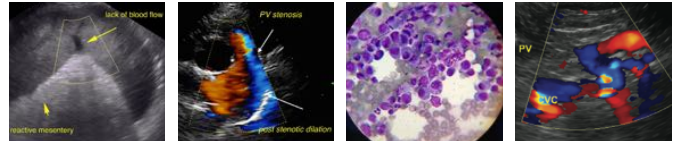


PATIENT	PRESENTING CLINICAL SIGNS
Toonces Petuch	History: Weight loss (14.5 down to 11.4#. On 1/6/23 one episode of "falling over"-unable to rise briefly-recovered and clinically normal since. No current meds. Borderline anemia RBC 6.55; pro BNP 231; SDMA 15; creat 1.5 else normal. BP normal 140; USG 1.030; protein +30; else normal
SPECIES	
Feline	
BREED	ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN
Domestic Shorthair	Urinary System
SEX	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 was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.
Neutered male	
AGE	The kidneys revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some 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 right kidney measured 3.55 cm. The left kidney measured 3.44 cm.
13 years	
WEIGHT	Adrenal Glands
11.4 lbs	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 right adrenal gland measured 0.51 cm. The left adrenal gland measured 0.57 cm.
INTERPRETED BY	Spleen
Eric Lindquist, DMV DABVP, Cert. IVUSS	The spleen revealed multi-focal, hypoechoic nodular changes with a target appearance and enlargement measuring up to 1.3 cm.
IMAGING PERFORMED BY	Liver
Shari Reffi, CVT	The liver was mildly enlarged and irregular. Some age-related parenchymal remodeling was noted but likely not clinically significant at this time. Occasional, hyperechoic cyst adenomatous type nodule was noted and measured up to 0.9 cm. Vascular and biliary tracts were of normal volume and no evidence of congestion was noted. Gallbladder calculus was also noted as well as lobar biliary calculi. Comet tail lung patterns were noted through the diaphragm.
HOSPITAL NAME	
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PATIENT

Gastrointestinal

Toonces Petuch

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. The mesenteric lymph nodes were mildly enlarged. . 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.

SPECIES

Feline

BREED

Domestic Shorthair

SEX

Neutered male

AGE

13 years

WEIGHT

11.4 lbs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Shari Reffi, CVT

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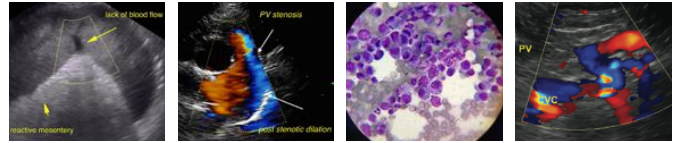
1/16/23

Pancreas

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Some parenchymal remodeling, however, with mild deviation from curvilinear normalcy was observed. Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxiphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

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.



PATIENT

Toonces Petuch

SPECIES

Feline

BREED

Domestic Shorthair

SEX

Neutered male

AGE

13 years

WEIGHT

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INTERPRETED BY

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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		210	0.43	1.41	0.41	43	77
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	1.34	1.3	1.48		1.4	0.66	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

ULTRASONOGRAPHIC FINDINGS

Normal echocardiogram with minor tricuspid insufficiency, not clinically significant.

Infiltrative splenic pattern or target nodules.

Hepatic remodeling with potential for emerging round cell neoplasia. Gallbladder calculus.

IBD GI pattern. Potential for pre-neoplastic state.

Mildly enlarged mesenteric lymph nodes.

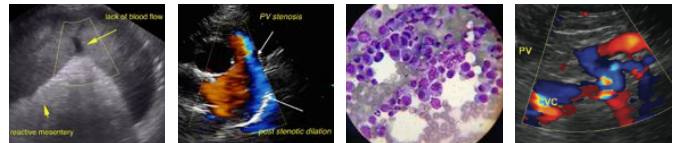
Multi-focal alveolar consolidation to be further defined by radiographs or CT.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chest radiograph assessment is indicated. FNA of the spleen and liver is recommended. Comet tail lung pattern was noted. Given the abdominal pathology there is a strong concern for metastatic disease. There is a strong concern for splenic round cell neoplasia, splenitis is less likely. I am most concerned for the spleen and chest presentation in this patient. PCV needs to be at least 20 and platelet count at least 70000 for FNA to be do safely.

ABOUT SONOPATH CT SERVICES:

SonoPath CT Services are offered at the SonoPath Imaging and Veterinary Education Center, 141 Main St (rt 206), Andover, New Jersey, a 20-minute drive west on route 80/206 North from the route 80/287 interchange/Parsippany, New Jersey. More information can be found at <https://sonopath.com/services/sonopath-ct-services>



PATIENT

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SPECIES

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BREED

Domestic Shorthair

SEX

Neutered male

AGE

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IMAGING PERFORMED BY

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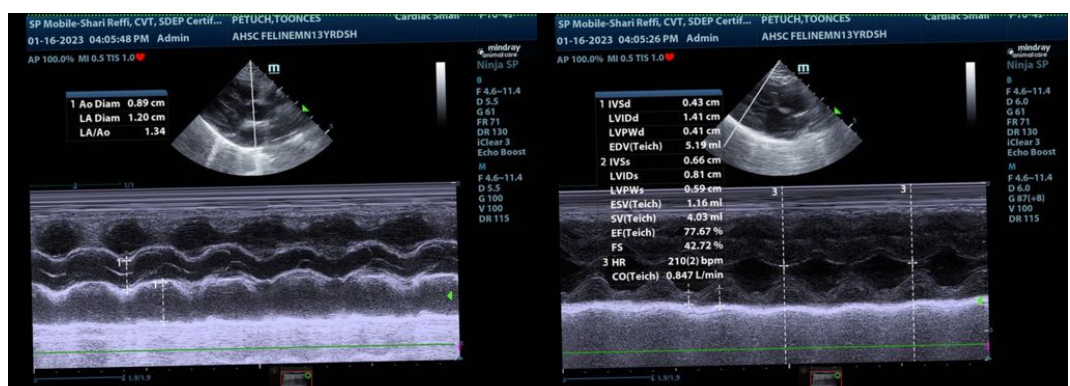
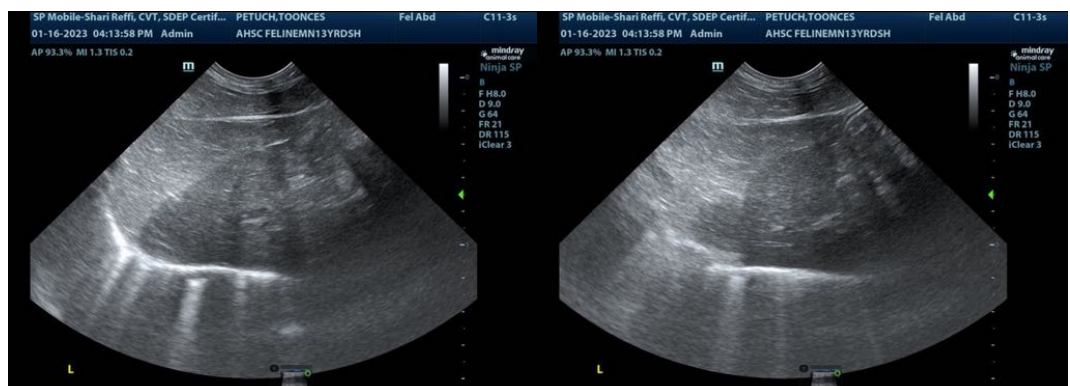
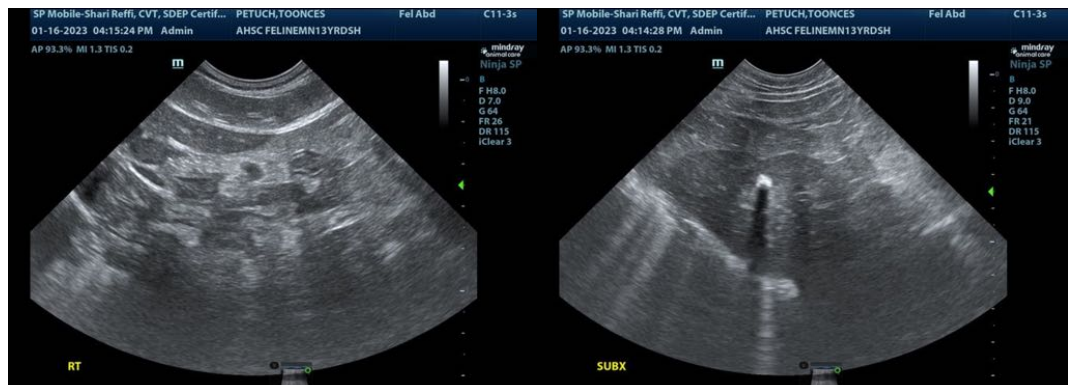
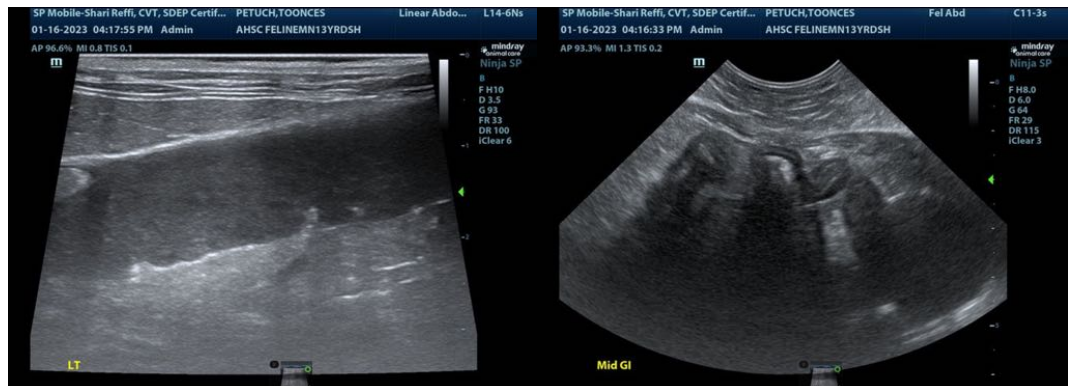
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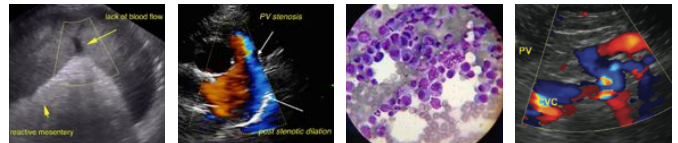
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PATIENT

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SPECIES

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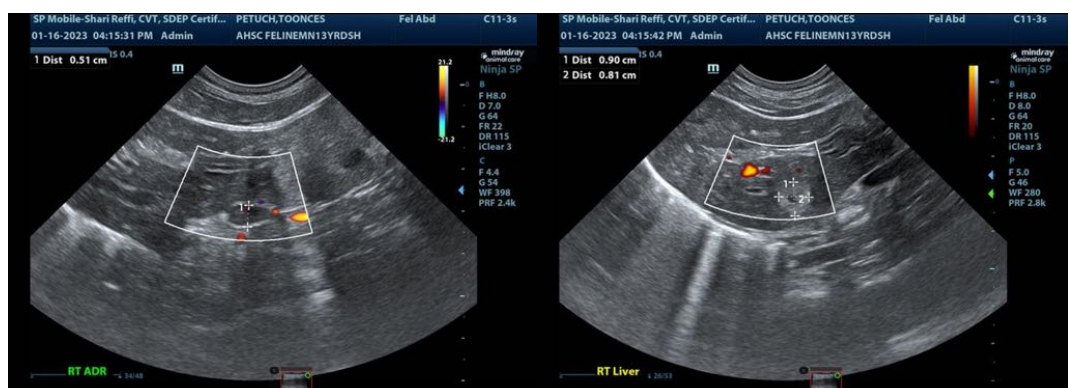
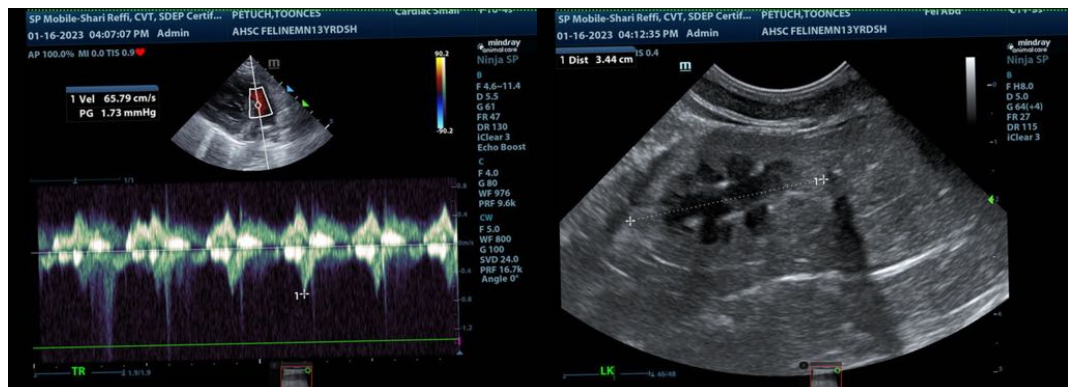
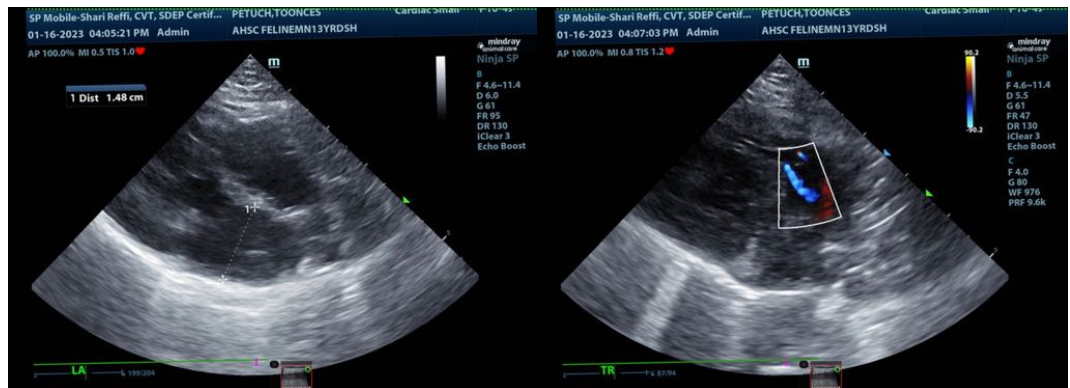
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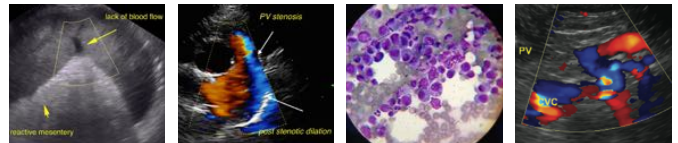
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PATIENT

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SPECIES

Feline

BREED

Domestic Shorthair

SEX

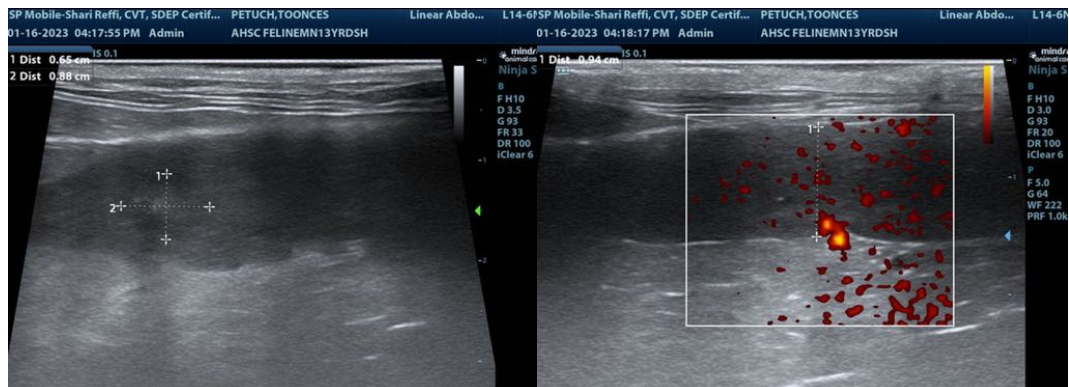
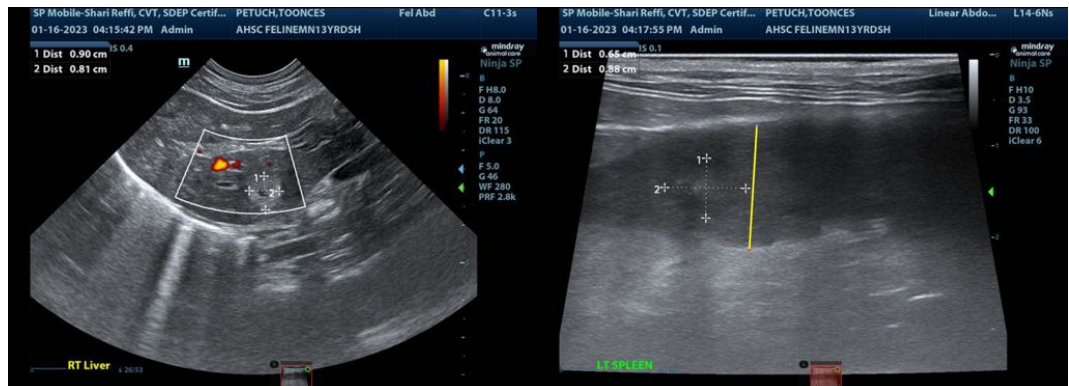
Neutered male

AGE

13 years

WEIGHT

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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.

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