



PATIENT PRESENTING CLINICAL SIGNS

Mia Deorio History of elevated ALKP (has doubled in the past 2 weeks), history of multiple masses in liver/spleen - stable. Recently azotemic, treated with Amoxi, recheck blood work, scanned kidney, possible cyst in r adrenal? Current meds: Galliprant.

SPECIES

Canine Abnormal PE/Chem/CBC/UA Results: 11/17 - AKLP 622, creat. 1.8, BUN 34, Dec 15 ALKP 1,435, creat. 1.8, BUN 34.

BREED ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Chihuahua X *Urinary System*

SEX

Spayed Female Urinary bladder is adequately distended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with occasional echogenic non-shadowing debris, most consistent with exfoliated cells, mucous and/or small blood clots. Both sterile inflammation as well as urinary tract infection can also present with echogenic debris. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface. Mineral debris is observed and conglomerated small non-shadowing cystoliths cannot be definitively ruled out.

AGE

13 Years The right kidney is normal in size (4.36 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed. Non-obstructive areas of mineralization/nephroliths are noted.

WEIGHT

17.5 Pounds The left kidney is normal in size (4.61 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed. Non-obstructive areas of mineralization/nephroliths are noted

INTERPRETED BY

Beth Johnson, DVM *Adrenal Glands*

DACVIM The left adrenal gland is normal in size (1.64 cm length x 0.42 cm cranial x 0.55 cm caudal), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

IMAGING PERFORMED BY

Kelly Vazquez The right adrenal gland is normal in size (1.72 cm length x 1.1 cm cranial x 0.46 cm caudal), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

HOSPITAL NAME *Spleen*

Englewood Cliffs VH Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). Multifocal well-demarcated hyperechoic homogenous nodules are noted.

REFERRING VET

Dr. Rachel Park Additionally, several small ~ 0.5 cm hypo to anechoic nodules were also present. Splenic vasculature appears normal.

INVOICE *Liver*

12522ag Liver is subjectively enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion. The largest nodule is 2 cm x 3 cm in size positioned just cranial to the stomach.

DATE

12/22/22 Gallbladder is moderately distended with anechoic bile as well as mild suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.



PATIENT

Gastrointestinal

Mia Deorio

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

SPECIES

Canine

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

BREED

Chihuahua X

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

SEX

Pancreas

Spayed Female

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

AGE

Free Abdomen

13 Years

There is no evidence of free peritoneal effusion noted in these images.

WEIGHT

There is no apparent lymphadenopathy noted in these images.

17.5 Pounds

ULTRASONOGRAPHIC FINDINGS

Primary

- Heterogenous Liver – These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.
- Hyperechoic splenic nodules – most consistent with benign myelolipomas. Other differentials such as fibrosis or calcification caused by old hematomas or infarcts, chronic inflammation, granulomatous disease or metastatic disease cannot be ruled out, but are considered less likely.
- Hypo to anechoic splenic nodules – likely represents benign lesions such as cysts, hematomas, nodular hyperplasia, extramedullary hematopoiesis, etc., however while considered less likely, infiltrative neoplasia can mimic benign lesions, and cannot be ruled out.

Secondary

- Mild gallbladder debris (canine) - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.
- Urinary bladder debris

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Englewood Cliffs VH

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

1. Given the patient's history or recent azotemia a urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.
2. While the appearance of both the spleen and liver trend towards benign, given the reported recent jump in ALP, a FNA of the liver, both diffuse parenchymal changes as well as the



PATIENT

Mia Deorio

largest nodule as described above could be considered if the patient's coagulation status is appropriate.

- Empirical therapy for the gallbladder debris in the form of Ursodiol +/- broad spectrum antibiotics could be considered.

SPECIES

Canine

BREED

Chihuahua X

SEX

Spayed Female

AGE

13 Years

WEIGHT

17.5 Pounds

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DATE

12/22/22





PATIENT

Mia Deorio

SonoPath Mobile deorio,mia Abdominal Small Intestine
 12-22-2022 09:49:20 AM Admin ENGLEWOODCLIFFSVET13Y... ENGLEW
 e: R:105 G:108 B:113
 9 cm AP 93.3% MI 1.0 TIS 0.1

SPECIES

Canine

BREED

Chihuahua X

SEX

Spayed Female

AGE

13 Years

WEIGHT

17.5 Pounds

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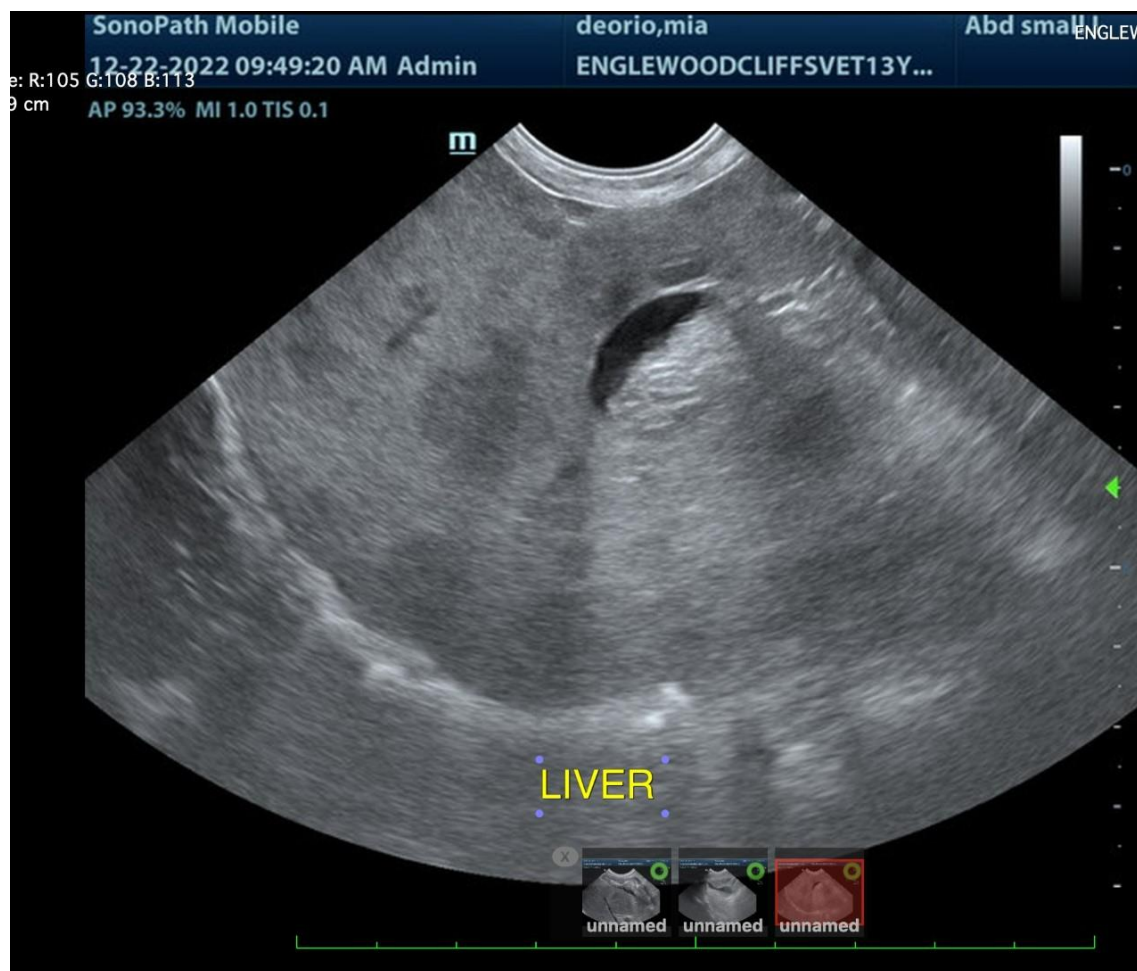
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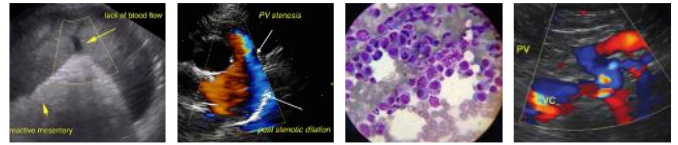
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12/22/22





PATIENT

Mia Deorio



SPECIES

Canine

BREED

Chihuahua X

SEX

Spayed Female

AGE

13 Years

WEIGHT

17.5 Pounds

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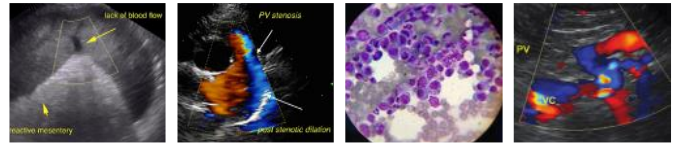
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Mia Deorio



SPECIES

Canine

BREED

Chihuahua X

SEX

Spayed Female

AGE

13 Years

WEIGHT

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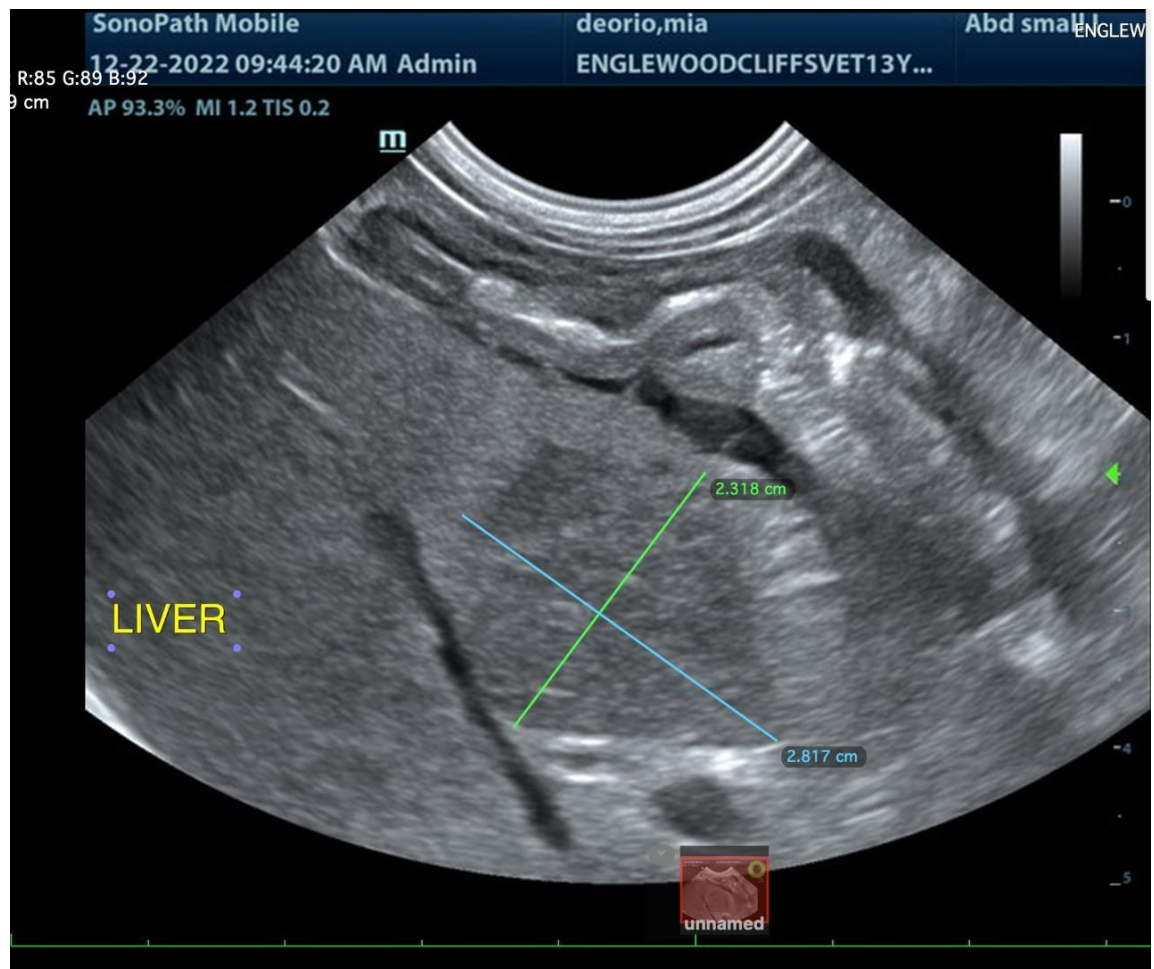
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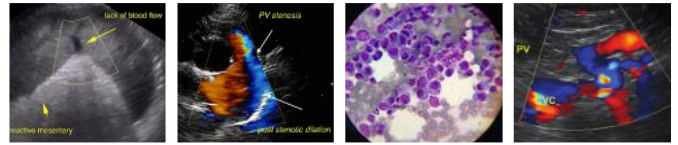
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DATE

12/22/22





PATIENT

Mia Deorio

SonoPath Mobile deorio,mia Abdominal
12/22/2022 09:49:00 AM Admin ENGLEWOOD
ENGLEWOODCLIFFSVET13Y...

SPECIES

Canine

BREED

Chihuahua X

SEX

Spayed Female

AGE

13 Years

WEIGHT

17.5 Pounds

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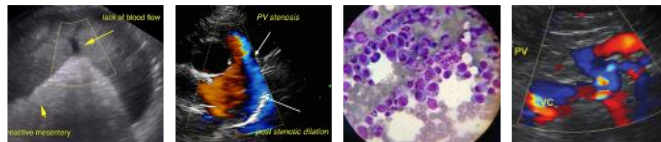
Dr. Rachel Park

INVOICE

12522ag

DATE

12/22/22



PATIENT

Mia Deorio

SonoPath Mobile deorio,mia Abdominal Ultrasound
12/22/2022 09:49:48 AM Admin ENGLEWOODCLIFFSVET13Y...

SPECIES

Canine

BREED

Chihuahua X

SEX

Spayed Female

AGE

13 Years

WEIGHT

17.5 Pounds

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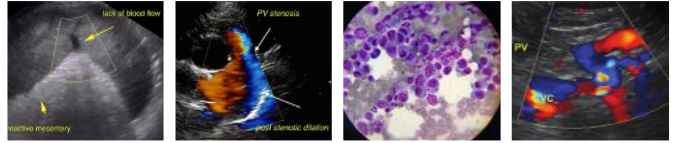
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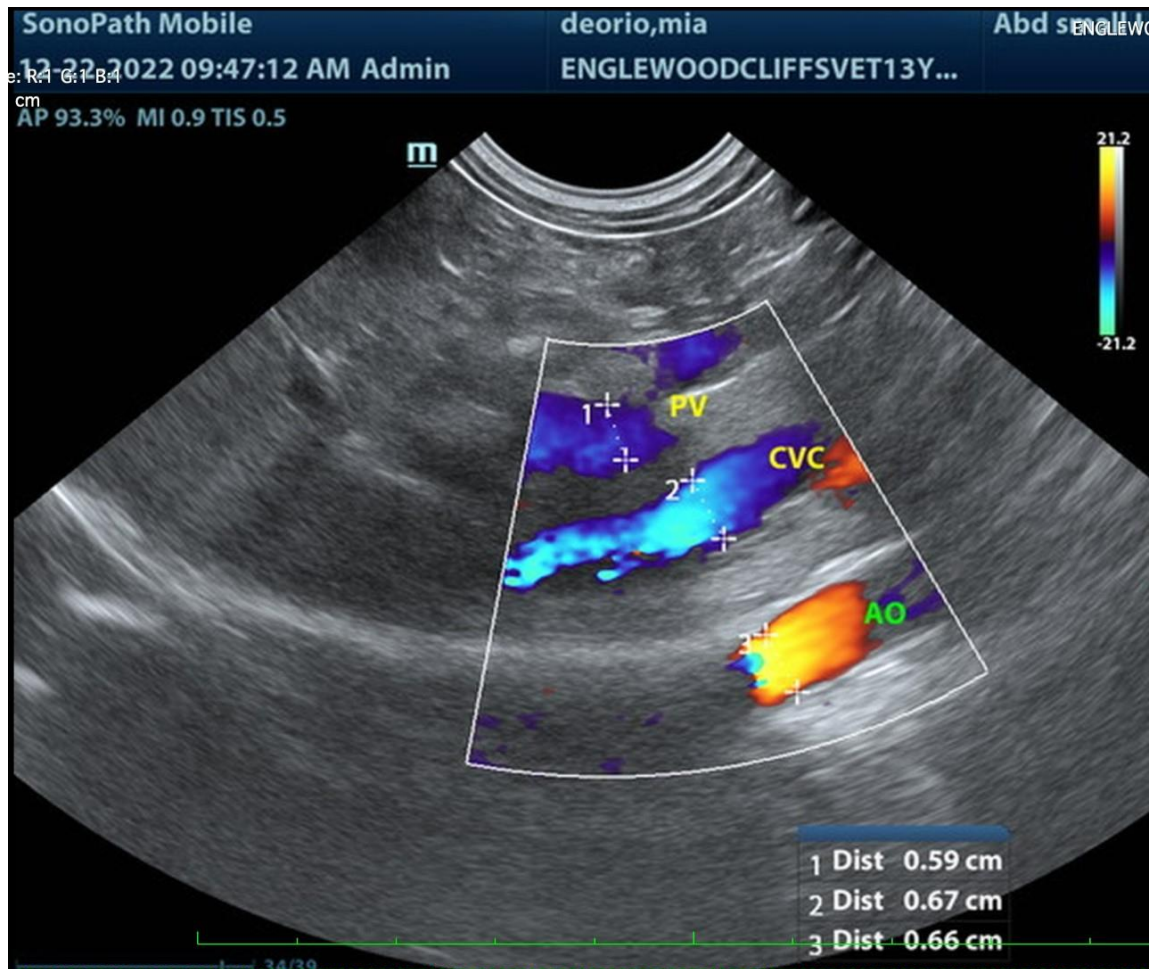
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PATIENT

Mia Deorio



e: R:1 G:1 B:1
cm
AP 93.3% MI 0.9 TIS 0.5

SPECIES

Canine

BREED

Chihuahua X

SEX

Spayed Female

AGE

13 Years

WEIGHT

17.5 Pounds

INTERPRETED BY

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IMAGING PERFORMED BY

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REFERRING VET

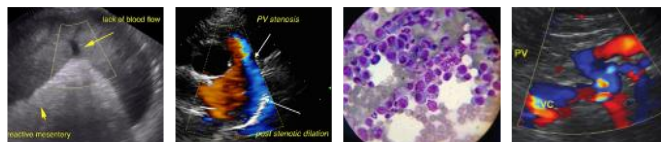
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INVOICE

12522ag

DATE

12/22/22



PATIENT

Mia Deorio

SonoPath Mobile deorio,mia Abdominal Ultrasound
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 e: R:1 G:1 B:1
 cm

SPECIES

Canine

BREED

Chihuahua X

SEX

Spayed Female

AGE

13 Years

WEIGHT

17.5 Pounds

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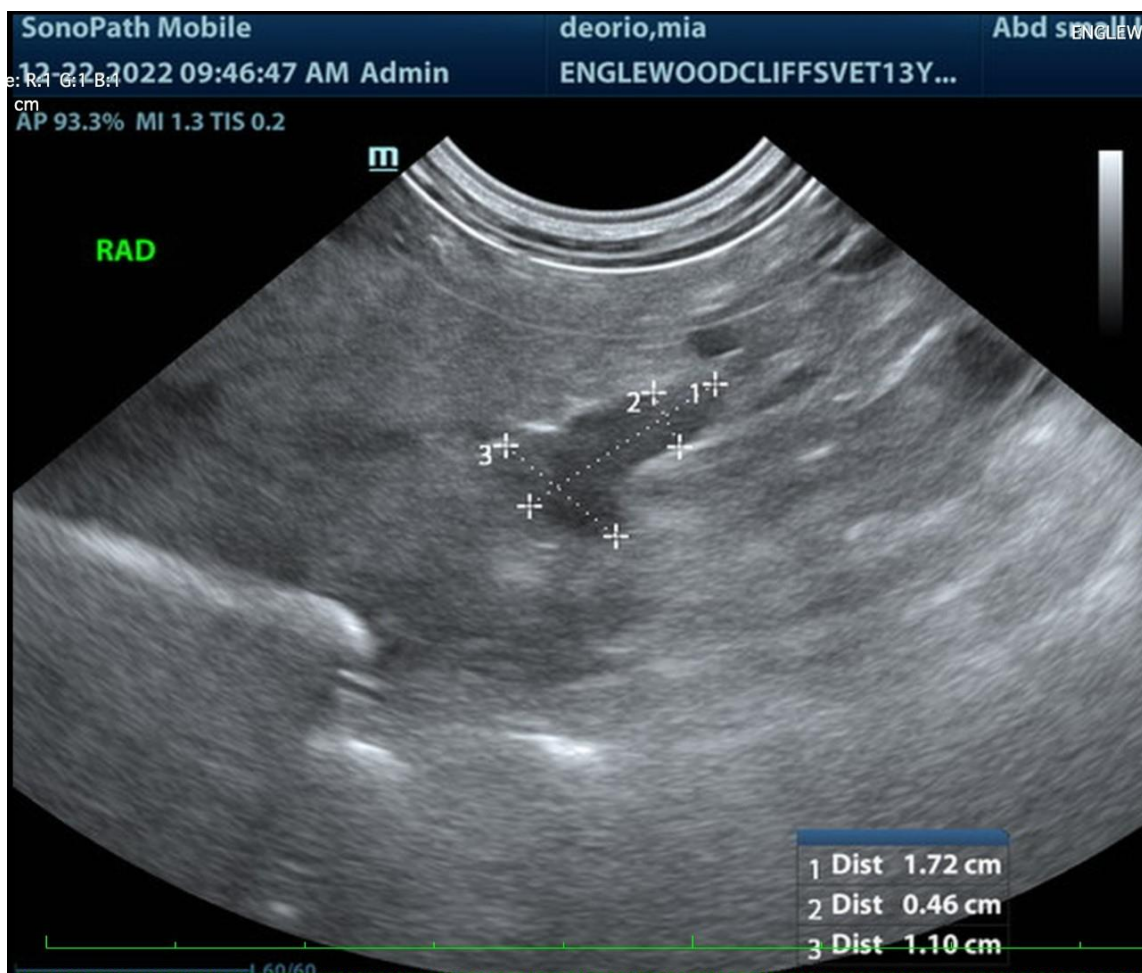
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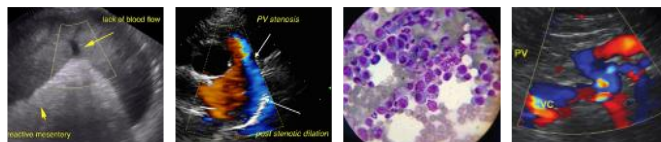
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SPECIES

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BREED

Chihuahua X

SEX

Spayed Female

AGE

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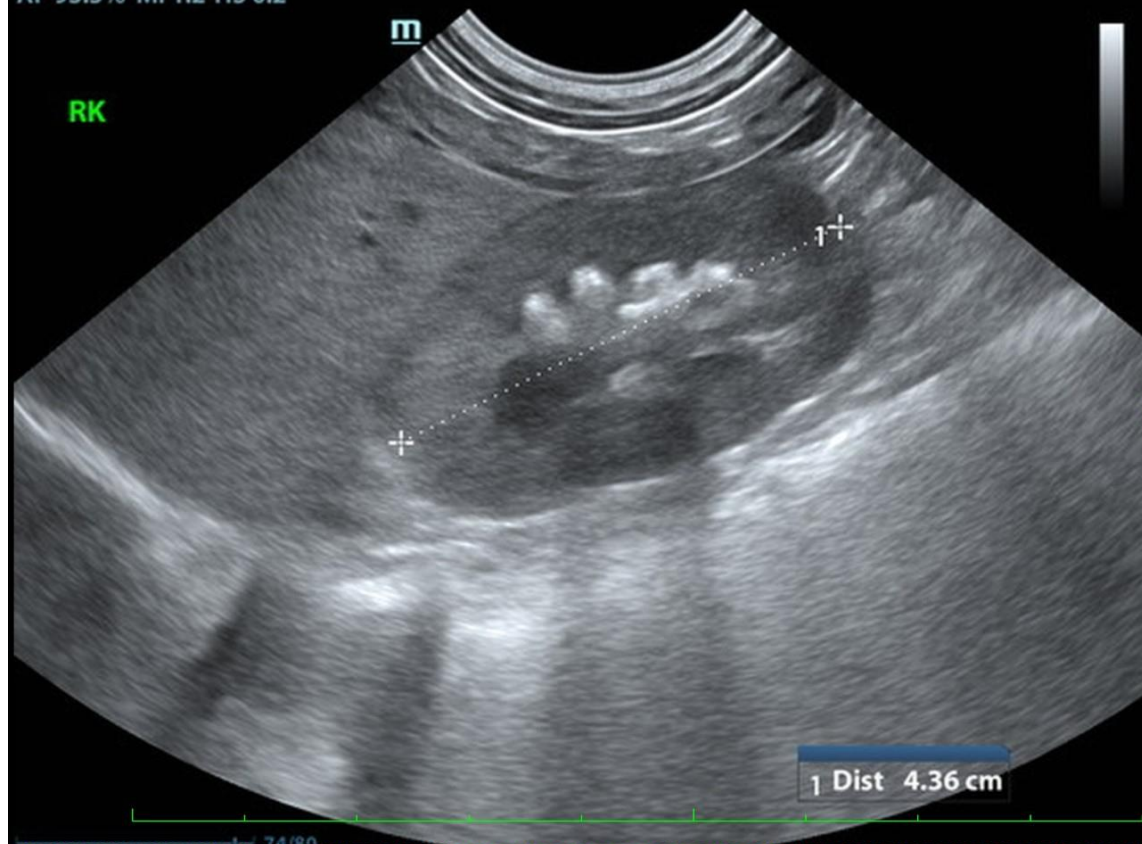
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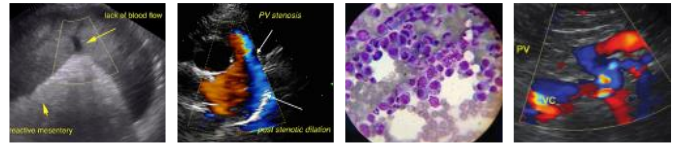
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DATE

12/22/22





PATIENT

Mia Deorio

SonoPath Mobile deorio,mia Abdominal Ultrasound
12/22/2022 09:44:56 AM Admin ENGLEWOOD CLIFFS VET
e: R:1 G:1 B:1
cm ENGLEWOOD CLIFFS VET
AP 93.3% MI 1.1 TIS 0.1

SPECIES

Canine

BREED

Chihuahua X

SEX

Spayed Female

AGE

13 Years

WEIGHT

17.5 Pounds

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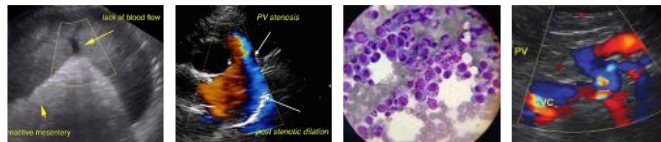
INVOICE

12522ag

DATE

12/22/22





PATIENT

Mia Deorio

SonoPath Mobile deorio,mia Abdominal Ultrasound
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 e: R:1 G:1 B:1
 cm
 AP 93.3% MI 1.2 TIS 0.2

SPECIES

Canine

BREED

Chihuahua X

SEX

Spayed Female

AGE

13 Years

WEIGHT

17.5 Pounds

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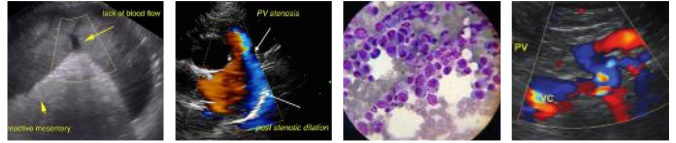
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12/22/22



PATIENT

Mia Deorio



SPECIES

Canine

BREED

Chihuahua X

SEX

Spayed Female

AGE

13 Years

WEIGHT

17.5 Pounds

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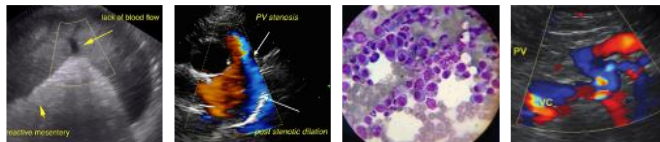
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INVOICE

12522ag

DATE

12/22/22



PATIENT

Mia Deorio

SonoPath Mobile deorio,mia Abdominal
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 e: R:1 G:1 B:1
 cm ENGLEWOOD
 AP 93.3% MI 1.3 TIS 0.2

SPECIES

Canine

BREED

Chihuahua X

SEX

Spayed Female

AGE

13 Years

WEIGHT

17.5 Pounds

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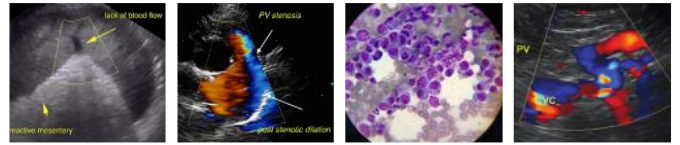
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12522ag

DATE

12/22/22





PATIENT

Mia Deorio

SonoPath Mobile deorio,mia Abdominal Ultrasound
12/22/2022 09:42:57 AM Admin ENGLEWOODCLIFFSVET13Y... ENGLEWOOD
e: R:1 G:1 B:1
cm

SPECIES

Canine

BREED

Chihuahua X

SEX

Spayed Female

AGE

13 Years

WEIGHT

17.5 Pounds

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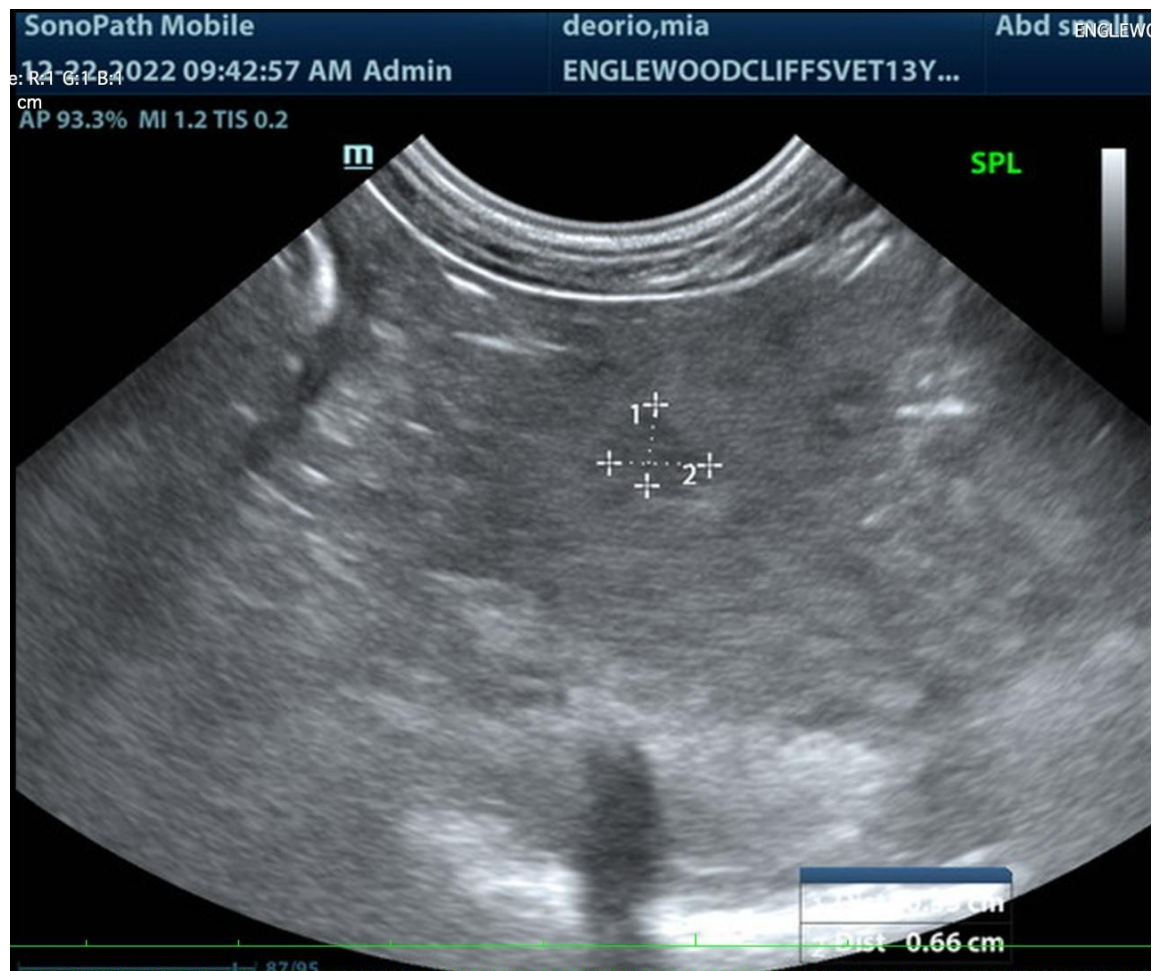
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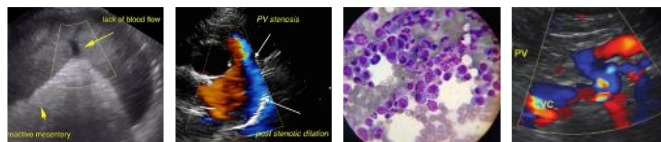
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12522ag

DATE

12/22/22





PATIENT

Mia Deorio

SonoPath Mobile deorio,mia Abdominal Ultrasound
 12/22/2022 09:42:36 AM Admin ENGLEWOODCLIFFSVET13Y... ENGLEWOOD

SPECIES

Canine

BREED

Chihuahua X

SEX

Spayed Female

AGE

13 Years

WEIGHT

17.5 Pounds

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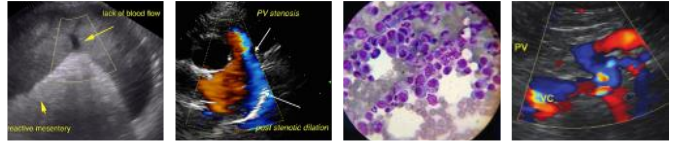
INVOICE

12522ag

DATE

12/22/22





PATIENT

Mia Deorio



SonoPath Mobile
 12/22/2022 09:41:59 AM Admin
 e: R:1 G:1 B:1
 cm
 AP 93.3% MI 1.2 TIS 0.2

deorio,mia
 ENGLEWOODCLIFFSVET13Y...

Abd son...
 ENGLEW...

SPECIES

Canine

BREED

Chihuahua X

SEX

Spayed Female

AGE

13 Years

WEIGHT

17.5 Pounds

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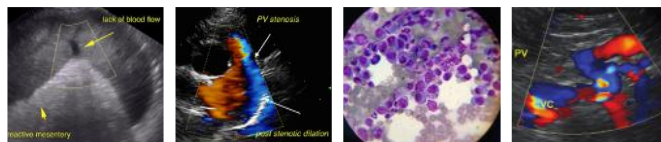
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Beth Johnson, DVM, DACVIM
Beth.Johnson@sonopath.com