



**PATIENT**

Ramsey DiCarlo

**SPECIES**

Canine

**BREED**

Maltese Mix

**SEX**

Neutered male

**AGE**

10 years

**WEIGHT**

20 lbs

**INTERPRETED BY**

Dr Brittany Sinclair,  
BVSc(hons), DACVECC

**IMAGING PERFORMED BY**

Dr. Giuliani

**HOSPITAL NAME**

The Pet Hospital of  
Stratford

**REFERRING VET**

Dr. Giuliani

**INVOICE**

43663

**DATE**

4/3/23

**PRESENTING CLINICAL SIGNS**

History: Pt presented on 3/3 for ADR, shaking, yelping. Pt has elevated triglycerides, pt has lipemic serum even when fasted for over 12hrs. Pt had rods in urine, was on clavamox for 2 weeks. On rads, mild amount of gas in proximal esophagus, rest wnl. Medications: prilosec. Pain/shaking - responded well to gabapentin and rimadyl.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, and visible pelvic urethra were of normal thickness. The ureters were not visible which is normal. There was normal wall layering with no masses, uroliths or abnormal thickening visualized. Urine was anechoic. No evidence of inflammatory or neoplastic changes were noted.

The left kidney has a smooth capsule and with hazing of corticomedullary definition to the point of inability to determine cortical/medullary ratio. Pinpoint areas of cortical mineralization. No evidence of pelvic dilation was present. Left spherical anechoic fluid accumulation consistent with cortical cyst. The left kidney measured 3.98 cm.

The right kidney has a smooth capsule and with mild hazing of corticomedullary definition. No evidence of pelvic dilation was present. The right kidney measured 4.86 cm.

**Adrenal Glands**

Both adrenal glands were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 2.3 cm in length and 0.59 cm at the cranial pole and 0.62 cm at the caudal pole. The right adrenal gland measured 1.5 cm in length x 0.35 cm at the cranial pole and 0.4 cm at the caudal pole.

**Spleen**

The spleen had a generally smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma and smooth capsule, with normal splenic vasculature with no signs of congestion or thrombosis. Perivascular hyperechoic nodules visualized most consistent with benign myelolipomas. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarct changes were noted.

**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. Gallbladder is moderately distended with normal wall thickness and anechoic contents. Common bile duct is non-distended and tapers normally



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**Gastrointestinal**

The stomach contains minimal luminal contents. It measures at a normal thickness of 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. 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 base and limbs of the pancreas were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour and parenchyma were normal. No overt evidence of active inflammatory or neoplastic disease was noted.

**Lymph Nodes**

No clinically significant lymphadenopathy or abnormalities noted.

**Free Abdomen**

No masses or free fluid were noted.

**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings**

1. Perivascular splenic myelolipomas
2. Degenerative renal changes – left more advanced than right

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

No cause of shaking and yelping or hypertriglyceridemia was found on abdominal ultrasound. Response to pain medications suggests a possible pain related (orthopedic vs neurologic) cause of signs, though alleviation of signs could be related to sedative effects of gabapentin. Hypertriglyceridemia can cause neurologic signs including trembling and yelping. Further investigation for the underlying cause of elevated triglycerides could include investigation for endocrine disease (hypothyroidism, hyperadrenocorticism) and questioning about possible exposure to exogenous steroids is recommended. Adrenal glands are normal making hyperadrenocorticism less likely, though this cannot be definitively ruled out. High fiber lower fat diet such as Royal Canin GI low fat or Purina EN GI diet (low fat), Hill's i/d low fat or home cooked diet with low fat (~12%) – veterinary nutrition consultation recommended - could be considered to help lower triglycerides. Additional therapies to lower triglycerides include 250mg Chitosan fiber supplement (shellfish origin) 30 minutes prior to a meal q 12h, 70-100mg/kg Omega 3 fatty acids q 24h, fenofibrate (dose varies depending on version used),



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Bezafibrate (not approved in USA – available in Canada and UK), niacin 50-300mg/day/dog divided into 2 doses.

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Further assessment may include current bloodwork and urinalysis, ECG, blood pressure measurement, and full neurologic, ocular and orthopedic evaluation.

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Splenic changes are a common age related change and nodules are most consistent with benign myelolipomas. No significant disruption of architecture noted to suggest significant pathology. Fine needle aspirate could be considered to further characterize parenchymal changes if clinically indicated, especially if any weight loss is noted or for baseline cytological assessment.

**SEX**

Neutered male

Renal changes are likely age related degeneration. Correlate clinical significance with blood work/urinalysis findings and clinical signs.

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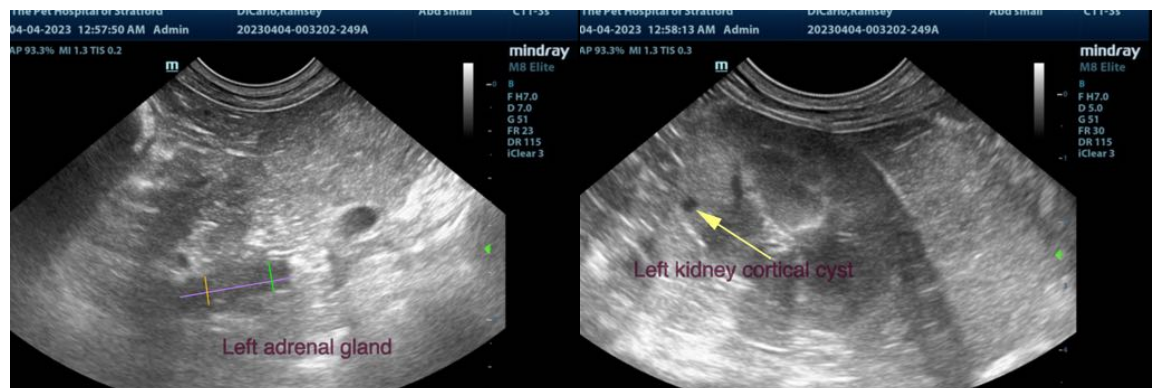
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Dr Brittany Sinclair, BVSc(hons), DACVECC  
info@SonoPath.com