IMAGING PERFORMED BY

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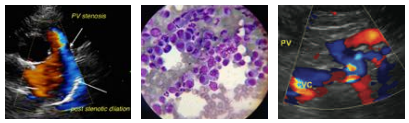

SonoPath
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DATE
9/30/21

PATIENT
Uno Hunter

SPECIES
Canine

BREED
Chow Chow

SEX
Neutered male

AGE
2008

WEIGHT
51.05 lbs

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

HOSPITAL NAME
Glen Burnie AH

REFERRING VET
Dr. Shah

INVOICE
92113

PRESENTING CLINICAL SIGNS

Have long term GI issue blood work indicated elevated liver enzymes, looking for hepatopathy or abdominal mass.

Current Medications: Denamarin PO daily. Omega-3 supplement daily.
Lab Results: Attached
Date of Previous IntraPet Ultrasound: No previous
Sedation: not needed
Stat Report: not requested

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, masses or cystic calculi.

The prostate is normal in size 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 (6.3 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (6.33 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.66 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 0.74 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, 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.

Liver

The liver is subjectively 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. The liver is severely mottled. There appeared to be several, large, indistinct, coalescing mass effects within the liver parenchyma. One measured 7.44 x 6.41 cm and one measured 6.24 x 10.0 cm and a more discrete peripheral mass effect measuring 3.29 x 5.1 cm. A hypoechoic lesion was noted and appears somewhat cystic

measuring 3.56 x 3.27 cm. There is very little normal appearing hepatic tissue and all of these mass effects are somewhat ill-defined. These can be benign or neoplastic lesions, but are relatively diffuse in nature. The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm 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. The duodenum measured as normal and the jejunum measured as normal (0.22 cm). Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. 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, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

ULTRASONOGRAPHIC FINDINGS

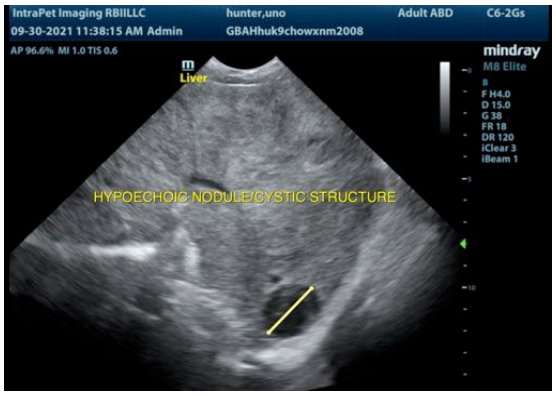
PRIMARY FINDINGS:

- Large, irregular, heterogenous liver with numerous, indistinct large mass effects. 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.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The primary abnormalities observed involve the liver. It is severely heterogenous and large with irregular margins and indistinct, large, mottled mass effects. Most of these are somewhat isoechoic to the normal parenchyma. The nature of the mass effects is unknown and they could be benign or malignant lesions. I suspect that they are unlikely to be surgically resectable based on the diffuse nature.

- Consider a liver function test and FNA of the liver to rule out possible lymphoma.
- Recommend three view thoracic radiographs.
- If this is not lymphoma I suspect that a biopsy would be necessary to accurately diagnose.
- CT scan can be considered to ensure that the abnormalities are not resectable, but I feel that this is unlikely. This could be a benign, slowly progressive condition which isn't impacting liver function greatly or it could be a more aggressive nature. Biopsy would be helpful to differentiate.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C6-2Gs
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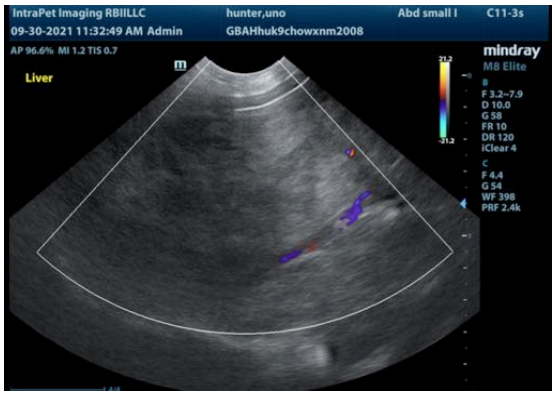
mindray
M8 Elite
Liver
HYPOECHOIC NODULE/CYSTIC STRUCTURE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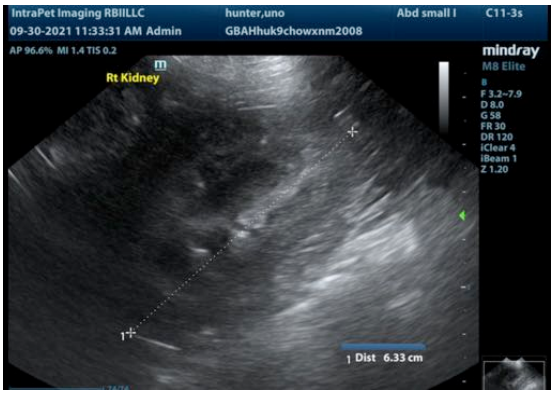
Liver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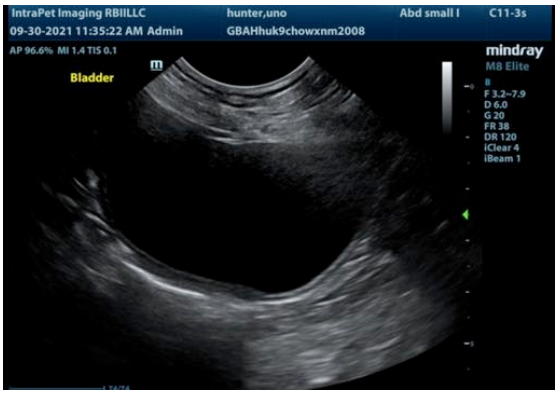
Rt Kidney
1 Dist 6.33 cm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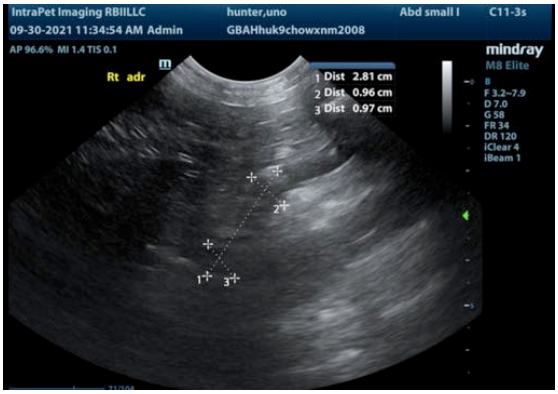
Bladder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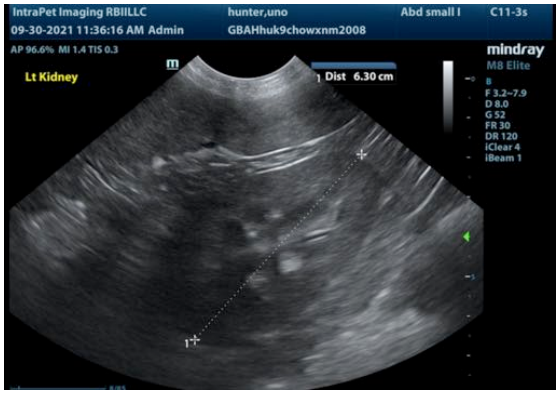
Rt adr
1 Dist 2.81 cm
2 Dist 0.96 cm
3 Dist 0.97 cm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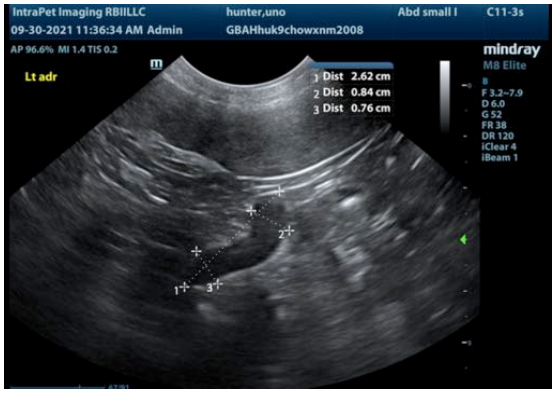
Lt Kidney
1 Dist 6.30 cm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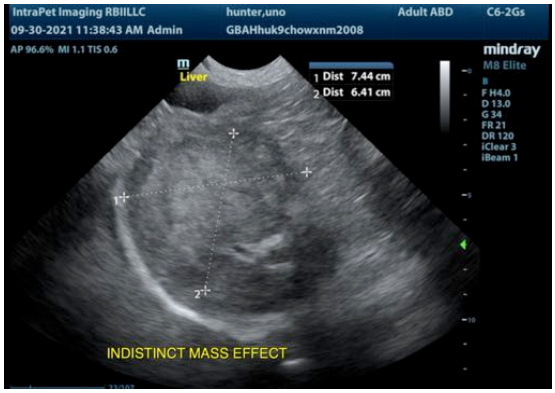
Lt adr
1 Dist 2.62 cm
2 Dist 0.84 cm
3 Dist 0.76 cm
mindray
M8 Elite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Liver
1 Dist 7.44 cm
2 Dist 6.41 cm
INDISTINCT MASS EFFECT
mindray
M8 Elite


IntraPet Imaging RBIILLC
hunter,uno
Adult ABD
C6-2Gs
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Liver
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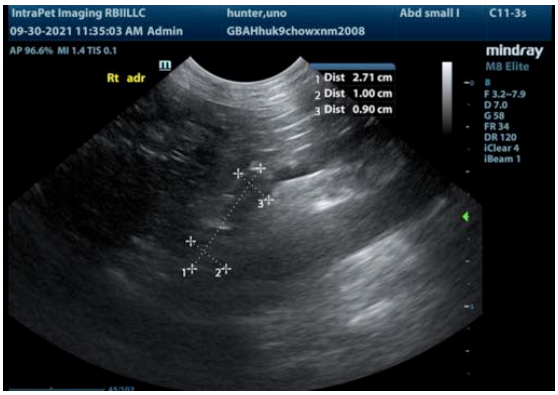
2 Dist 7.57 cm
mindray
M8 Elite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Rt adr
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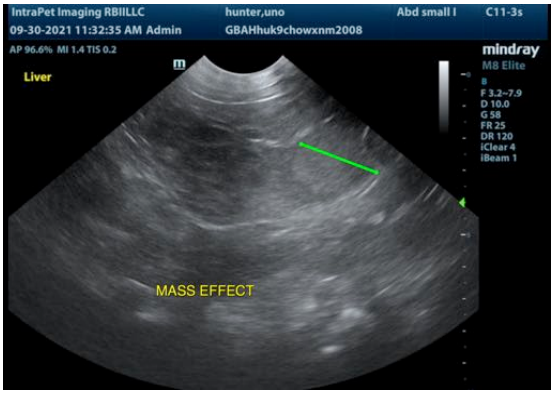
2 Dist 1.00 cm
3 Dist 0.90 cm
mindray
M8 Elite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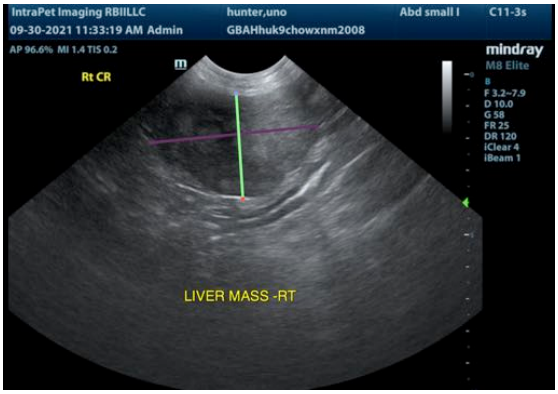
Liver
MASS EFFECT
mindray
M8 Elite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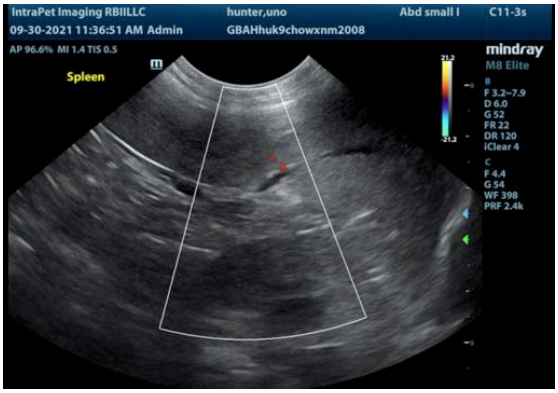
Rt CR
LIVER MASS -RT
mindray
M8 Elite



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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)
kathleen.sennello@sonopath.com