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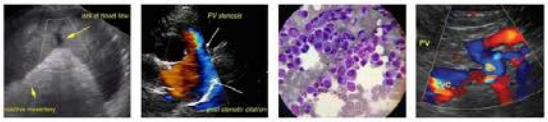

IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

PATIENT

Moebandi Johnson

SPECIES

Canine

BREED

Chihahua X

SEX

Neutered Male

AGE

5 Years

WEIGHT

18.7 Pounds

INTERPRETED BY

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

IMAGING BY

Loetitia Saint-Jacques, LVT

HOSPITAL NAME

Desert Hills AH

REFERRING VET

Dr. Michelle Caldwell

INVOICE

41588

DATE

9/22/22

PRESENTING CLINICAL SIGNS

P presented on 7/15 for painful paws. P was having a hard time walking and chewing at paws and a temperature of 104.3. P treated for allergies and suspected pododermatitis with Apoquel, Cefpodoxime and Rimadyl. Recheck 2 weeks later showed minimal improvement so a dental and biopsies was scheduled. Procedure performed 8/17/22 where P had 14 dental extractions and punch biopsies were obtained of the paw lesions. P's labs at that time showed ALP 195 (1-131), rest wnl. Histopathology revealed deep bacterial pyoderma and cultured pseudomonas, enterobacter, and staph pseudintermedius. P treated with 2 weeks of enrofloxacin and convenia and recheck was performed at 2 weeks and lesions had mostly resolved and P was doing well. Antibiotics continued for additional 2 weeks and another recheck was performed where lesions had worsened. Given lesions and elevation in liver values, concern for hepatocutaneous syndrome vs. pemphigus-Gabapentin for pain

Abnormal PE/Chem/CBC/UA Results: 9/19/22: cbc - wnl, chem - ALT 146, ALP 231

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 (0.59 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 (4.4 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal 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 (4.53 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal 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 0.39 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 0.45 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.

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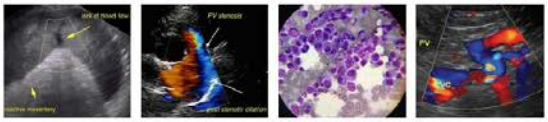

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Spleen

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. There is a hypoechoic nodule visualized within the parenchyma measuring 0.76 cm x 1.2 cm.

Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is mildly heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There are occasional very subtle hypoechoic regions. Two of these measure 0.46 cm x 0.57 cm and 0.47 cm x 0.63 cm.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and 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 (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 prominent and mottled compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

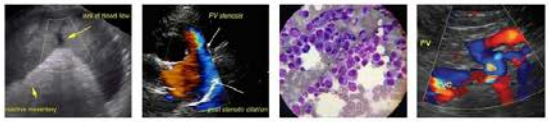
Evaluation of the peritoneal cavity did not reveal any evidence of effusion. The sublumbar lymph nodes are visualized and are isoechoic and appear relatively normal. The left sublumbar lymph node measures 0.71 cm. The right measures 0.49 cm. The omentum is of normal echogenicity.

Other

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

ULTRASONOGRAPHIC FINDINGS

- Hypoechoic nodule in the spleen – There is a non-cavitated, hypoechoic splenic nodule visualized. Differentials include lymphoid hyperplasia, extramedullary hematopoiesis,



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infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.

- Prominent, mottled pancreas – The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- Mildly heterogeneous liver with very subtle hypoechoic nodules – 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.
- Visible sublumbar lymph nodes – likely within normal limits.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No dramatic focal lesions are visualized in the liver, and the parenchyma appears mildly heterogeneous, but this is very mild. Consider the following for further evaluation:

The ultrasonographic changes in the liver were relatively mild. Unfortunately, the sonographic changes do not always reflect the severity or cause of the hepatopathy. The scan today supports a primary hepatopathy as no severe biliary changes were observed.

- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc...

- Consider PCR on urine/serum for leptospirosis (if not on antibiotics)/serology if recent antibiotic history

- If not already done, consider pre and post prandial bile acids to evaluate liver function

- Consider Fine needle aspirate if round cell neoplasia is on your differentia list (25 g needle, normal coags)

- If no response to supportive care (Denamarin, fluids, antibiotics, +/- ursodiol etc.) Consider liver biopsy with samples obtained for histopathology, culture, and copper levels.

There is a hypoechoic lesion in the spleen. Options moving forward include continued monitoring or a fine needle aspirate (recommend a fine needle aspirate).

The changes in the pancreas are mild and likely associated with mild remodeling.

The appearance of the liver appears relatively mild for hepatocutaneous syndrome, but this is typically a biopsy diagnosis. If liver function testing is abnormal, consider a biopsy. Additionally, you could consider advanced imaging to look for a portosystemic shunt (none observed on today's exam).

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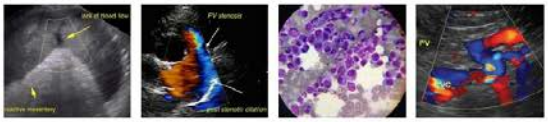

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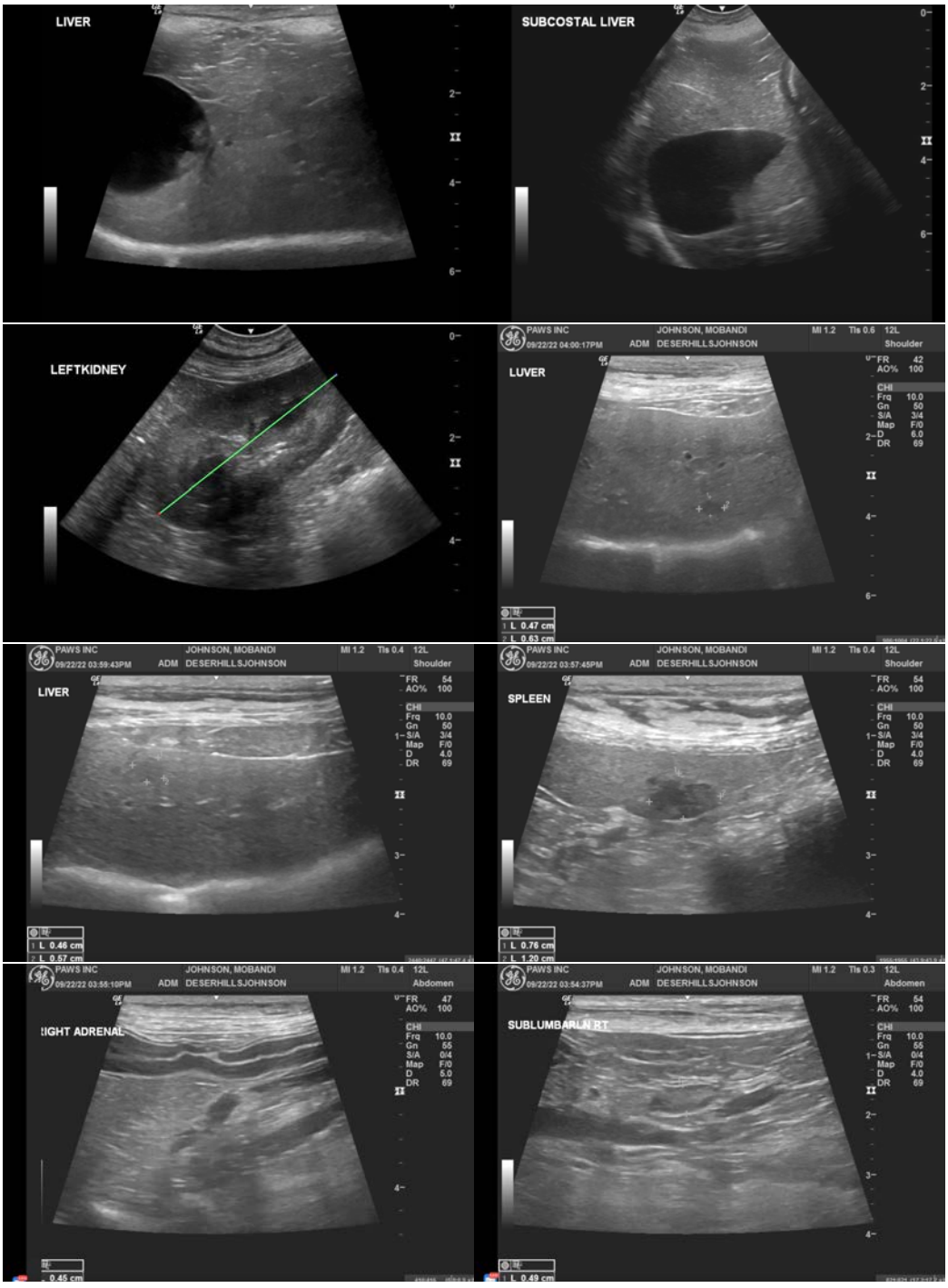
Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.



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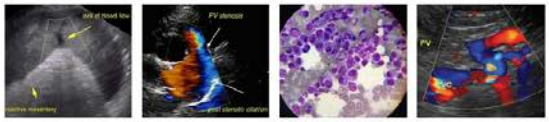

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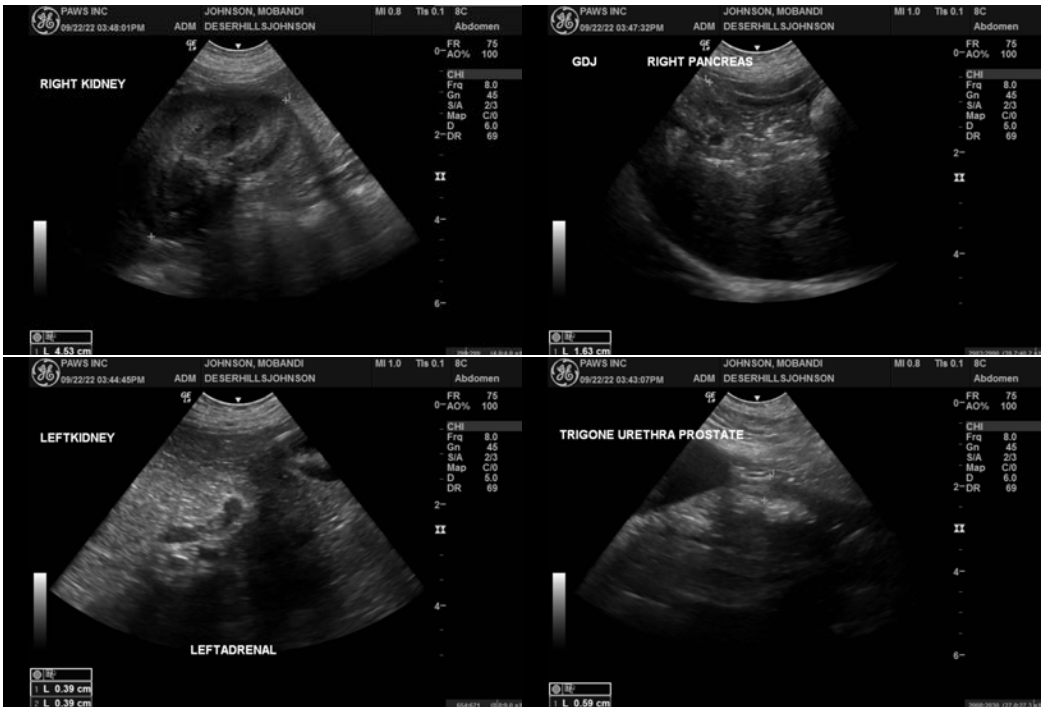

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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