

**DATE PRESENTING CLINICAL SIGNS**

9/3/21 History: anorexic, lethargic, very distended.

PATIENT Current Medications: Not provided by the veterinarian.

Epo McClanning Lab Results: attached
Radiographs: attached

Date of Previous IntraPet Ultrasound: No previous IntraPet scans.

SPECIES Sedation: not needed

Stat Report: not requested

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**BREED** *Urinary System*

Pekingese X

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.

SEX

Spayed Female

The left kidney has a normal shape and size (5.61 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. A 0.45 cm non-obstructive nephrolith was seen. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

AGE

6/9/09

The right kidney has a normal shape and size (6.18 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.

WEIGHT

34 Pounds

INTERPRETED BY

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Adrenal Glands

The left adrenal gland is large in size measuring 1.91 cm at the cranial pole and 0.55 cm at the caudal pole, and 3.91 cm in length. It is observed in its normal position cranial to the left renal artery. It is irregular in appearance with an enlarged cranial pole and a hyperechoic nodule within the cranial pole measuring 0.66 cm.

HOSPITAL NAME

ACC Flanders

The right adrenal gland is normal in size measuring 3.36 cm at the cranial pole, 1.28 cm at the caudal pole, and 4.15 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 abnormal in appearance, being uniformly large and hyperechoic.

REFERRING VET

Dr. Johnston

Spleen

The spleen is large in size. The spleen echotexture is heterogenous and mottled, the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. There is an ill-defined, 2.4 cm hypoechoic nodule/mass towards the cranial aspect of the spleen.

INVOICE

25193

Liver

The liver is large in size, and normal in 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. No focal nodules or cystic lesions are observed.

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. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) 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.

Other

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

ULTRASONOGRAPHIC FINDINGS

- Mottled, large spleen with ill-defined, hypoechoic mass/nodule – The diffuse splenic changes are non-specific and could be consistent with lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.
- Large, heterogeneous liver – 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.
- Bilaterally large and irregular adrenal glands – could be consistent with bilateral adrenal tumors or irregular bilateral nodular hyperplasia (possible PDH).
- Moderate gallbladder sludge – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Both adrenal glands are very large and abnormal in appearance (but do not look similar to each other). This could be bilateral adrenal tumors/metastatic lesions or could be consistent with irregular hyperplasia and PDG. Options moving forward include:

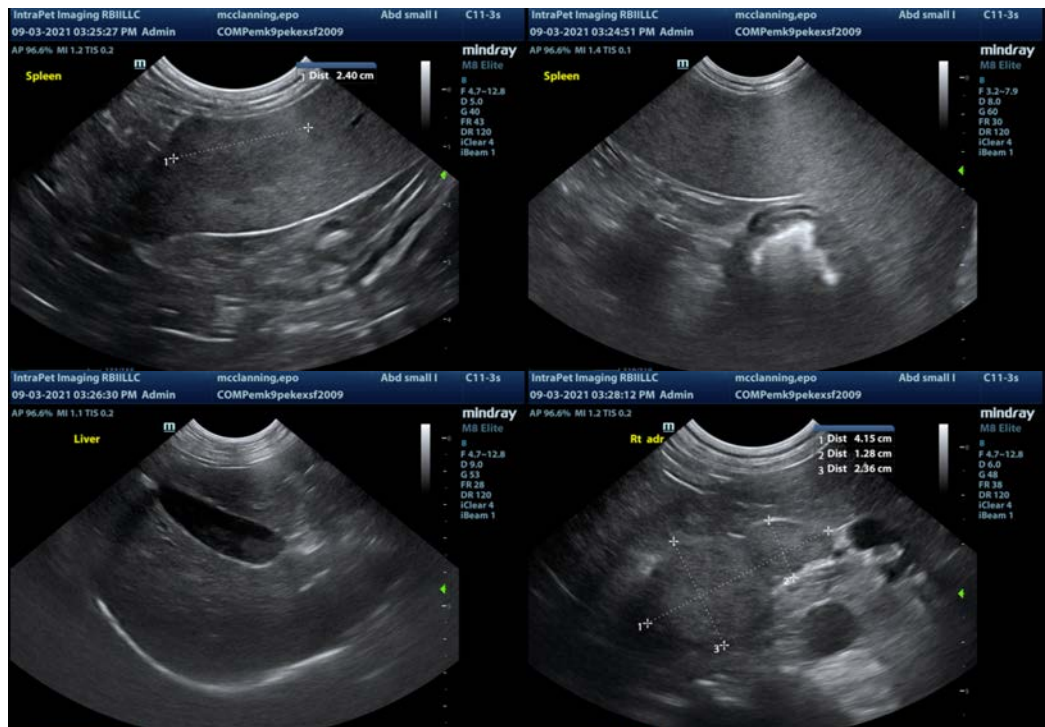
- Adrenal function testing. This can be difficult in a patient that is not feeling well. Recommend ACTH stimulation test possibly once feeling better.

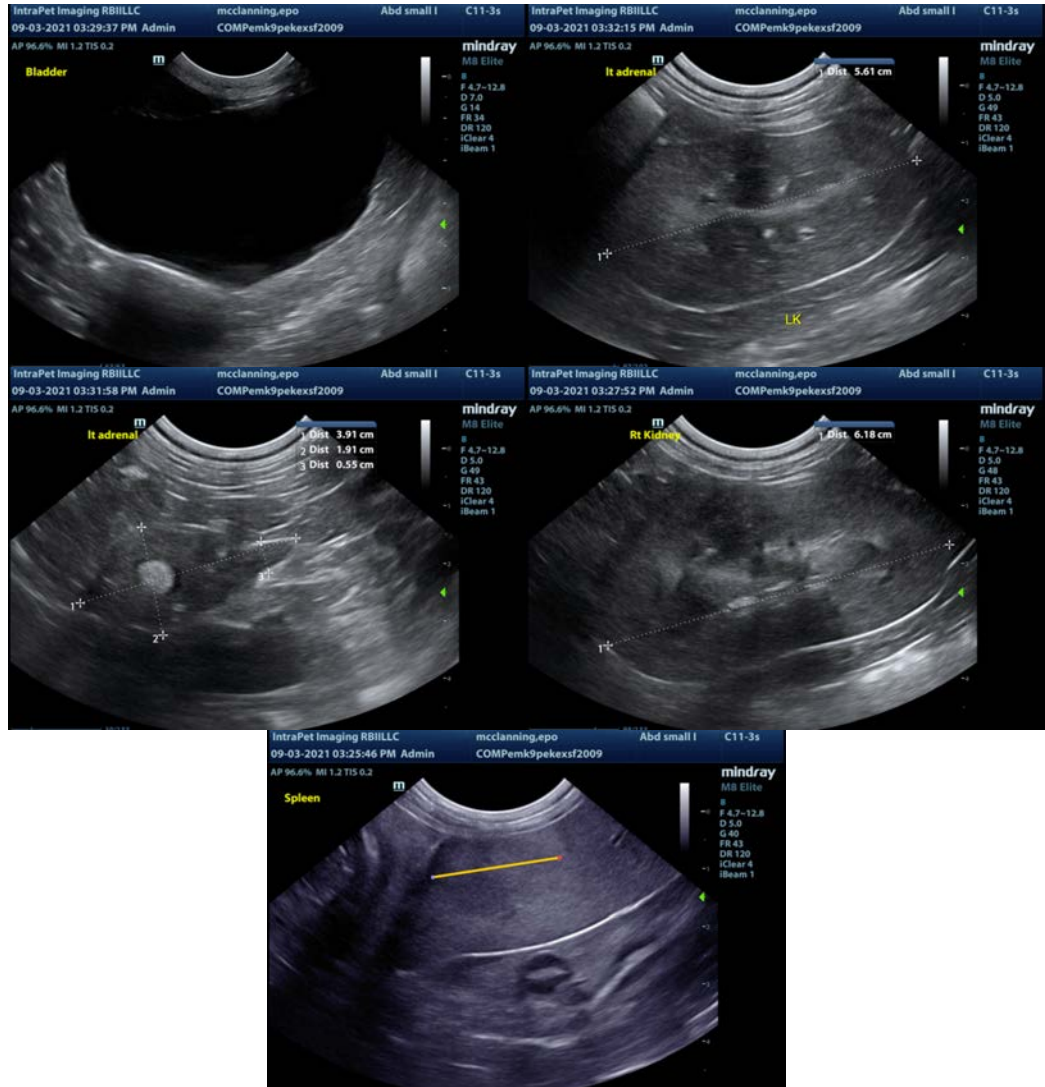
- Consider advanced imaging (CT scan) of the adrenals to look for any evidence of vascular invasion and to obtain more information.
- Consider a fine needle aspirate of the adrenal glands. This carries some risk, but complications are rare.
- If Cushing's is diagnosed, consider medical management (likely with Lysodren as Trilostane can increase adrenal size), or you could consider bilateral adrenomegaly. Recommend referral to a veterinary internist/surgeon if considering this option.

Additionally, the spleen is very large and has an ill-defined nodule. Recommend fine needle aspirate of the spleen, as I suspect this may be more likely to be a source of acute illness. If unable to obtain a cytologic diagnosis, you could consider advanced imaging in conjunction with the adrenal glands.

The liver appears large and mottled. This could be normal if the patient has Cushing's disease. Correlate with blood work findings. You could consider a liver function test and fine needle aspirate of the liver.

Recommend 3-view thoracic radiographs and blood pressure evaluation. Consider testing for pancreatitis, as this can sometimes not be apparent on abdominal ultrasound.





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.

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