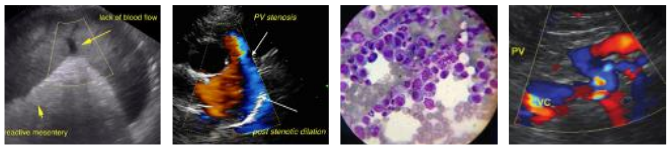
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Sebastian Stillwell

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

11

WEIGHT

10 Pounds 14 Ounces

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

HOSPITAL NAME

Franklin Lakes AH

REFERRING VET

Dr. Kozak

INVOICE

22403

DATE

5/9/23

PRESENTING CLINICAL SIGNS

New heart murmur grade 3, weight loss, int vomiting, r/o underlying IBD

Current meds: B12 weekly

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

FELINE CARDIAC PARAMETERS	**BODY WEIGHT** (kg)	**HR** (BPM)	**IVSd** (cm)	**LVIDd** (cm)	**LVWd** (cm)	**FS** (%)	**EF** (%)
NORMAL PARAMETER	------	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT	--	265	0.4	1.57	0.52	69	96
FELINE CARDIAC PARAMETERS	**LA/AO** (Boon)	**LA/AO HEART BASE** (Sisson)	**LA** 2D 4-chamber long axis AS to FW (Sisson) (cm)		**LVOT VEL.** (m/s)	**RVOT VEL.** (m/s)	**IVRT** (m/)
NORMAL PARAMETER	<1.5	0.88-1.79	0.7-1.7		<1.6	<1.3	40-60
PATIENT	1.2	1.1	1.4		2.00	1.10	NM

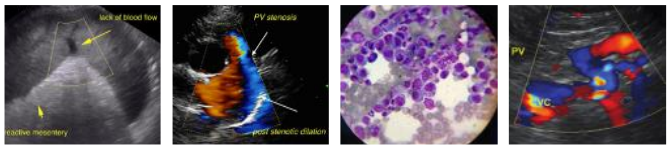
Adapted from June Boon,Veterinary Echocardiography,1998
Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate LA measurements. The cranial and caudal **mitral** valve leaflets presented normal linear structure and kinetics. The **left ventricle** presented normal 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 and angles 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 and kinetics. 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 or extra cardiac pathology in the visible planes. The cranial **mediastinum and pericardial regions** were free of masses in the visible window. Tachycardia was noted in this patient, appeared to be sinus, however, EKG is indicated to assess for pathological tachyarrhythmia.

Urinary System

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine



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

PATIENT

Sebastian Stillwell

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

11

WEIGHT

10 Pounds 14 Ounces

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

HOSPITAL NAME

Franklin Lakes AH

REFERRING VET

Dr. Kozak

INVOICE

22403

DATE

5/9/23

was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some mild age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The left kidney measured 3.84 cm. The right kidney measured 4.1 cm.

Adrenal Glands

The **left adrenal gland** was 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 0.36 cm.

The region of the **right adrenal gland** revealed no evident pathology.

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 were noted.

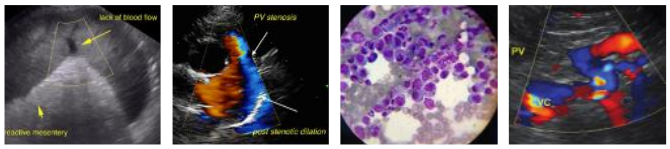
Liver

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 presented some dependent debris with essentially normal contour. The cystic and common bile ducts were normal. No overt evidence of active inflammatory, infiltrative or regenerative pathology was noted but should be paired with current or past LE elevations regarding any clinical significance to this presentation. The hepatic lymph nodes were unremarkable.

Gastrointestinal

The **gastrointestinal** presentation revealed mild uniform prominence of the gastric mucosa as well as areas of "ropey" small intestinal wall with slight disruption of the normal 1:3 muscularis/mucosal ratio. The intestinal submucosa was slightly irregular, thickened and hyperechoic suggestive of low grade, chronic disease. No concerning lymphadenopathy was visible. No evidence of obstruction was present. Chronic inflammatory bowel disease is likely with a low possibility of an early neoplastic event such as lymphoma. Full thickness tissue biopsies via open laparotomy, ideally guided by intraoperative ultrasound in order to obtain the most representative mural sample, would be necessary to rule out this possibility.

Pancreas



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

PATIENT

Sebastian Stillwell

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

11

WEIGHT

10 Pounds 14 Ounces

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

HOSPITAL NAME

Franklin Lakes AH

REFERRING VET

Dr. Kozak

INVOICE

22403

DATE

5/9/23

The **pancreas** was hypoechoic and enlarged, measuring 1.0 cm in the right limb. The right limb of the pancreas revealed undulating contour. Reactive mesentery was noted around the pancreas.

Free Abdomen

Multifocal hypoechoic rounded **lymph nodes** were noted in this patient, measuring up to 1.0 cm.

An epigastric lymph node measured 1.3 cm x 0.89 cm.

ULTRASONOGRAPHIC FINDINGS

- Normal echocardiogram
- Minor intestinal thickening
- Subacute on chronic pancreatitis
- Regional lymphadenopathy
- Age-related renal and hepatic changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

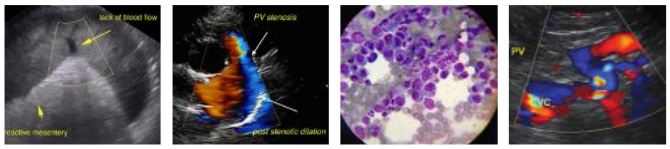
No obvious neoplastic criteria noted. Full thickness intestinal and lymph node biopsies would be ideal. It's debatable on whether exfoliation on ultrasound guided FNA of the largest lymph node (which would be the epigastric lymph node), could be achieved, however, could be attempted. Otherwise, full thickness biopsies would be best. Maldigestion panel, three view chest radiographs and full CNS examination is recommended to examine for occult disease that could be responsible for the weight loss. Evaluation for competitive eating environments should also be considered. Infectious agents should be ruled out, such as toxoplasmosis and bartonella. Treatment for pancreatitis and inflammatory bowel is warranted, such as the following protocol:

Triaditis/Pancreatitis protocol

Part or all of this protocol may be considered based on your clinical impression of the patient:

Recommend pain management when anorexic with **Buprenorphine** (0.01-0.02 mg/kg IM or SC), clinical trial of **Zithromax** (50 mg sid/cat x 10 days, 3 weeks if bartonella +), **Prednisolone** (0.5-2 mg/kg tapering over 1 week to minimal effective dose), and **B12 injections** if weight loss (Cyanobalamine 250 mcg sub-q once-weekly x six weeks, then every other week for six weeks and then once-monthly, long-term if necessary), **novel-protein or hydrolyzed diet (***Hydrolyzed diets have been shown to be more effective in dietary intolerance case management compared to hypoallergenic diets***)** or the **magical Purina DM** (changing protein source is crucial and may need rotation every 6 months if clinical signs recur) Diet trials is a whatever works phenomenon. If vomiting becomes a persistent issue then endoscopy would be warranted and/or recheck sonogram to assess more emerging disease. One diet does not work for all patients so different trials may be necessary or protein source rotation every 6 months as new sensitivities develop.

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Sebastian Stillwell

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

11

WEIGHT

10 Pounds 14 Ounces

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

HOSPITAL NAME

Franklin Lakes AH

REFERRING VET

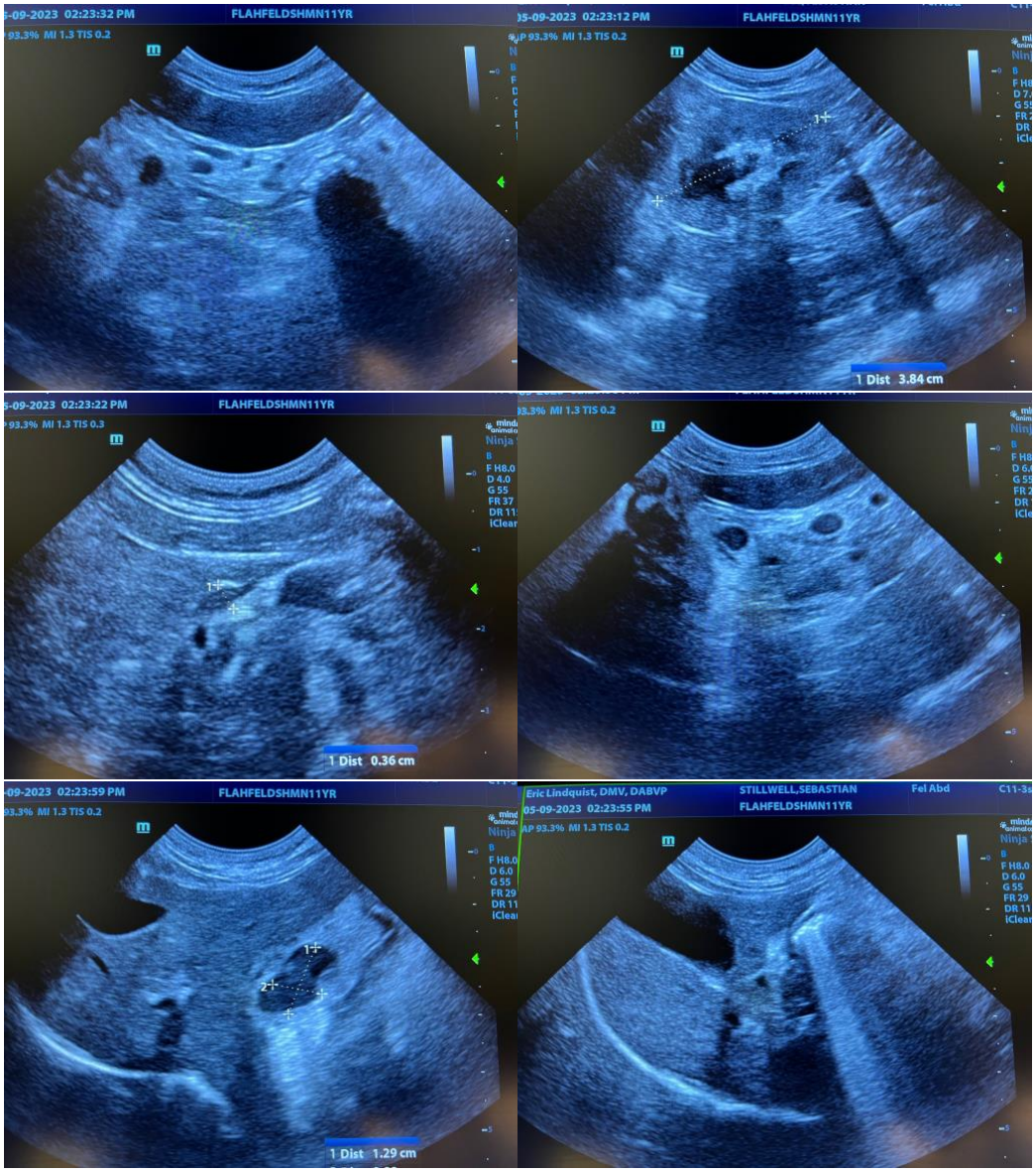
Dr. Kozak

INVOICE

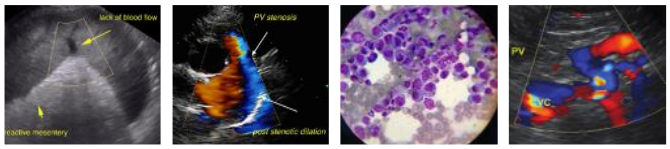
22403

DATE

5/9/23



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Sebastian Stillwell

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

11

WEIGHT

10 Pounds 14 Ounces

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

HOSPITAL NAME

Franklin Lakes AH

REFERRING VET

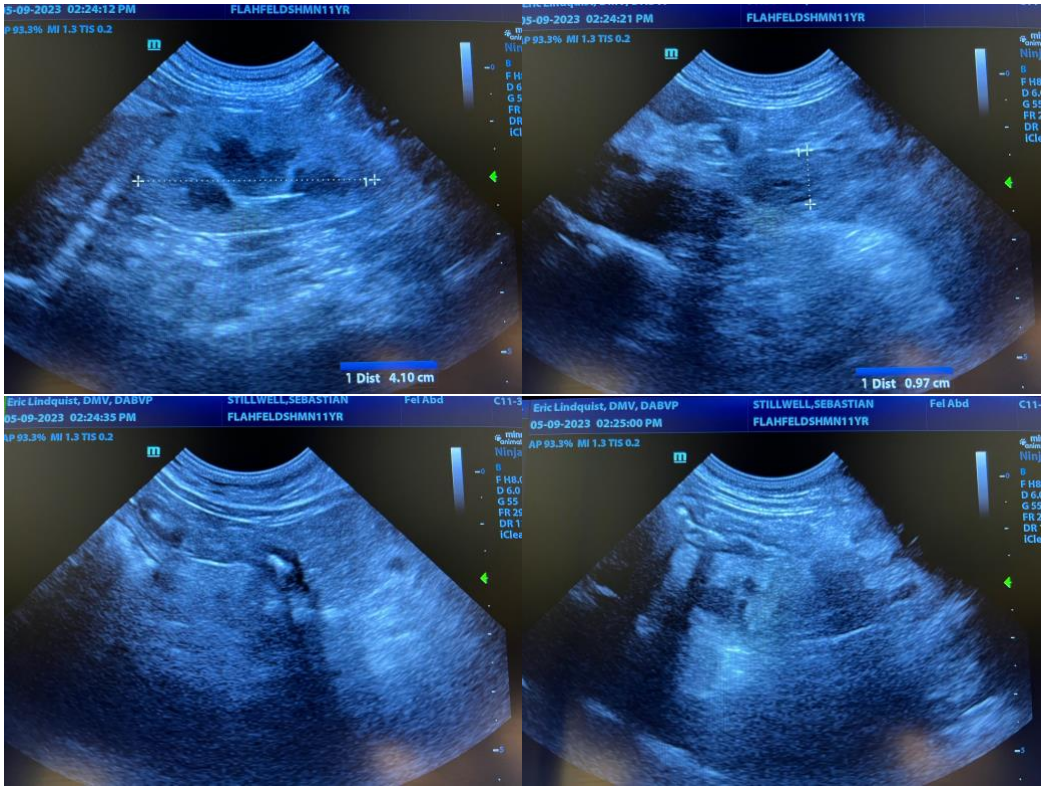
Dr. Kozak

INVOICE

22403

DATE

5/9/23



The information and recommendations provided are based on the images presented by the referring veterinarian. 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