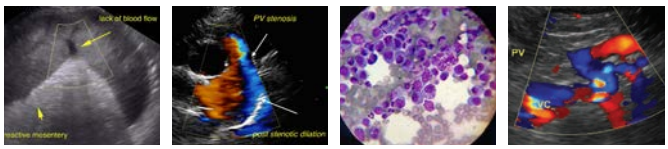
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com™
1-800-838-4268 info@sonopath.com

**PATIENT**
Ciel Chung

**SPECIES**
Canine

**BREED**
Miniature Poodle

**SEX**
Spayed Female

**AGE**
8.5 Years

**WEIGHT**
9.6 kg

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

**IMAGING PERFORMED BY**
Dr. Trudeau

**HOSPITAL NAME**
Petworks Vet Hospital

**REFERRING VET**
Dr. Trudeau

**INVOICE**
45576

**DATE**
2/28/23

## PRESENTING CLINICAL SIGNS

Minor elevation in ALT Dec 2022; started on Zentonil and the values have returned to normal; stopped the Zentonil in Jan ; repeated the liver values early Feb and they remained normal but the dog seemed to become pu/pd

Abnormal PE/Chem/CBC/UA Results: Dec 2022 ALT 155 remained normal after Zentonil

## 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 left kidney has a normal shape and size (5.36 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 (5.15 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 0.56 cm at the cranial pole, 0.48 cm at the caudal pole, and 2.73 cm in length. It is observed in its normal position cranial to the left renal artery. It is slightly irregular in appearance in that there are two very subtle hyperechoic nodules visualized in the caudal pole measuring 0.41 cm and 0.42 cm in diameter. No evidence of vascular invasion.

The right adrenal gland is normal in size measuring 0.28 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*

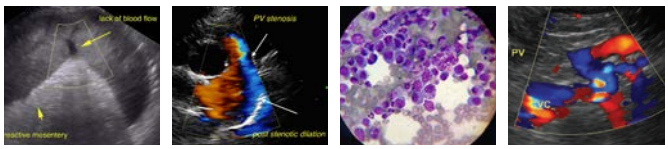
The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

### *Liver*

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is homogenous echotexture. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

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.

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com
1-800-838-4268 info@sonopath.com

**PATIENT**
Ciel Chung

**SPECIES**
Canine

**BREED**
Miniature Poodle

**SEX**
Spayed Female

**AGE**
8.5 Years

**WEIGHT**
9.6 kg

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

**IMAGING PERFORMED BY**
Dr. Trudeau

**HOSPITAL NAME**
Petworks Vet Hospital

**REFERRING VET**
Dr. Trudeau

**INVOICE**
45576

**DATE**
2/28/23

### *Gastrointestinal*

The stomach contains minimal luminal contents. It measures at a normal thickness of 0.42 cm 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. Duodenum wall measures 0.50 cm. Jejunum wall measures 0.40 cm. 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. There is a somewhat prominent sublumbar lymph node measuring 0.50 cm in width, and visible mesenteric lymph nodes measuring 0.28 cm and 0.54 cm. The omentum is of normal echogenicity.

### ULTRASONOGRAPHIC FINDINGS

- Two hyperechoic ill-defined nodules on the caudal pole of the left adrenal gland – The significance of this is unclear and trends towards a benign lesion (hyperplasia, etc.) but continued monitoring is warranted.
- 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.
- Prominent sublumbar lymph node – Recommend a digital rectal exam to evaluate the anal glands, and continued monitoring.

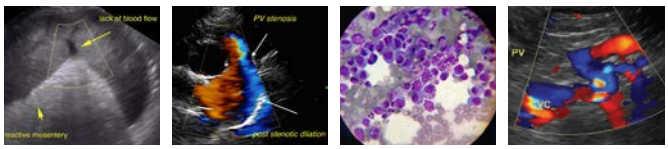
### INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The changes observed on today's scan are relatively mild. There are two very subtle hyperechoic nodules on the caudal pole of the left adrenal gland. This could be an incidental finding or could represent early lesions of hyperplasia, neoplasia, etc. I would recommend a blood pressure evaluation and continued monitoring of this lesion with ultrasound.

The pancreas appears slightly prominent and mottled but does not appear overtly inflamed. There are occasional visible mesenteric lymph nodes and a slightly prominent sublumbar lymph node, which should be monitored. Additionally, a digital rectal exam should be performed to evaluate the anal glands for any abnormalities.

Given the PU/PD reported, recommend a urinalysis and culture. Additionally, a liver function test should be considered because of the previous liver enzyme elevations. Additionally, you could consider screening for Leptospirosis.

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com
1-800-838-4268 info@sonopath.com

**PATIENT**

Ciel Chung

**SPECIES**

Canine

**BREED**

Miniature Poodle

**SEX**

Spayed Female

**AGE**

8.5 Years

**WEIGHT**

9.6 kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Trudeau

**HOSPITAL NAME**

Petworks Vet Hospital

**REFERRING VET**

Dr. Trudeau

**INVOICE**

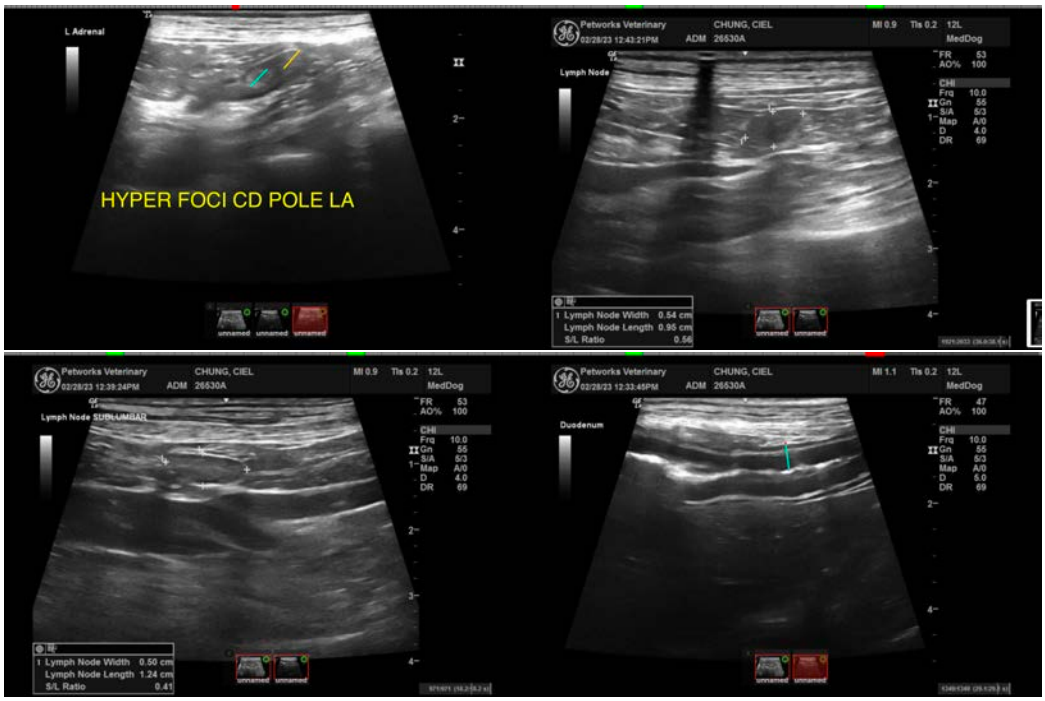
45576

**DATE**

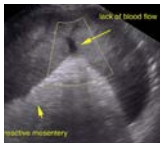
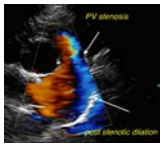
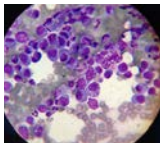
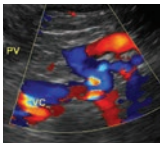
2/28/23

Below is a list of differentials for PU/PD that I commonly use to help guide my thought process:

1. Diabetes Mellitus
2. Chronic Renal Disease/Renal Failure (can present pre-azotemic, especially in dogs, but expect the BUN & creatinine not to be at the low end of the reference range)
   Hypercalcemia
3. Urinary tract infection
4. Iatrogenic Disease due to medications (diuretics, phenobarbital, KBr; diets either high in salt [such as S/D] or very low in protein (such as U/D))
5. Hyperthyroidism
6. Hypokalemia
7. Liver Disease (hepatic encephalopathy may be a mixed primary PU and PD)
8. Pyelonephritis
9. Polycythemia
10. Renal Tubular Diseases (glycosuria or Fanconi & Fanconi-like syndromes or RTA)
11. Hyperadrenocorticism (may be a mixed primary PU and PD)
12. Hypoadrenocorticism (either Addison's or hypocortisolism)
13. Paraneoplastic Syndromes (particularly splenic hemangiosarcoma?)
14. Pericardial Effusion
15. Pyometra (including stump pyometra in spayed dogs)
16. Chronic Partial Urinary Obstruction or Post-Obstructive Diuresis
17. Pheochromocytoma
18. Psychogenic Polydipsia (as in a true behavior disorder with a compulsive element)
19. Primary Non-Medical Polydipsia (aka "I drink a lot because I like it or I engage in activities that promote it, but that doesn't mean I'm sick")
20. Primary Nephrogenic Diabetes Insipidus (Congenital Nephrogenic Diabetes Insipidus, other diseases that cause primary PU other than Congenital Diabetes Insipidus would be considered Acquired Nephrogenic Diabetes Insipidus)
21. Atypical Cushing's and SARDS
22. Central Diabetes Insipidus



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

SonoPath.com
1-800-838-4268 info@sonopath.com

**PATIENT**

Ciel Chung

**SPECIES**

Canine

**BREED**

Miniature Poodle

**SEX**

Spayed Female

**AGE**

8.5 Years

**WEIGHT**

9.6 kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Trudeau

**HOSPITAL NAME**

Petworks Vet Hospital

**REFERRING VET**

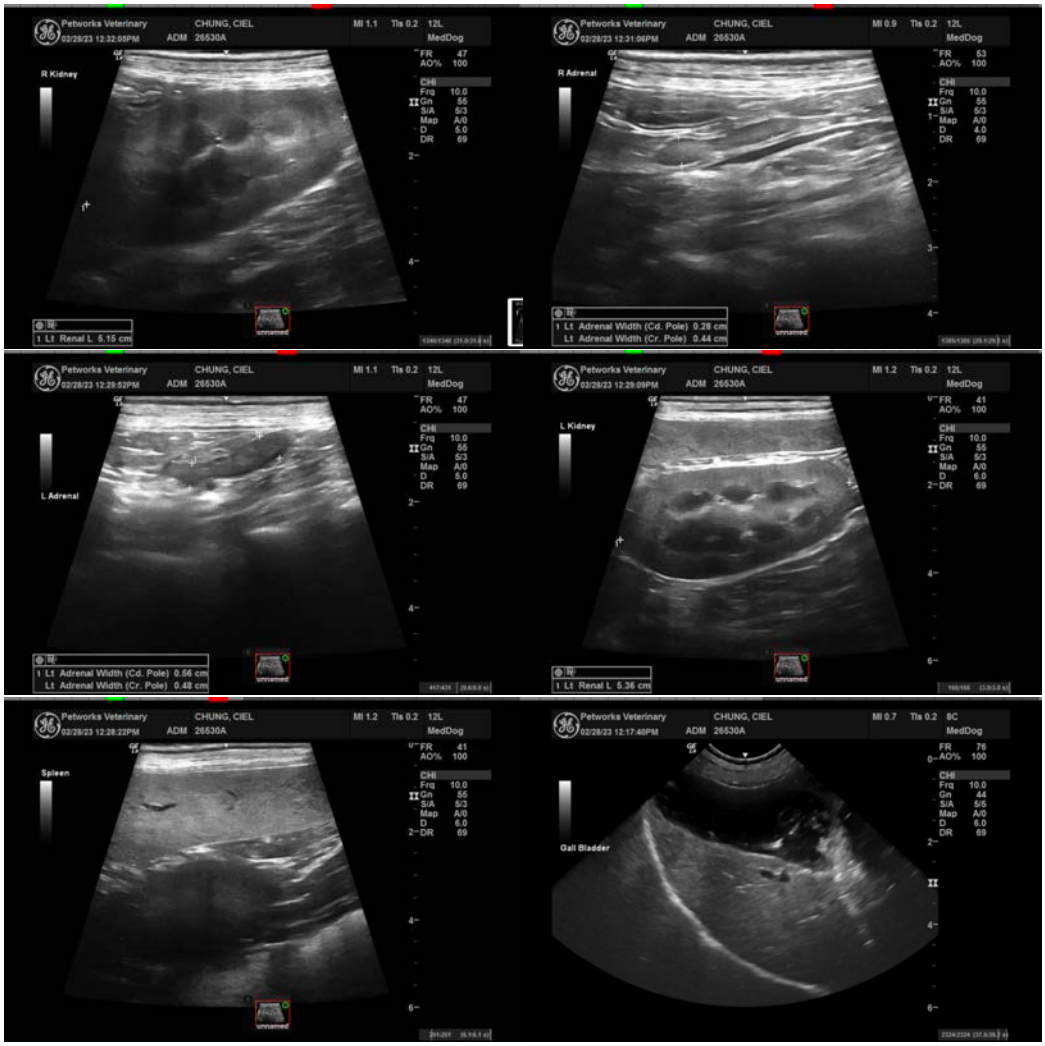
Dr. Trudeau

**INVOICE**

45576

**DATE**

2/28/23




**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.

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

kathleen.sennello@sonopath.com