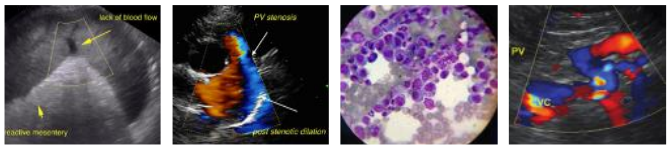
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Mo Burbank

SPECIES

Canine

BREED

Pug

SEX

Neutered Male

AGE

14 Year

WEIGHT

32.5

INTERPRETED BY

Jessica Midence, DVM, DACVIM (SAIM)

IMAGING PERFORMED BY

JK

HOSPITAL NAME

Hamburg VC

REFERRING VET

Dr. DenHeyer

INVOICE

21549

DATE

3/10/23

PRESENTING CLINICAL SIGNS

History: Had echo on 3/7/23. Mass noted on liver scan. Full abdominal ultrasound

Abnormal PE/Chem/CBC/UA Results: N/A

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder mucosa, trigone, and visible urethra are normal in thickness and there is no evidence of mucosal irregularities. The bladder lumen is mildly distended with anechoic urine and bladder thickness is considered normal for volume of urine. No masses, inflammatory changes or calculi are observed.

The prostate measures appropriate (0.72 cm) for the neutered status of the dog. The parenchyma appears homogenous.

The left kidney is normal in size, measuring 5.13 cm. There is mildly decreased corticomedullary distinction. The left kidney has a flattened cranial pole, consistent with prior infarct with a slight bulge at the junction between the cranial pole of the kidney and the mid body of the kidney. There is no evidence of pyelectasia, nephroliths or hydroureter.

The right kidney is normal in size, measuring 5.5 cm. There is mildly decreased corticomedullary distinction. The right kidney has a slightly undulating contour. There is no evidence of pyelectasia, nephroliths or hydroureter.

Adrenal Glands

The left adrenal gland is normal in size (cranial pole 0.52 cm, caudal pole 0.51 cm). The left adrenal gland has normal shape and it is normal in appearance and echogenicity.

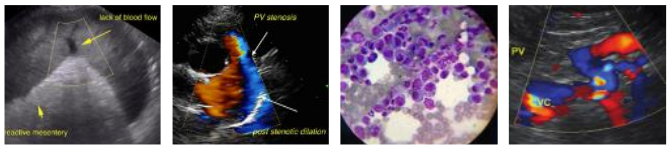
The right adrenal gland is normal in size at 0.4 cm. The right adrenal gland has normal shape and it is normal in appearance and echogenicity.

Spleen

The splenic echotexture is homogeneous with parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule is smooth with no irregularities. The splenic vasculature is normal without signs of congestion or thrombosis. The spleen measures 1.5 cm thick. There is scant anechoic effusion at the tail of the spleen.

Liver

The liver is significantly abnormal, particularly cranial at the diaphragm. It is difficult to evaluate in it's entirety. Surrounding the liver, there is a moderate volume of effusion that is very scantly echogenic. The omentum surrounding the cranial liver (between the liver and the diaphragm) is hyperechoic and has an almost nodular/reactive appearance, and in certain areas it appears to be adherent to the liver. The cranial left liver is indistinct and difficult to visualize in its entirety, but there does appear to be at least two liver masses. One of the masses is adjacent to and abuts the gallbladder, measuring 2.8 cm x 3.8 cm and is slightly cavitated and mottled. The other mass is also mottled and has a similar appearance to the other mass, measuring 3.2 cm x 4.32 cm. The borders of both of these masses are indistinct and difficult to discern. There is also a nodule that is approximately 1.1 cm, that does bulge the contours. The fat within the portohepatis and surrounding liver is generally hyperechoic.



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The gallbladder lumen is significantly distended. There is a large amount of echogenic debris that is organizing and nondependent.

Gastrointestinal

The gastric lumen contains a small volume of ingesta. The stomach wall is of normal wall thickness, measuring 0.33 cm with some variability due to rugal folds. There is normal gastric wall layering. There are no masses or focal lesions observed.

Certain loops of jejunum measured mildly thick at 0.47 cm. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material. No focal lesions are observed.

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

Pancreas

The area of 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. The visible pancreatic duct was normal.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Hepatic masses with significant surrounding steatitis, adherent omentum at moderate effusion (concern for prior mass rupture).

Secondary Findings

- Significant gallbladder sludge
- Chronic degenerative renal changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The appearance of the liver is most concerning for a ruptured hepatic neoplastic mass given the effusion and inflamed and adherent omentum. Hepatocellular carcinoma with intrahepatic metastasis would be considered most likely but other carcinomas, histiocytic sarcoma or other round cell neoplasia's are possibilities as well. It was difficult to discern a distinct border to either mass, though the parenchyma of the liver was mottled and distinctly different in those areas, and both of these mottled areas appeared similar to each other. These masses are most concerning for a ruptured neoplastic process. There is plenty of effusion for abdominocentesis for cytology and culture. The liver masses may be amenable to fine needle aspirates, however, they are located relatively cranial, so the patient would likely need heavy sedation in case an intercostal approach is necessary. Also, the masses abut the gallbladder, which contains a large amount of nondependent debris. Given the location of the masses, they do not appear amenable to surgical excision.

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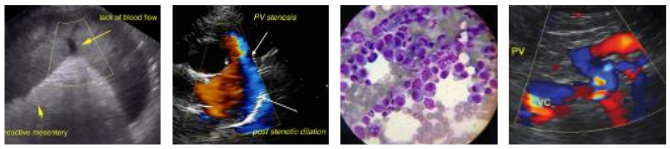

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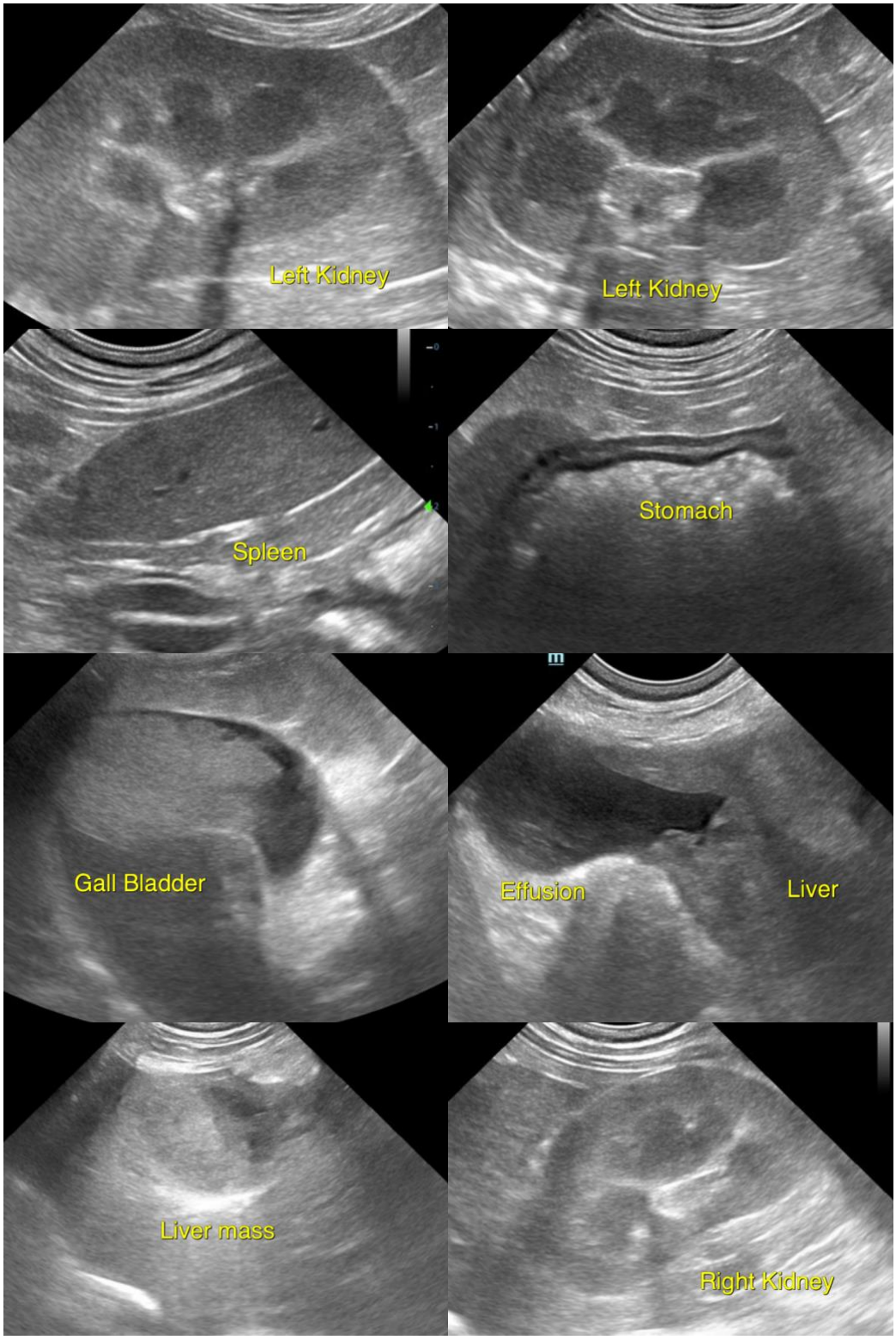

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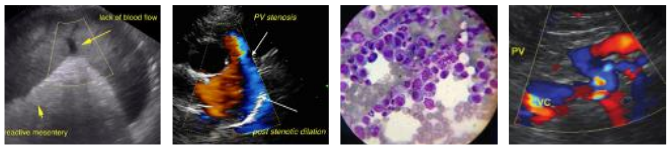

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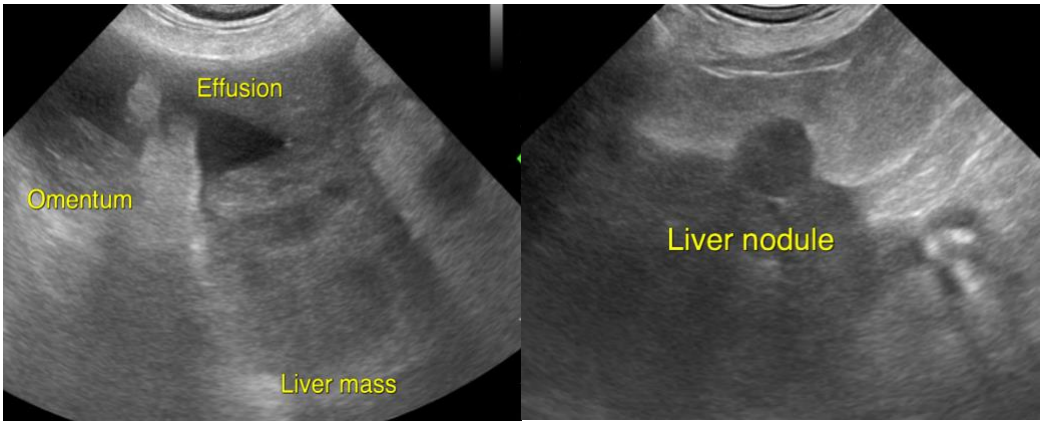

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Jessica Midence, DVM, DACVIM (SAIM)

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