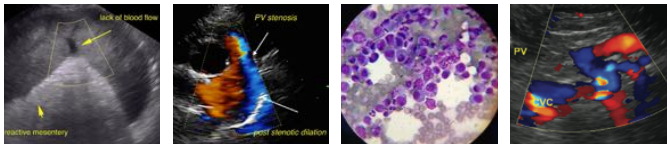
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
SonoPath.com
1-800-838-4268 info@sonopath.com



PATIENT

Cooper Nieck

SPECIES

Canine

BREED

Havanese

SEX

Neutered male

AGE

15 years

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

HOSPITAL NAME

Newton VH

REFERRING VET

Dr. Harris

INVOICE

76344

DATE

8/1/23

PRESENTING CLINICAL SIGNS

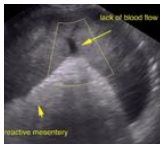
Heart murmur.

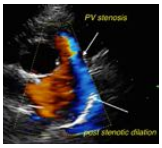
Elevated renal and hepatic values. Creatinine 5, BUN 86, ALT 197, GGT 18, urine specific gravity 1.011, PLN (historical) 1+

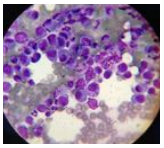
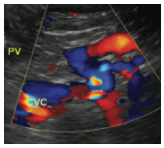
ULTRASONOGRAPHIC EXAMINATION OF THE HEART

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable insufficiency. The **left ventricle** presented thicknesses with linear contour and was not dilated nor restricted. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. **Contractility** of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions of the myocardium. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. **Tricuspid** valvular assessment demonstrated adequate linear morphology. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter (approx.1:1 pa/ao ratio). No visible **pericardial** or free pleura fluid was noted. No echographically detectable evidence of infiltrative disease was visible. The cranial **mediastinum and pericardial regions** were free of masses in the visible window. The patient was bradycardic.

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base;)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
PATIENT	5.5		1.0	1.0	37	71	NM
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT** (kg)	**LA** 2D short axis Base view (cm)	**LVIDd** Avg; 2D and m-mode short axis (cm)	**LVIDs** Avg; 2D and m-mode short axis (cm)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
PATIENT	60-80 variable	1.46	0.89		2.9	2.05	





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

PATIENT

Cooper Nieck

SPECIES

Canine

BREED

Havanese

SEX

Neutered male

AGE

15 years

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

HOSPITAL NAME

Newton VH

REFERRING VET

Dr. Harris

INVOICE

76344

DATE

8/1/23

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** wall and urethra were unremarkable. Slight calculus was noted and was non-obstructive and measured 0.2 cm. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

The **kidneys** were both polycystic, irregular and mildly enlarged. Multi-focal, corticomedullary and pelvic calculi were noted with cortical sclerosis and remodeling. Both kidneys measured 5.13 cm.

Adrenal Glands

The left **adrenal gland** revealed a mixed, hypoechoic, moderately vascular mass that measured 5.12 x 3.6 cm. The mass was lobular and irregular. The left adrenal mass was imaged from the right approach as well. The phrenic vein appeared occupied, yet the vena cava was not. The right adrenal gland was nodular, irregular and enlarged measuring 3.0 x 2.1 cm at the cranial pole and 0.8 cm at the caudal pole. The right adrenal gland revealed mild, phrenic occupation with slight vena cava invasion measuring 1.0 cm.

Spleen

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes was noted.

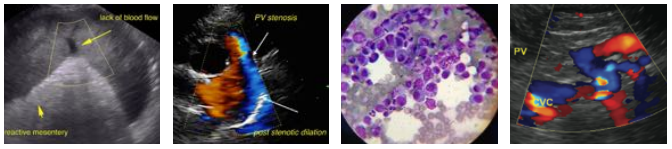
Liver

The **liver** images from right and left intercostal as well as subcostal views revealed subjectively normal liver size, contour, and structure. Some age-related parenchymal remodeling was noted but likely not clinically significant at this time. Vascular and biliary tracts were of normal volume and no evidence of congestion was noted. The gallbladder was over distended contour with striating bile and mildly thickened wall. This is consistent with immature mucocele formation.

Gastrointestinal

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
SonoPath.com
1-800-838-4268 info@sonopath.com



PATIENT

Cooper Nieck

SPECIES

Canine

BREED

Havanese

SEX

Neutered male

AGE

15 years

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

HOSPITAL NAME

Newton VH

REFERRING VET

Dr. Harris

INVOICE

76344

DATE

8/1/23

Pancreas

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

ULTRASONOGRAPHIC FINDINGS

Bilateral adrenal masses. Differentials include pheochromocytoma or carcinoma, less likely adenoma.

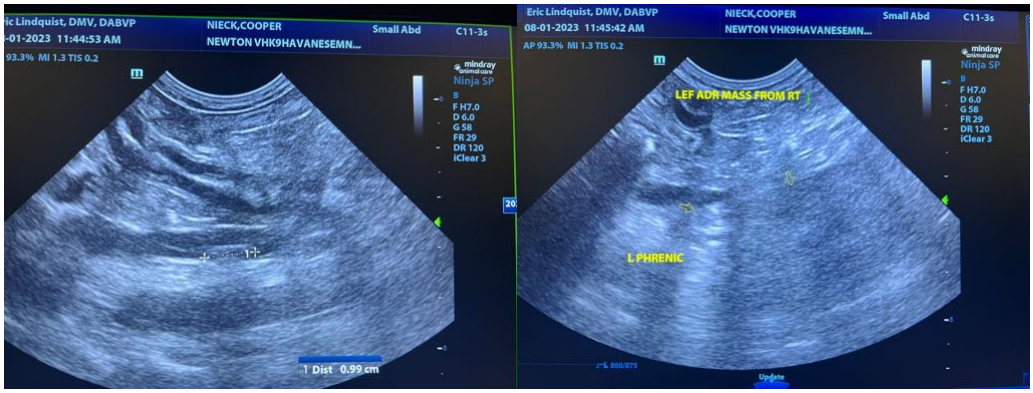
Emerging gallbladder mucocele.

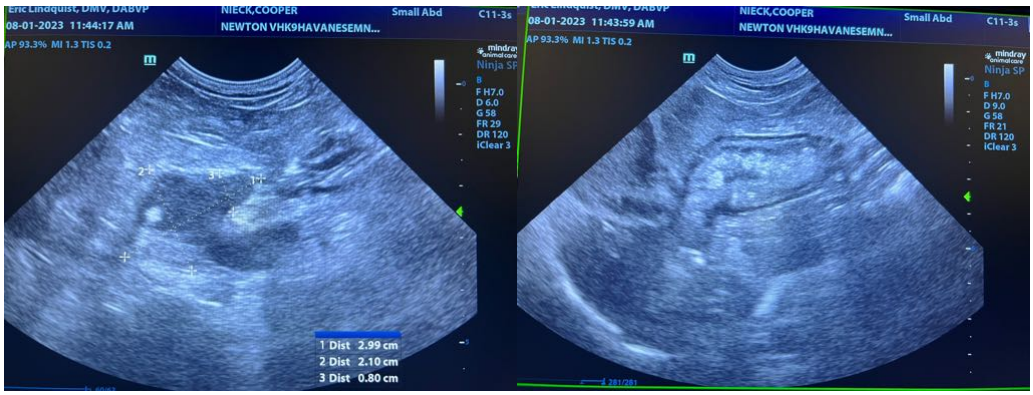
Polycystic, irregular and enlarged kidneys.

Stage B1 valvular disease with variable bradycardia. No volume overload.

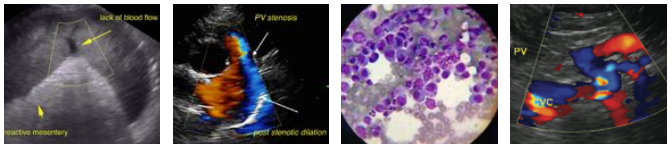
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Urine catecholamine is indicated with serial blood pressure measurements. EKG or Holter monitor is indicated as well as serial blood pressure measurements. Ursodiol therapy is indicated. My biggest concern is the renal presentation and the azotemia as well as the adrenal masses. I recommend focusing further diagnostic work-up and supportive care upon pathology related to those structures. Eventual Ursodiol therapy can be considered. Holter monitor would be ideal given the patient's history. Full CNS examination is also indicated. CT evaluation of the abdomen is ideal if surgery is to be considered upon either of the adrenal glands. Prognosis long term is very guarded unless medical management is able to maintain this patient's quality of life.





SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Cooper Nieck

SPECIES

Canine

BREED

Havanese

SEX

Neutered male

AGE

15 years

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

HOSPITAL NAME

Newton VH

REFERRING VET

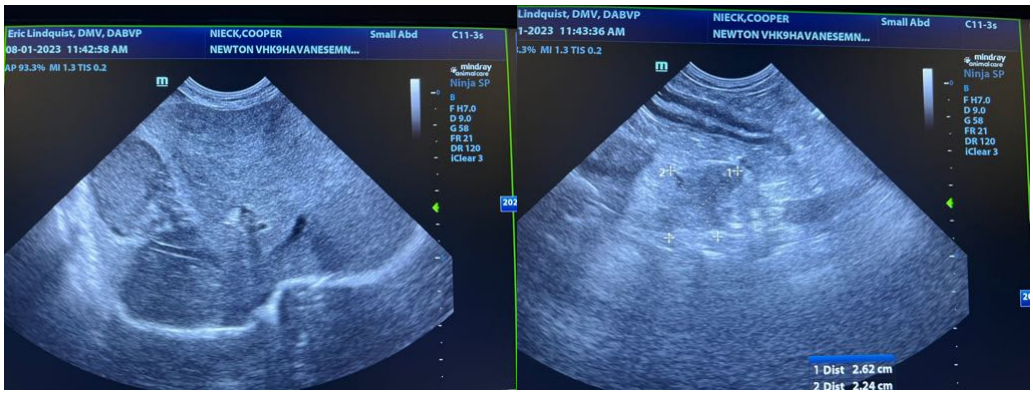
Dr. Harris

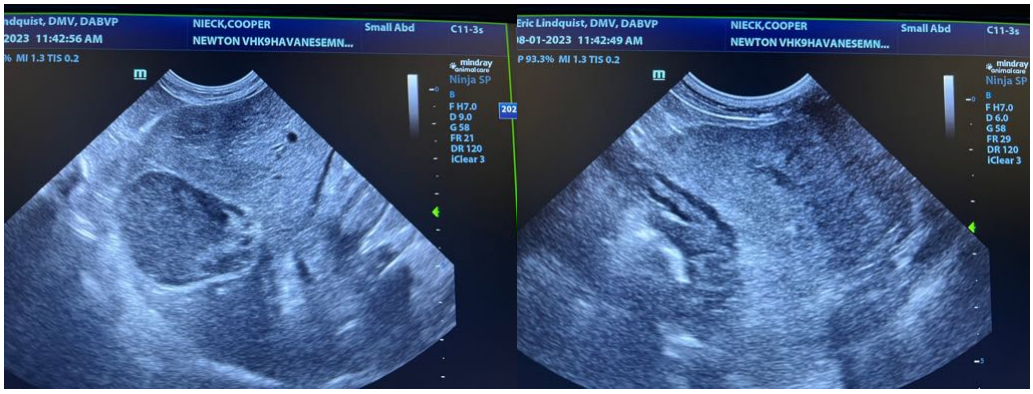
INVOICE

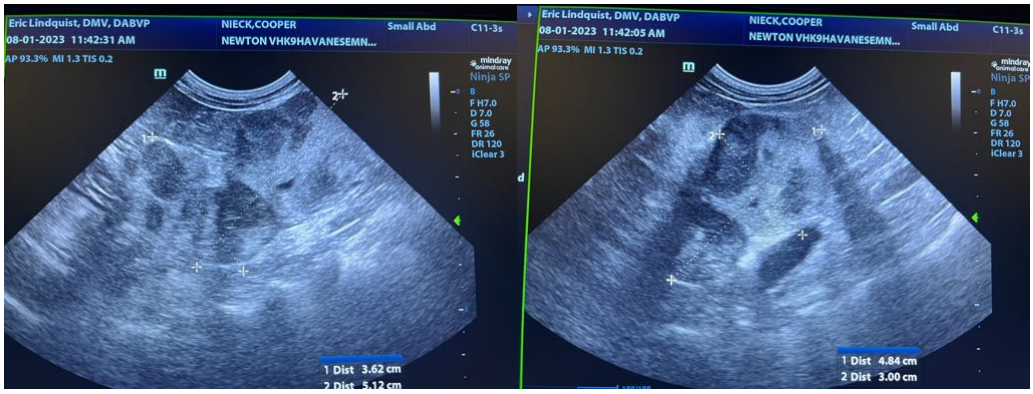
76344

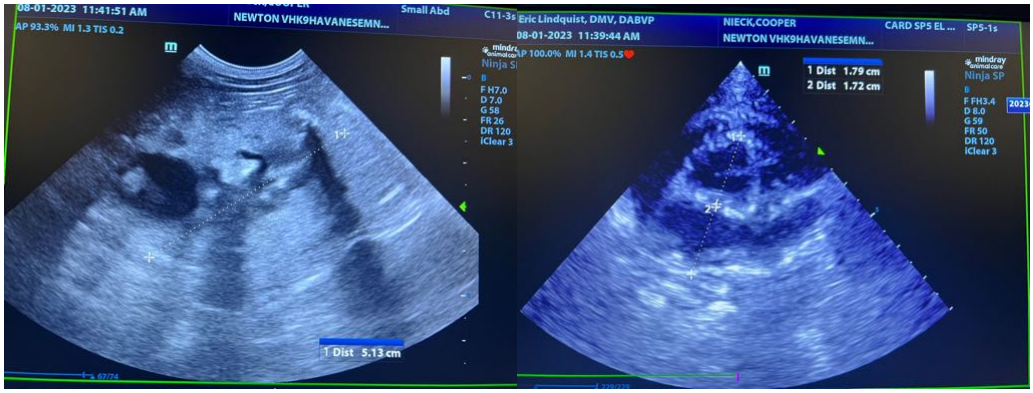
DATE

8/1/23

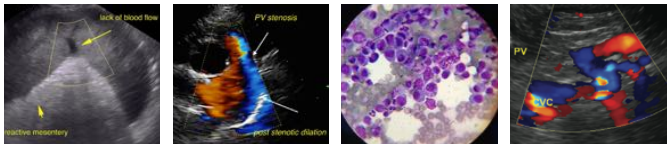








SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Cooper Nieck

SPECIES

Canine

BREED

Havanese

SEX

Neutered male

AGE

15 years

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

HOSPITAL NAME

Newton VH

REFERRING VET

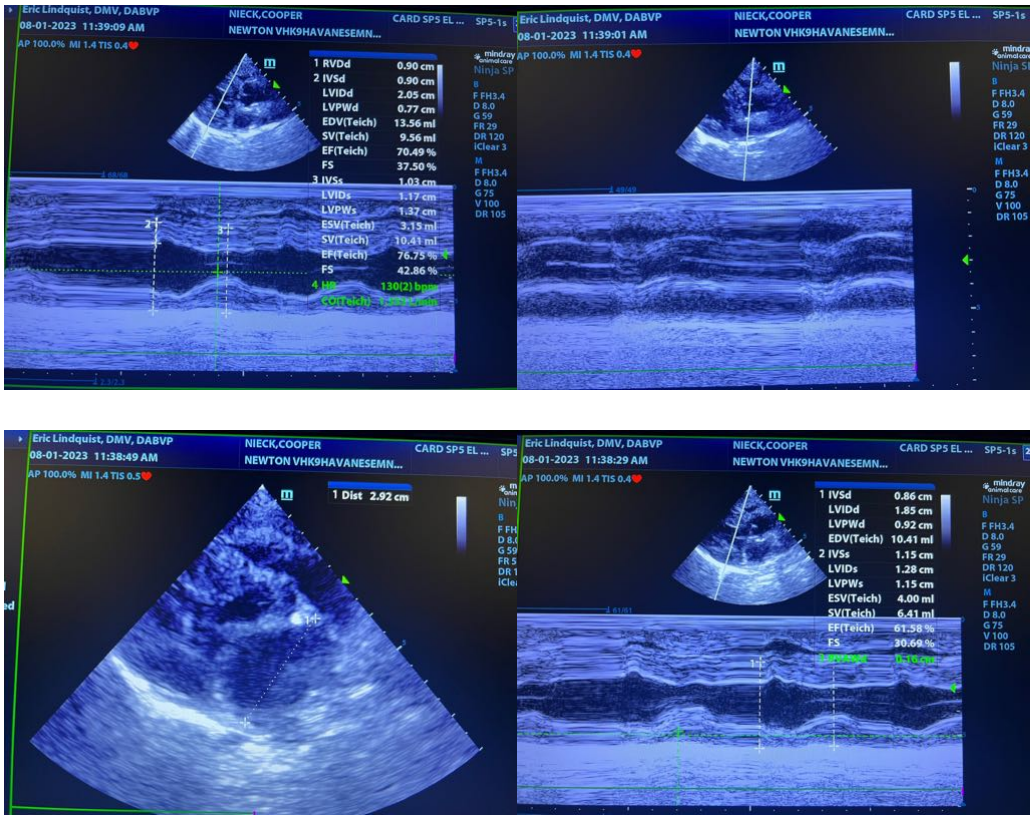
Dr. Harris

INVOICE

76344

DATE

8/1/23



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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com
Info@SonoPath.com