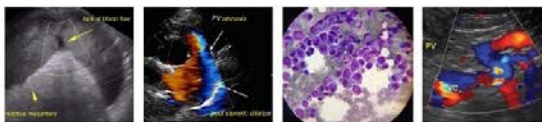




PATIENT	PRESENTING CLINICAL SIGNS
Minnie McGregor	Chronic diarrhea, weight loss, history of pancreatitis, appetite change/decrease, intermittent vomiting meds: Pimobendan, Denamarin
SPECIES	
Canine	Abnormal PE/Chem/CBC/UA Results: Aug 15- progressive liver enzyme elevation, spec cPL elevation, elevated urea.
BREED	ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN
Mini Dachshund	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	
AGE	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 measures 6.48 cm. The right kidney measures 6.75 cm.
16 Years	
WEIGHT	Adrenal Glands
9.85 kg	The right adrenal gland is small (flattened contour). Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal. Cranial pole measures 1.1 cm. Caudal pole measured 1.4 cm.
INTERPRETED BY	The left adrenal gland is enlarged with mild heterogenous parenchymal changes, primarily affecting the caudal pole, which measures 1.8 cm x 1.7 cm in size. The cranial pole measures 0.87 cm. Swollen capsular expansion is noted without evident capsular escape or vascular invasion.
Beth Johnson, DVM DACVIM	
IMAGING PERFORMED BY	Spleen
Kelly Reschny	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
East Credit VH	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. A markedly heterogeneous mass is noted in the caudal liver measuring 5.2 cm x 6.2 cm in size. Visible vasculature and biliary tree appear normal without distension or congestion.
REFERRING VET	Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.
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PATIENT

Gastrointestinal

Minnie McGregor

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

SPECIES

Canine

BREED

Mini Dachshund

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.

SEX

Spayed Female

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

AGE

16 Years

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.

WEIGHT

9.85 kg

Free Abdomen

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

INTERPRETED BY

Beth Johnson, DVM
DACVIM

There is no apparent lymphadenopathy noted in these images.

PRIMARY FINDINGS

- Heterogeneous/nodular liver mass – Concerning for infiltrative neoplasia such as hepatocellular carcinoma versus round cell neoplasia versus sarcoma versus other. Having said that, marked benign nodular hyperplasia, steroid vacuolar hepatopathy, chronic inflammatory disease, etc., while considered less likely, are possible and cannot be ruled out without tissue sampling.
- Left adrenal mass with a concurrently flat right adrenal gland – suggestive of a functional adrenal cortical tumor such as adenoma versus adenocarcinoma. There are no characteristics of malignancy to suggest malignancy over benign adenoma. However, malignancy can't be definitively ruled out.
- Moderate gallbladder debris - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

IMAGING PERFORMED BY

Kelly Reschny

HOSPITAL NAME

East Credit VH

REFERRING VET

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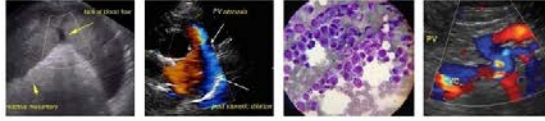
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SECONDARY FINDINGS

- Age related kidney changes
- 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.



PATIENT

Minnie McGregor

SPECIES

Canine

BREED

Mini Dachshund

SEX

Spayed Female

AGE

16 Years

WEIGHT

9.85 kg

INTERPRETED BY

Beth Johnson, DVM
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the appearance of this patient's liver, three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.

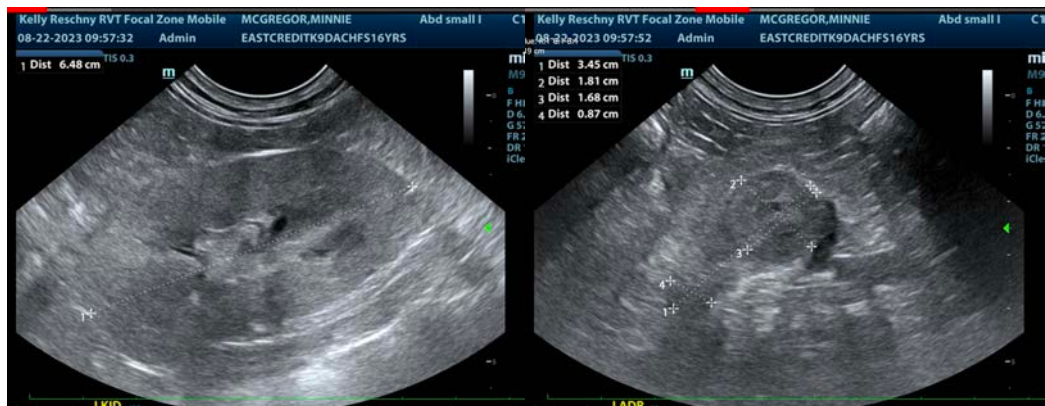
A fine needle aspirate of the liver mass is recommended if patient's coagulation status is appropriate.

Having said that, this finding may or may not be related to the patient's reported presenting complaint of diarrhea and weight loss. Therefore, pending results of the above, further evaluation of digestion and absorption, etc. could be considered, beginning with a gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory.

Additionally, given the patient's reported laboratory changes, if not recently evaluated, a 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 ratio is recommended.

Finally, while further workup of hyperadrenocorticism typically is not warranted in the face of concurrent illness, given the presence of an adrenal tumor, if further liver evaluation (i.e., cytology, etc.) is most consistent with benign disease, then proceeding with further evaluation of the adrenal mass could be considered, beginning with hormone testing in the form of a low-dose Dexamethasone suppression test.

In the meantime, a blood pressure is also recommended if not already evaluated.





PATIENT

Minnie McGregor

SPECIES

Canine

BREED

Mini Dachshund

SEX

Spayed Female

AGE

16 Years

WEIGHT

9.85 kg

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Kelly Reschny

HOSPITAL NAME

East Credit VH

REFERRING VET

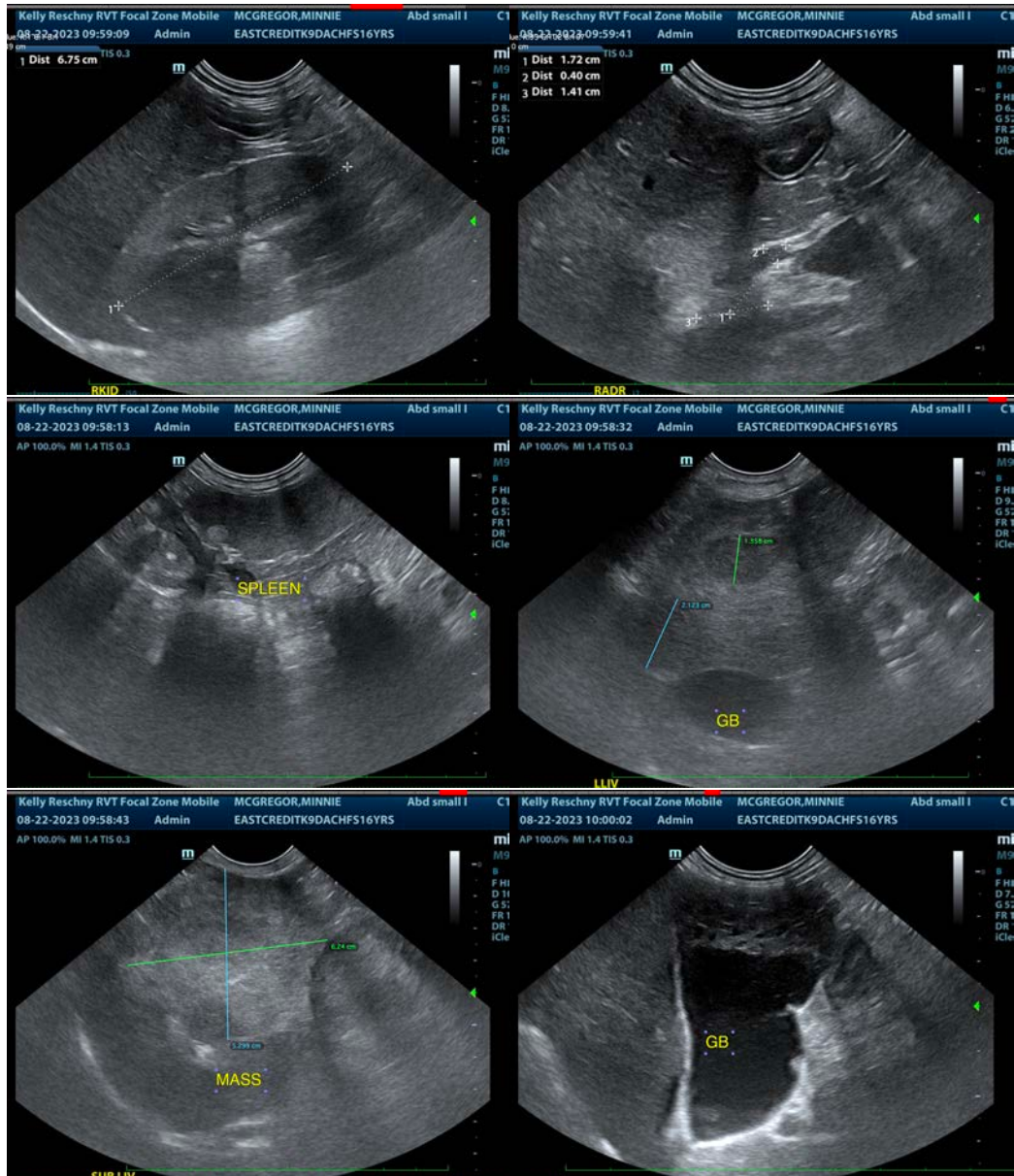
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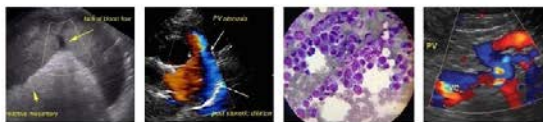
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PATIENT

Minnie McGregor

SPECIES

Canine

BREED

Mini Dachshund

SEX

Spayed Female

AGE

16 Years

WEIGHT

9.85 kg

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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
info@sonopath.com