Splenic vasculature appears normal.
HOSPITAL NAME	Liver
Paseos Vet Center	The liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. Several discrete hyperechoic nodules are noted, measuring < 1.0 cm. Visible vasculature and biliary tree appear normal without distension or congestion.
REFERRING VET	Gallbladder is moderately overdistended with organized, aggregated and centralized non-gravity dependent sludge. Striations of sludge separated by anechoic areas are noted extending from the lumen to the luminal wall. The wall is mildly thick, irregular and hyperechoic. There is no evidence of CBD dilation.
Dr. Michele Biello	
INVOICE	
42530	
DATE	
11/3/22	



PATIENT

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Gastrointestinal

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

SPECIES

Canine

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). 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.

BREED

Schnauzer

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

SEX

Spayed Female

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.

AGE

12 Years

Free Abdomen

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

WEIGHT

11.1 Pounds

The right and left medial iliac lymph nodes are isoechoic and normal in shape.

PRIMARY FINDINGS

- Gallbladder mucocele

INTERPRETED BY

Beth Johnson, DVM
DACVIM

- **Liver nodules** – Differentials for discrete liver nodules include primarily benign changes such as nodular hyperplasia, fibrosis of an old hematoma, granuloma, myelolipoma, etc.; however, while considered less likely, primary hepatic neoplasia, infiltrative round cell neoplasia and metastatic disease can mimic benign lesions and cannot be definitively ruled out.

IMAGING PERFORMED BY

Dr. G. Ferrer

SECONDARY FINDINGS

- **Hyperechoic splenic nodules** – most consistent with benign myelolipomas. Other differentials such as fibrosis or calcification caused by old hematomas or infarcts, chronic inflammation, granulomatous disease or metastatic disease cannot be ruled out, but are considered less likely.

HOSPITAL NAME

Paseos Vet Center

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

REFERRING VET

Dr. Michele Biello

First and foremost, given this patient's mildly increased BUN and mild hyperglycemia, if not recently evaluated, Urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.

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The recommended treatment of choice for a gallbladder mucocele is a surgical cholecystectomy. However, the level of aggressiveness in terms of intervention partially depends on clinical signs as well as owner wishes, etc. If this patient is clinically well, and the increased liver enzymes were found incidentally during a wellness exam for example, the elected choice may be an empirical course of Ursodiol and close monitoring of the gallbladder and liver enzymes for changes, with education provided about the risks of a gallbladder mucocele progressing and rupturing.

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However, if the patient is clinically ill, has a decreased appetite, is vomiting, and especially experiencing any cranial abdominal pain, a more immediate surgical cholecystectomy is warranted, at which time liver biopsy is also recommended.

SPECIES

Canine

BREED

Schnauzer

SEX

Spayed Female

AGE

12 Years

WEIGHT

11.1 Pounds

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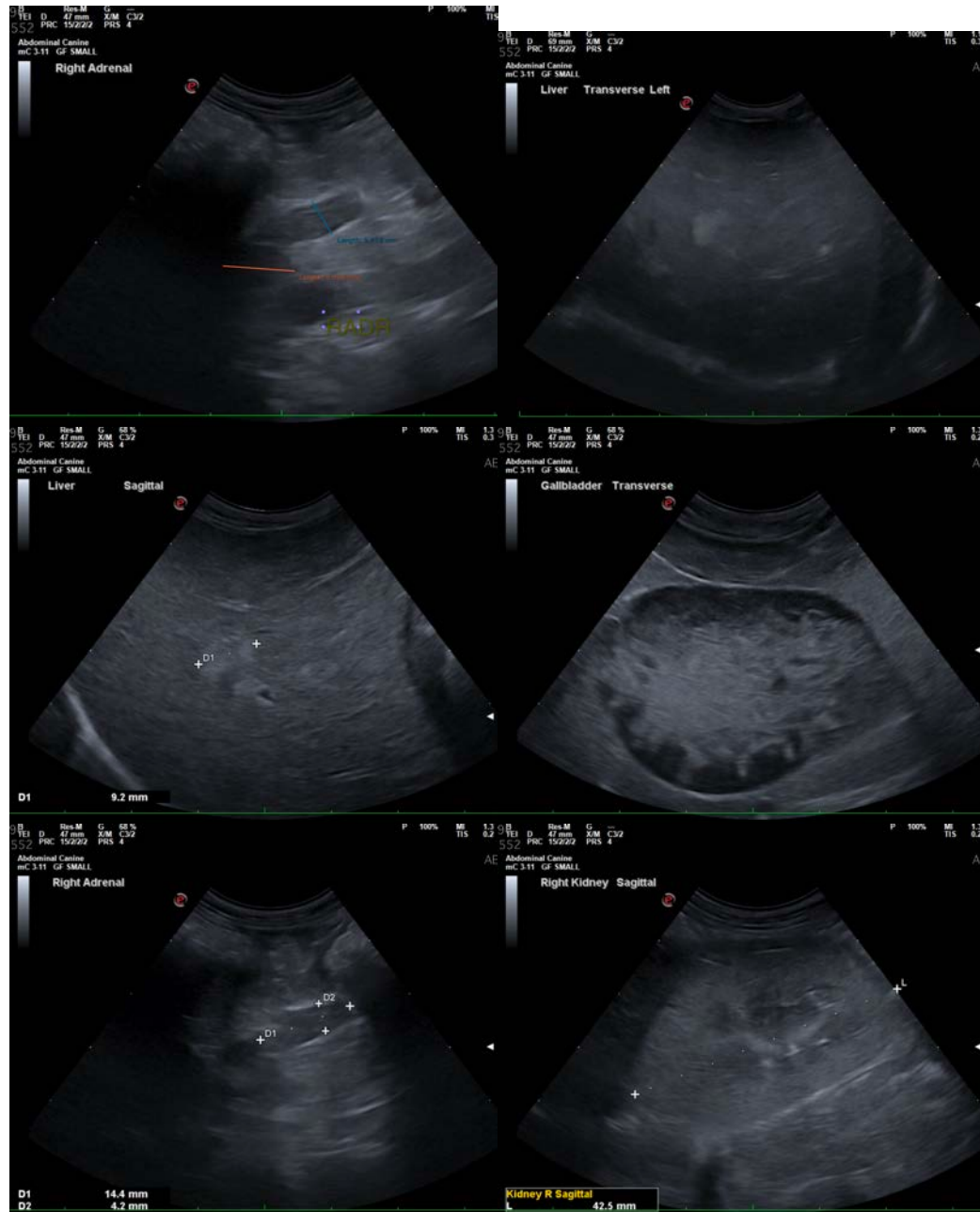
Dr. G. Ferrer

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SPECIES

Canine

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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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