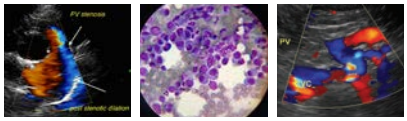
IMAGING PERFORMED BY

IntraPet.com



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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DATE

5/4/23

PATIENT

Hazel West

SPECIES

Canine

BREED

Labrador X

SEX

Spayed Female

AGE

8/31/11

WEIGHT

79.4 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Belvedere Vet Center

REFERRING VET

Dr. Eden

INVOICE

47155

PRESENTING CLINICAL SIGNS

Presented for dental prophylaxis. Pre-anesthetic lab work reveled ALKP elevation and trending up. P well maintained hypothyroid patient. Remaining CBC/chem WNL including ALT and ALB.
P is asymptomatic for hyperadrenocorticism (no PUPD, coat thinning etc)

Current Medications: Thyro-tabs- for a few years- currently 0.8mg PO BID, Rimadyl 75mg- one tab PO q8-12hrs- since Jan 2023
Lab Results: ALKP Trends (normal <131): 09/2018- 278. 07/2019- 409. 08/2022- 777
04-2023- 1,687
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Rachel Brilhart, RDMS.

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, or masses. In the dependent portion of the urinary bladder there are small hyperechoic foci consistent with occasional very small stones, one of these visualized measures 0.29 cm. These are likely small enough to pass.

The left kidney has a normal shape and size (7.11 cm) with small non-obstructive nephroliths, one of which measured 0.23 cm. Overall echogenicity is slightly hyperechoic with poor 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, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (6.01 cm) with small non-obstructive nephroliths, one of which measured 0.26 cm. Overall echogenicity is slightly hyperechoic with poor 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, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is large and irregular in shape, measuring 1.0 cm at the cranial pole, 1.25 cm at the caudal pole, and 3.51 cm in length. It is observed in its normal position cranial to the left renal artery. It is abnormal in appearance in that it is large, hypoechoic and irregular with an indistinct central hyperechoic region measuring 1.53 cm x 1.86 cm. There appears to be soft tissue invasion into the phrenic vessel with reduced blood flow in that region. Findings are most consistent with an invasive adrenal mass.

The right adrenal gland is normal in size measuring 0.70 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 large and irregular. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There are numerous ill-

defined hypoechoic nodules visualized throughout the parenchyma. One such nodule measures at 1.04 cm. Additionally, there is a hyperechoic mass effect visualized in the left side measuring 2.53 cm x 3.53 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 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.

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

- Small, hyperechoic foci in the dependent portion of the urinary bladder – These are consistent with occasional small bladder stones. These are likely small enough to pass. Recommend a urinalysis and culture.

- Large, irregular left adrenal gland with evidence of invasion into the phrenic vein – Adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.

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

- Heterogeneous hypoechoic liver with ill-defined hypoechoic nodules and a hyperechoic left-sided mass effect – 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. The nodules observed trend toward a more benign process, but underlying neoplasia cannot be ruled out. The nature of the hyperechoic mass effect is uncertain, although the appearance of this lesion trends towards a more benign lesion.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

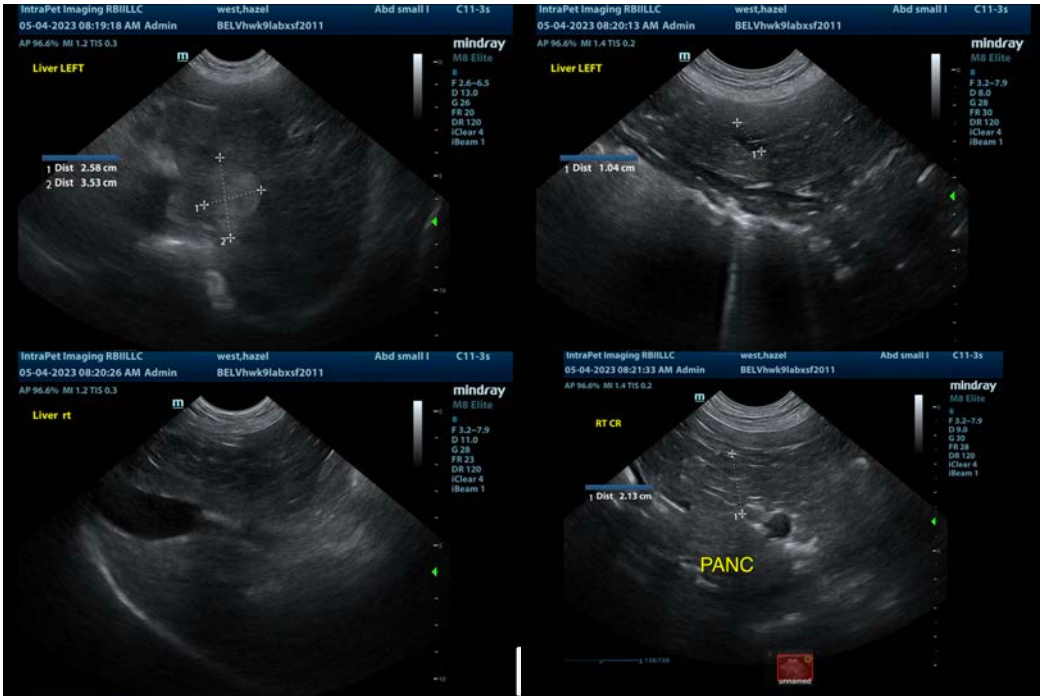
There is a left-sided adrenal mass with likely early invasion into the phrenic vein. This is concerning for a neoplastic process. Recommend a contrast CT scan to assess for possible surgical removal, as if this is early invasion, surgery could still be an option.

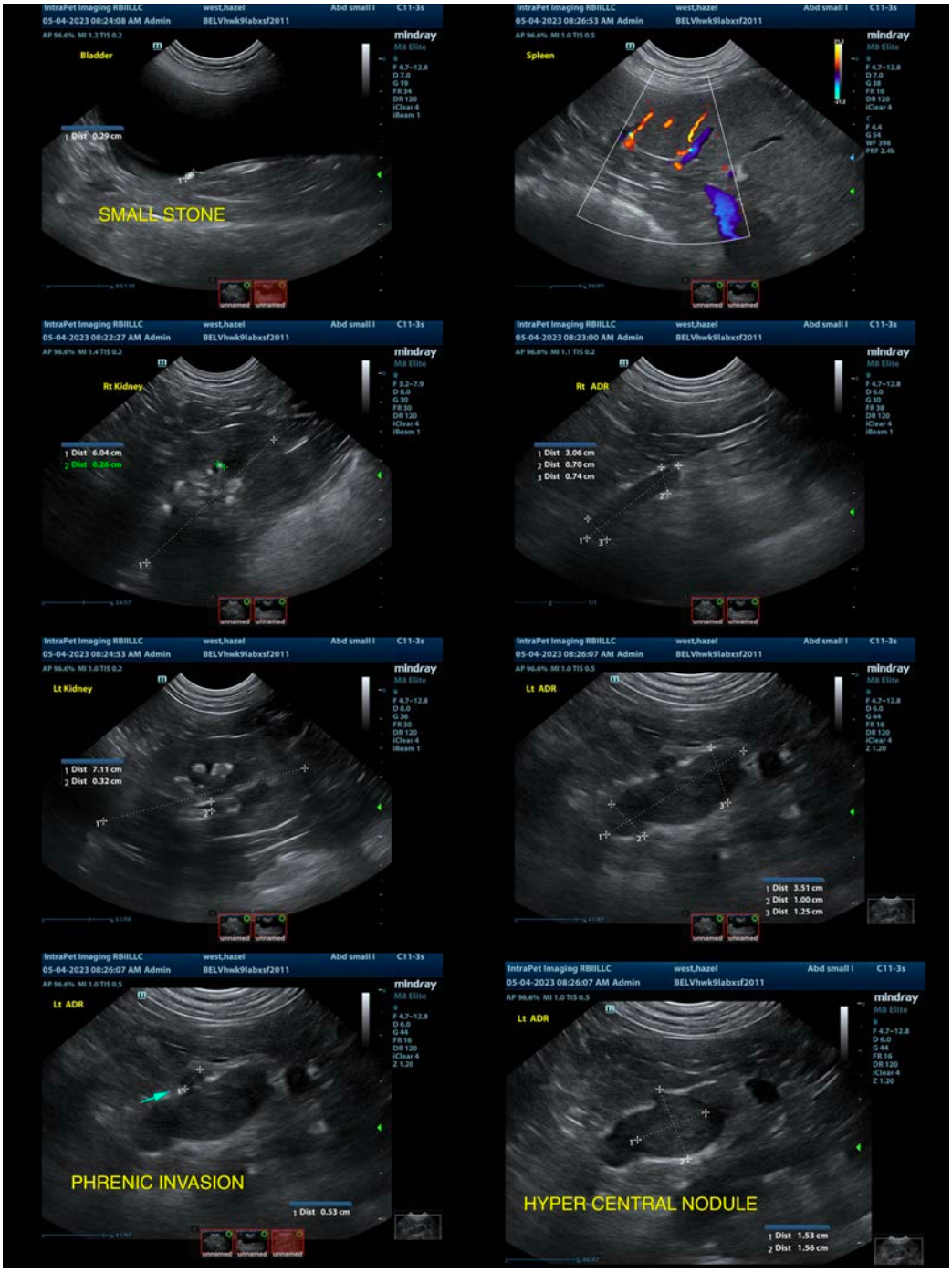
Recommend a blood pressure evaluation. If hypertension is present, recommend measuring catecholamines to screen for possible pheochromocytoma.

The liver is heterogeneous with numerous ill-defined hypoechoic nodules. The appearance of these lesions trends towards a more benign process, although underlying neoplasia cannot be ruled out. Additionally, there is a larger hyperechoic mass effect more consistent with a primary hepatic lesion/mass. This could represent a benign or neoplastic lesion. If a window for aspiration can be obtained (I suspect this would be difficult), a fine needle aspirate could be considered. Alternately, recommend evaluation of this lesion with the CT scan at the time of evaluation of the left adrenal.

Small stones are visualized in the urinary bladder and in both kidneys. There is no evidence of an obstruction, and the stones in the urinary bladder are likely small enough to pass. Recommend urinalysis and culture and continued monitoring.

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

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west,hazel
Abd small I
C11-3s
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BELVhwk9labxsf2011
mindray
M8 Elite
Bladder
1 Dist 0.29 cm
SMALL STONE
IntraPet Imaging RBIILLC
west,hazel
Abd small I
C11-3s
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mindray
M8 Elite
Spleen
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west,hazel
Abd small I
C11-3s
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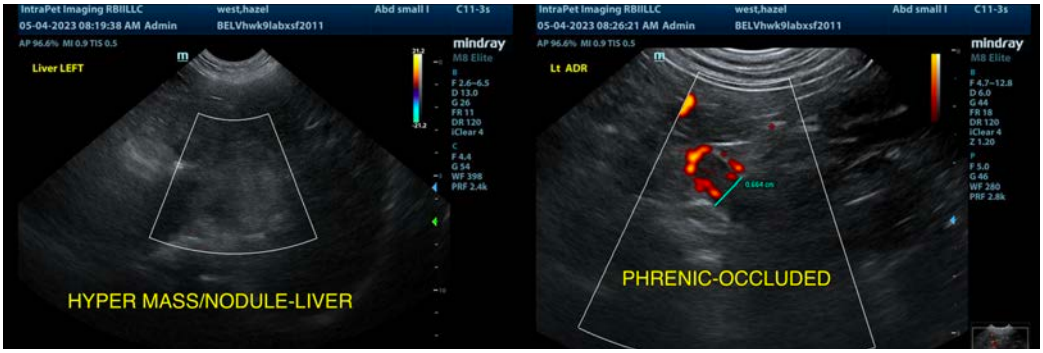
BELVhwk9labxsf2011
mindray
M8 Elite
Rt Kidney
1 Dist 6.04 cm
2 Dist 0.26 cm
IntraPet Imaging RBIILLC
west,hazel
Abd small I
C11-3s
05-04-2023 08:23:00 AM Admin
BELVhwk9labxsf2011
mindray
M8 Elite
Rt ADR
1 Dist 3.06 cm
2 Dist 0.70 cm
3 Dist 0.74 cm
IntraPet Imaging RBIILLC
west,hazel
Abd small I
C11-3s
05-04-2023 08:24:53 AM Admin
BELVhwk9labxsf2011
mindray
M8 Elite
Lt Kidney
1 Dist 7.11 cm
2 Dist 0.32 cm
IntraPet Imaging RBIILLC
west,hazel
Abd small I
C11-3s
05-04-2023 08:26:07 AM Admin
BELVhwk9labxsf2011
mindray
M8 Elite
Lt ADR
1 Dist 3.51 cm
2 Dist 1.00 cm
3 Dist 1.25 cm
IntraPet Imaging RBIILLC
west,hazel
Abd small I
C11-3s
05-04-2023 08:26:07 AM Admin
BELVhwk9labxsf2011
mindray
M8 Elite
Lt ADR
PHRENIC INVASION
1 Dist 0.53 cm
IntraPet Imaging RBIILLC
west,hazel
Abd small I
C11-3s
05-04-2023 08:26:07 AM Admin
BELVhwk9labxsf2011
mindray
M8 Elite
Lt ADR
HYPER CENTRAL NODULE
1 Dist 1.53 cm
2 Dist 1.56 cm



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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