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Clinical Sonography & Telecytology
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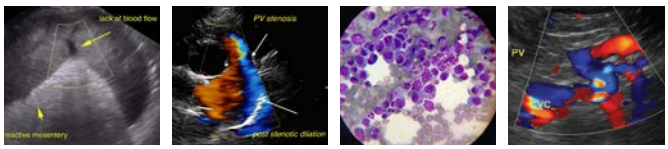


SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Midas Schank

SPECIES

Canine

BREED

Bulldog X

SEX

Neutered Male

AGE

12 Years

WEIGHT

70 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

Tranquility VC

REFERRING VET

Dr. C.

INVOICE

40686

DATE

8/23/22

PRESENTING CLINICAL SIGNS

Vomiting/anorexia. Current meds: Amoxicillin, Metro, Ondansetron
Abnormal PE/Chem/CBC/UA Results: ^Alk Phos, ^ALT, ^T. bili

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 (1.05 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 (7.21 cm). Overall echogenicity is slightly hyperechoic with poor 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 (7.95 cm). Overall echogenicity is slightly hyperechoic with poor 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 0.59 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.

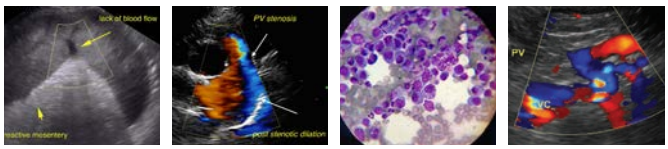
The right adrenal gland is large in size measuring 0.62 cm at the cranial pole, 1.31 cm at the caudal pole, and 3.35 cm in length. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is irregular in appearance in that the caudal pole is enlarged and hypoechoic, creating the impression of a caudal adrenal mass measuring approximately 1.68 cm x 2.21 cm.

Spleen

The spleen is large in size and irregular in shape. The blood flow through the hilus and splenic parenchyma appears normal. There is a large, mixed echogenic, somewhat cavitated mass lesion arising from the cranial two thirds of the spleen measuring approximately 7.86 cm x 7.08 cm. There is echogenic free fluid surrounding the lesion, and inflammatory tissue.

Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There is a small cluster of rounded cystic lesions, each measuring approximately 0.50-0.80 cm (in a series of 5 or 6) in the periphery of the caudate lobe. The significance of this is unclear.



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The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. 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. Duodenum wall measures 0.47 cm. Jejunum wall measures 0.36 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

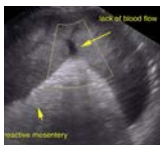
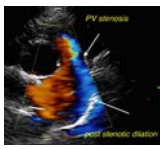
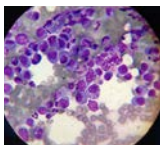
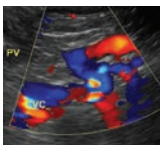
There is a large volume of highly echogenic, swirling free fluid. No lymphadenopathy is noted. The omentum is diffusely hyperechoic, particularly around the splenic mass.

Other

A brief view of the heart was submitted. No significant pericardial effusion was seen.

PRIMARY FINDINGS

- Large, irregular, mixed echogenic, cavitated splenic mass – The mass distorts the splenic capsule. Differentials for the mass include neoplasia (e.g., hemangiosarcoma, hemangioma), hematoma, abscess, other. A neoplastic process is favored.
- Heterogeneous liver with cystic lesion in the caudate lobe – 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.
- Moderate gallbladder debris – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.
- Hypoechoic mass in the caudal pole of the right adrenal gland – Right adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.
- Large amount of echogenic free fluid in the abdomen – Recommend fluid analysis and cytology. There is concern this could represent hemorrhage.

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- Hyperechoic, irregular omentum – Consistent with peritonitis (likely sterile). The irregularity of the omentum could be concerning for small nodules.

SECONDARY FINDINGS

- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a large, irregular, cavitated splenic mass surrounded by a large volume of echogenic free fluid. There is concern for possible hemoabdomen. Additionally, the mesentery is diffusely irregular and hyperechoic. This could be inflammatory secondary to the free fluid, but there is always the possibility of omental mets, which cannot be clearly distinguished on ultrasound. Recommend splenectomy for both diagnostic and therapeutic purposes.

Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.

There is a mass effect on the caudal pole of the right adrenal gland. This could represent a benign or neoplastic lesion, and this lesion could be secreting hormone or be non-active. These are considerations/recommendations for an adrenal mass:

- If signs of cushings are present, consider adrenal function testing. I prefer an ACTH stimulation test combined with an adrenal panel to the University of Tennessee's endocrine lab to look for atypical adrenal hormones as well as cortisol. (other testing can suffice)
- If adrenal dependent cushings is suspected and supported by adrenal function testing consider medical therapy with lysodren or trilostane and/or consider surgical removal (recommend referral to a board certified veterinary surgeon and possible pre op CT)-This can be a challenging surgery with significant risk for complication
- Recommend blood pressure evaluation-if hypertensive consider testing catecholamine levels for a possible pheochromocytoma
- Due to the invasive nature of these masses a CT scan is recommended to evaluate for metastasis and vascular invasion.
-
- If no symptoms of cushings are present, consider either referral for surgery or if surgery is not an option consultation with a veterinary oncologist regarding chemotherapeutic options and continued monitoring with ultrasound (in 4-6 weeks) can be considered.
- Some aggressive adrenal tumors can grow quickly and there is risk for acute hemorrhage from vascular invasion.

The above recommendations for a pet with an adrenal mass lesion. This is more complicated, as this patient additionally has a possibly bleeding splenic mass. I would not recommend pursuing adrenal function testing at this time due to the stress of this illness, but blood pressure evaluation and possibly a CT scan to look for invasion and metastasis could be considered. Additionally, you could consider referral to a veterinary surgeon, who may be able to evaluate this lesion intraoperatively.

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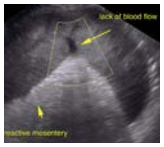
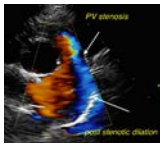
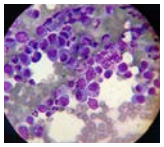
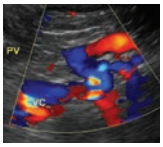

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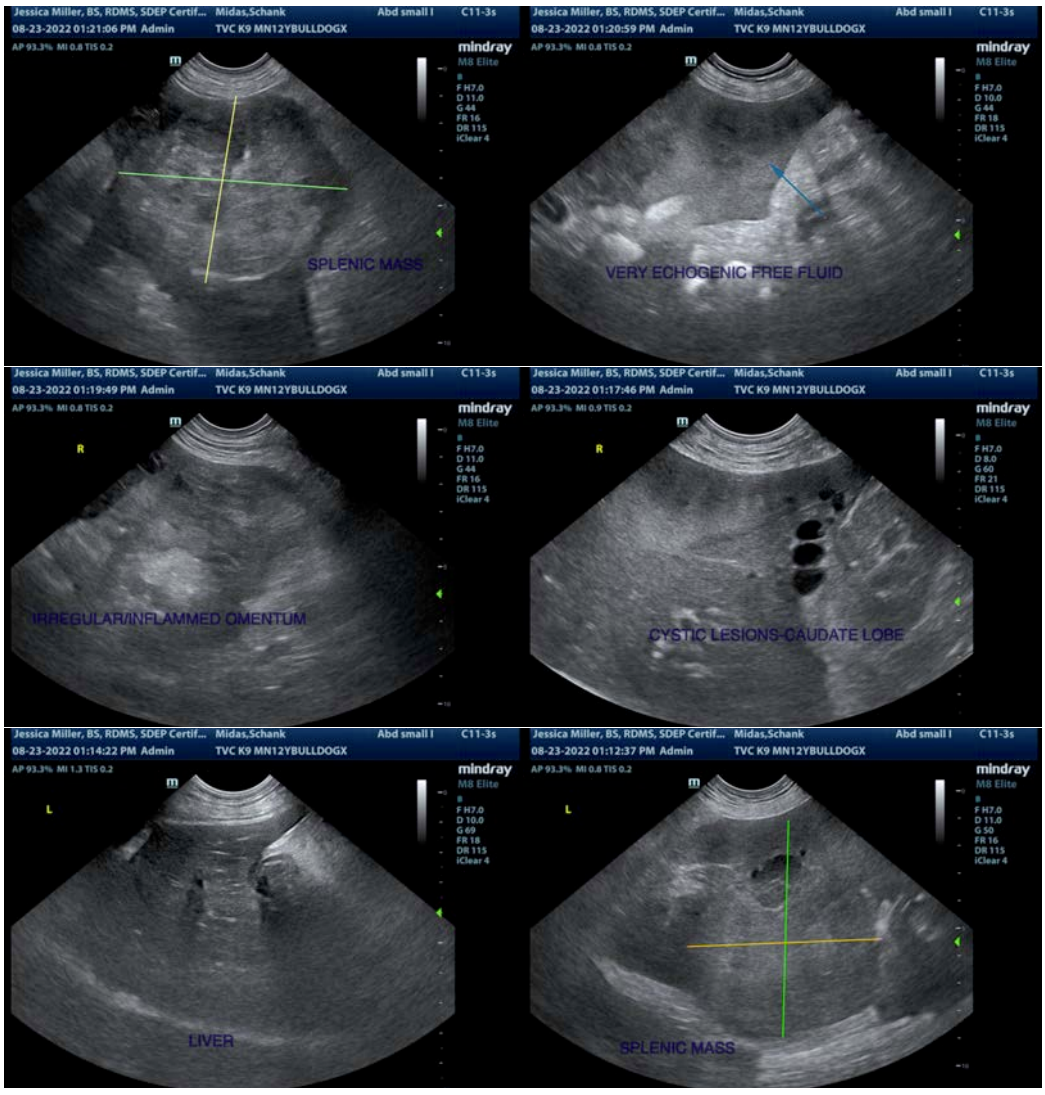

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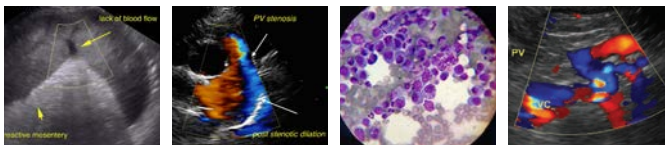

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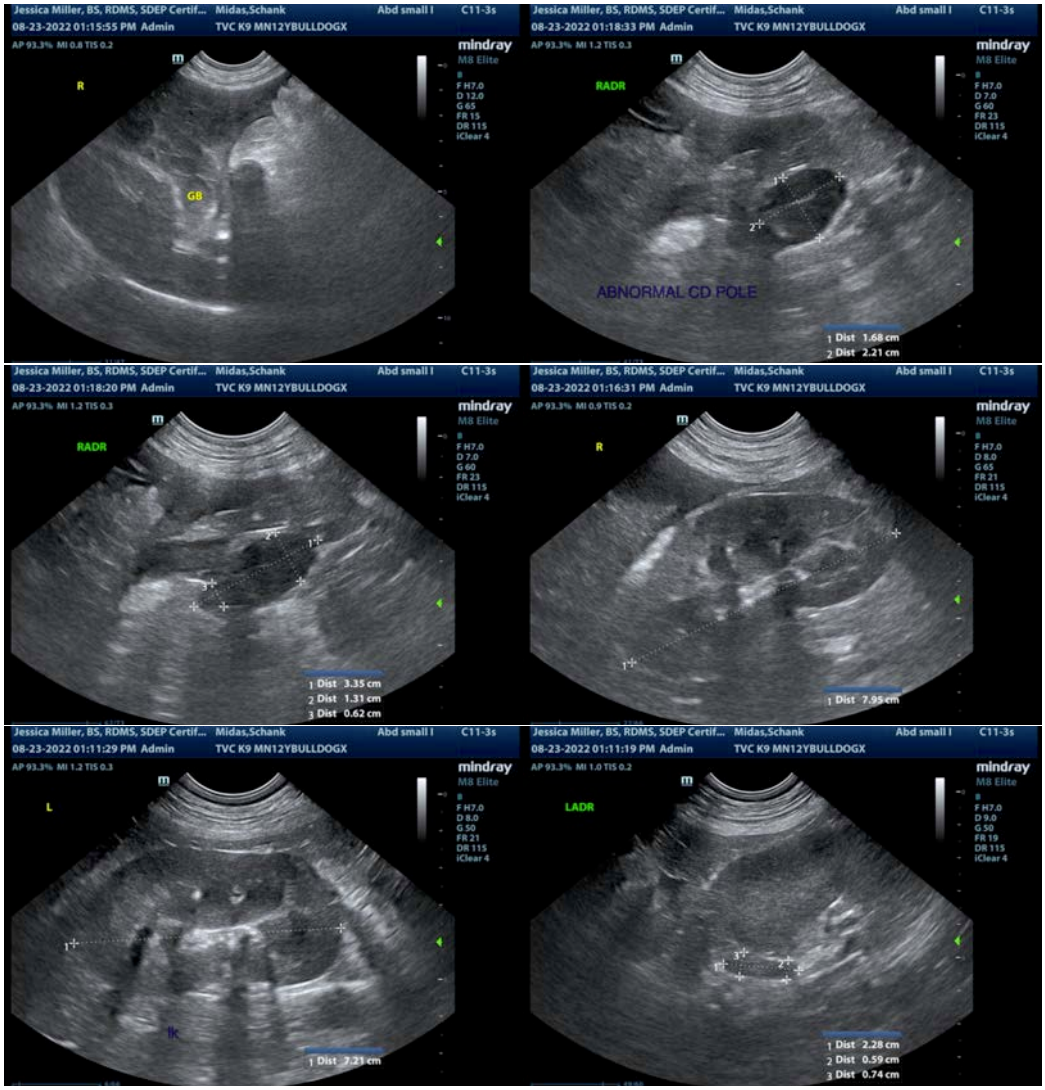

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

kathleen.sennello@sonopath.com