

PATIENT

Honey Cook

SPECIES

Feline

BREED

DMH

SEX

Spayed Female

AGE

2.24.2022

WEIGHT

3.1 kg

INTERPRETED BY

Andrea Nicastro,
DVM, Diplomate ACVIM
(Small Animal Internal
Medicine)

**IMAGING
PERFORMED BY**

Andrea Nicastro,
DVM, Diplomate ACVIM
(Small Animal Internal
Medicine)

HOSPITAL NAME

Blue Pearl Mt Pleasant

REFERRING VET

Dr. Graham

INVOICE

11480

DATE

8.25.22

PRESENTING CLINICAL SIGNS

Clinical Exam Findings: Presents for gagging, decreased appetite, hiding, and lethargy.

Diagnosis:

1. Gagging, decreased appetite, hiding
2. Severe cardiomegaly (primarily right sided cardiomegaly)
3. Mild Hepatomegaly
4. Mild bronchial pulmonary pattern

Abnormal lab-work values: Chem 17, cbc, Feline Triple SNAP: pending

For ECHO Only: Blood Pressure pending. HR/RR/BP: HR: 180 bpm; RR: 48 bpm. No heart murmur

Current Medications: None

Radiographic Findings: Seven orthogonal views of the thorax and abdomen are submitted for assessment.

Bony structures surrounding the thorax are normal. Trachea and main stem bronchi are displaced dorsally by cardiomegaly. Cardiomegaly is partly obscured by the pulmonary changes in the cranial thorax and the overlying forelimbs on the lateral views of the thorax, but there is an impression of severe cardiomegaly with a vertebral heart score of 9.6. On the straighter ventrodorsal views this appears to be mostly right-sided cardiomegaly and there is enlargement of the main pulmonary artery segment and left caudal pulmonary artery. Caudal vena cava is also distended in a very mild pleural effusion is creating pleural fissure lines. Cranial mediastinum appears slightly widened on the ventrodorsal views but cannot be inspected on the lateral views as the forelimbs are superimposed over the cranial thorax on every lateral view. Supplementary lateral views with the forelimbs displaced cranially would enable evaluation of the cranial mediastinum on the lateral views as well to see if there is a cranial mediastinal mass effect. There is a diffuse active bronchial pattern present throughout the lungs. There also appears to be interstitial to alveolar disease in the right cranial and to a lesser extent the cranial subsegment of the left cranial lung lobe.

Bony structures surrounding the abdomen are normal. Liver is mildly enlarged with rounded lobar borders. Stomach is mildly distended with air and fluid. Small intestinal loops are fluid and air filled and mildly distended. A small amount of formed fecal material and a large amount of gas is seen in the colon. Bladder is mildly distended with no mineralization seen. Kidneys are normal and symmetrical. Spleen is normal in size and shape.

Assessment:

Suspect severe cardiomegaly with primary right-sided cardiomegaly, enlargement of the main pulmonary artery segment and enlargement of the left caudal pulmonary artery. In this young patient this could be congenital heart disease, but I am also concerned about heartworm disease and pulmonary hypertension. Correlate with echocardiography and recent testing.

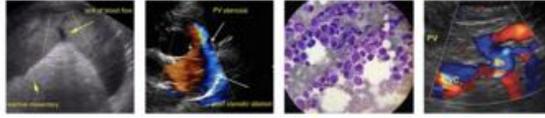
Distended caudal vena cava and mild pleural effusion indicates increased central venous pressures and possible increased right heart pressure. See above recommendations.

Widened cranial mediastinum. This should be considered inconclusive currently as the widening on the ventrodorsal view could be the enlarged main pulmonary artery segment or enlargement of the aortic root. Consider supplementary lateral view with the forelimbs displaced cranially to see if the cranial mediastinum is widened on the lateral views.

Diffuse active bronchial pattern lungs. This is consistent with feline bronchial disease secondary to allergy (food, inhalant), infection (bacterial, parasitic such as heartworm disease, fungal), or inflammatory (smoke, household irritants, dust) disease. Correlate with clinical history and signs.

Hazy interstitial to alveolar infiltrates in the right cranial and cranial subsegment of the left cranial lung lobe. This could represent pneumonia, hemorrhage, pulmonary thromboembolism or atelectasis.

Otherwise normal thorax.



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Mild hepatomegaly. Differentials include vascular congestion, metabolic hepatopathies (such as vacuolar hepatopathy, endocrine hepatopathy, fatty liver and hepatic lipidosis), infiltrative neoplasias, cholestatic hepatopathy and biliary associated liver disease, and infectious/inflammatory conditions such as hepatitis. Further information may be obtained by laboratory assessment of liver enzymes, potential bile acid stimulation testing and abdominal ultrasound with guided fine needle aspirates. Otherwise normal abdomen with no conclusive foreign material, obstructive pattern or plication detected.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** is contracted. The wall is of appropriate thickness for the level of repletion. The vs luminal contents are anechoic. No cystic calculi are observed. The region of the trigone appears normal.

The **left kidney** is normal size (4.00 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The **right kidney** is normal size (4.41 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The region of the **adrenal glands** is evaluated. No obvious pathology is observed.

Spleen

The **spleen** is normal in size (0.68 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

Liver

The **liver** is subjectively normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative, or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed. The portal vein to caudal vena cava ratio is approximately 1: 1.

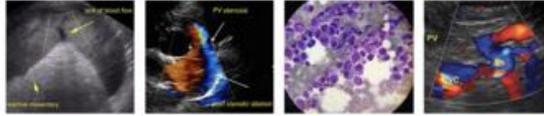
The **gall bladder** lumen is moderately distended. The wall is thin and smooth. Luminal contents are anechoic. The cystic and common bile ducts are normal.

Gastrointestinal

The **stomach and intestine** are free of stasis and exhibit normal peristaltic activity. The gastric lumen is minimally fluid distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

Pancreas

The region of the **pancreas** is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.



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Free Abdomen

A few prominent **mesenteric and colic lymph nodes** are visualized, the largest measuring 1.74 cm in length. The mesentery surrounding the colic lymph nodes is mildly hyperechoic. The **abdominal lymph nodes** are normal/not visible.

ULTRASONOGRAPHIC FINDINGS

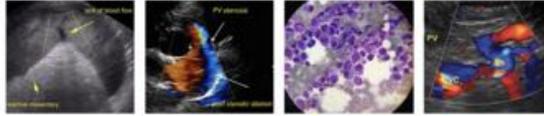
Primary Findings

- The abdominal lymphadenopathy could be consistent with immunologic immaturity, reactive lymphadenitis or lymphoid hyperplasia. Infiltrative neoplasia is possible but considered unlikely. The remainder of the abdomen is unremarkable. An obvious cause for the patient's gagging is not identified in this study.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Depending on the results of the echocardiogram report, a barium esophagram (preferably via fluoroscopy), airway evaluation +/- an upper GI endoscopy/bronchoscopy with bronchoalveolar lavage may be warranted. In the meantime, consider a trial of an acid blocker as empirical treatment for acid reflux.





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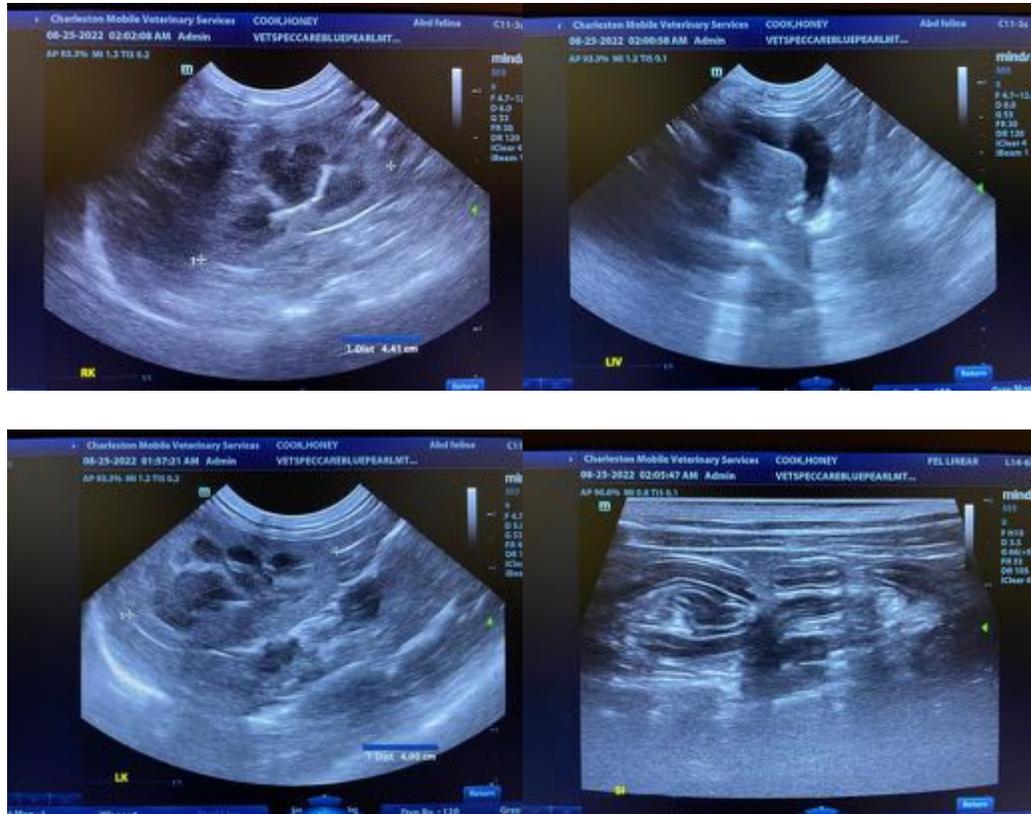
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

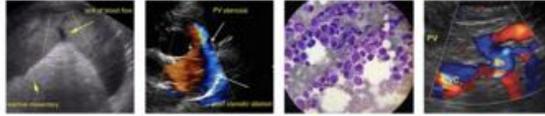
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PRESENTING CLINICAL SIGNS

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory



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changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

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The left kidney is normal size (xxx cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

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The right kidney is normal size (xxx cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

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Adrenal Glands

The left adrenal gland is normal size (xxx cm length; xxx cm width). Normal shape and glandular echogenicity. The phrenicoabdominal vein and surrounding vasculature are normal.

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The right adrenal gland is normal size (xxx cm length; xxx cm width). Normal shape and glandular echogenicity. The phrenicoabdominal vein and surrounding vasculature are normal.

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Spleen

The spleen is normal in size (xxx cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

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Liver

The liver is subjectively normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative, or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed.

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The gall bladder lumen is moderately distended. The wall is thin and smooth. Luminal contents are anechoic. The cystic and common bile ducts are normal/not seen.

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Gastrointestinal

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

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Pancreas

The pancreas is normal in size with normal peripheral contours. The pancreatic duct is normal. The base and limbs of the pancreas are isoechoic to surrounding omental fat. No focal lesions are observed. There is no evidence of pancreatitis or effusion.

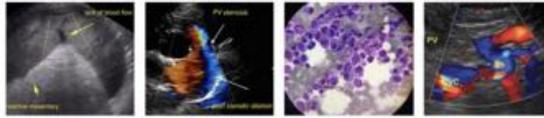
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The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- The

Secondary Findings

- The

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The

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