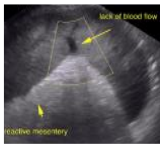
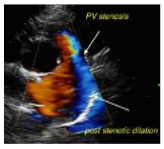
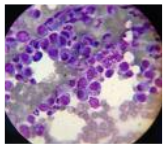
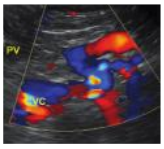
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

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

PATIENT

Boo Caltagirone

SPECIES

Canine

BREED

Shepherd Mix

SEX

Spayed Female

AGE

12 Years

WEIGHT

49 pounds

INTERPRETED BY

R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

North Jersey AH

REFERRING VET

Dr. Mark Reidel

INVOICE

13315

DATE

9/28/21

PRESENTING CLINICAL SIGNS

History: Patient presents for enlarged heart and liver, weight loss, and progressive lethargy. Current meds: Lasix 12.5 mgs BID.

Abnormal PE/Chem/CBC/UA Results: HWT (neg), ALT 209, BG 50, recheck BG fasted 75.

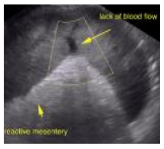
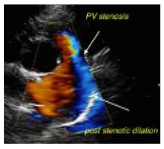
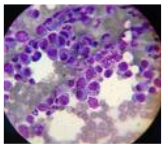
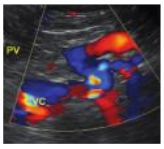
ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

CANINE CARDIAC PARAMETERS	**MR VMAX** (m/s)	**TR VMAX** (m/s)	**LA/AO** (Boon method)	**LA/AO** (Heart Base; Swe)	**FS** (%)	**EF** (%)	**EPSS** (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	5.0	3.0	NM	2.6	26.2	50.9	0.45
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				
PATIENT	108	1.0	0.8	--	6.1	5.5	--

Cardiac Presentation

The echocardiogram for this patient presented excessive **left atrial size** expressed both in the LA/AO and LA max measurements in the table below. Left atrial content was anechoic. No evidence of "smoke" or thrombotic activity was noted. The atrial septum was deviated owing to volume overload and increased left atrial pressure. The cranial and caudal **mitral** valve leaflets presented normal linear structure yet centralized to eccentric insufficiency was noted. No significant dystrophic or vegetative changes were noted. The **left ventricle** demonstrated excessive volume (LVIDd measurement below). Ventricular function was subnormal expressed by the fractional shortening measurement listed below. Myocardium appeared subjectively thin typical of DCM. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. Color doppler assessment revealed mild aortic valve insufficiency. The **right atrium** was mildly enlarged without significant overload. No neoplastic evidence was visualized here. The **tricuspid valve** was found to be linear with proper extension, length and closure but insufficiency was also evident on power doppler assessment and clinically significant owing to annulus stretch from volume overload and increased pulmonary resistance. The **right ventricle** demonstrated subnormal kinesis and volume overload. The **pulmonic outflow** tract presented dilation and prominent pulmonic volume. Rapid assessment of the hepatic veins and vena cava revealed passive congestion. No evidence of tachyarrhythmia or arrhythmogenic disease noted. Mild pericardial free fluid was present.

Urinary System

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

PATIENT

Boo Caltagirone

SPECIES

Canine

BREED

Shepherd Mix

SEX

Spayed Female

AGE

12 Years

WEIGHT

49 pounds

INTERPRETED BY

R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

North Jersey AH

REFERRING VET

Dr. Mark Reidel

INVOICE

13315

DATE

9/28/21

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted. Aortic trifurcation was normal.

Normal size and margination was present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 5.7 cm. The right kidney measured 5.9 cm.

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 1.8 cm x 0.61 cm width at the caudal pole.

The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured1.8 cm x 0.67 cm width at the caudal pole.

Spleen

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

Liver

The liver presented enlarged in size with symmetrical yet swollen contour. The parenchyma exhibited conserved uniform parenchyma with normal echogenicity isoechoic to the spleen and falciform fat. The hepatic vasculature was dilated in appearance, most notable at the level of the hepatic vein / caudal vena cava junction, without evidence of thrombosis. Intermittent, subtly hypoechoic non-specific parenchymal nodules were present, an example measured 2.8 cm in diameter. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal. Minor gallbladder wall edema was present.

Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction or foreign material.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material.

Normal visible colon wall layers were present with apparent formed feces in lumen.

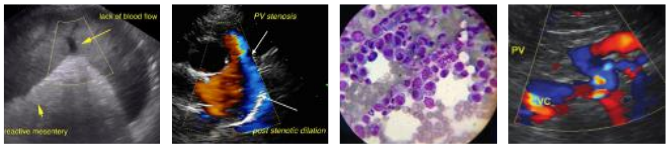
Pancreas

The parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.

Free Abdomen

Mild ascites was present. No overt lymphadenopathy noted.

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Boo Caltagirone

SPECIES

Canine

BREED

Shepherd Mix

SEX

Spayed Female

AGE

12 Years

WEIGHT

49 pounds

INTERPRETED BY

R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

North Jersey AH

REFERRING VET

Dr. Mark Reidel

INVOICE

13315

DATE

9/28/21

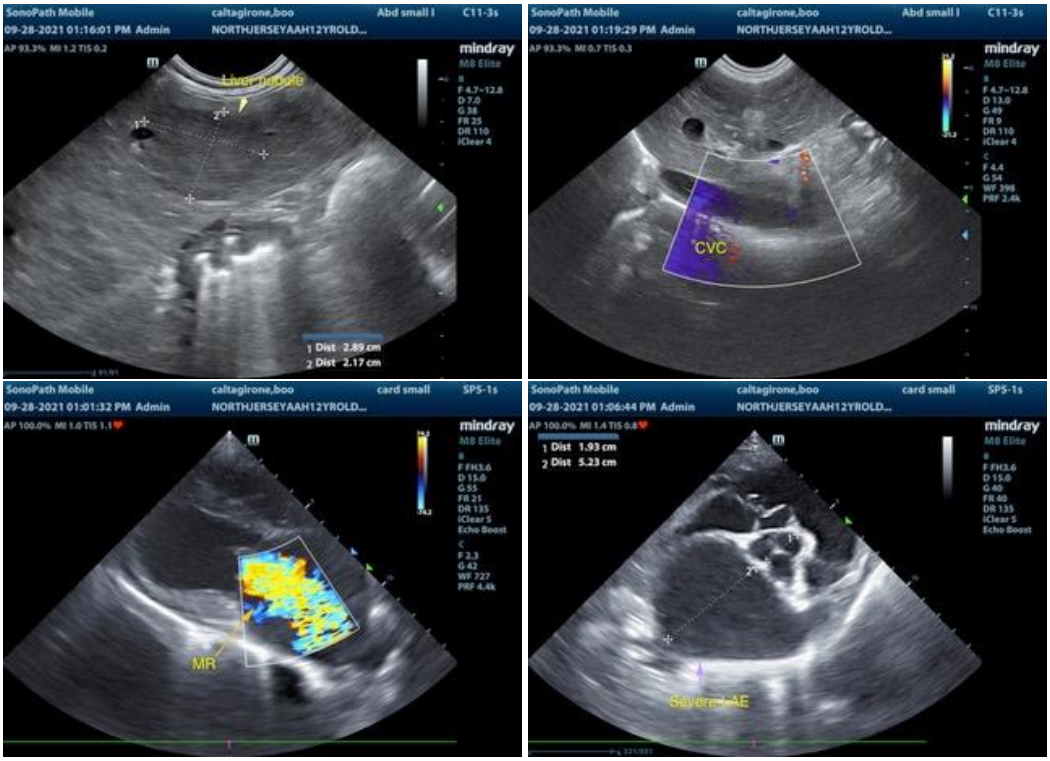
ULTRASONOGRAPHIC FINDINGS

- Severe left atrium and left ventricle enlargement with systolic dysfunction
- Mitral valve, tricuspid valve and aortic valve insufficiency
- Congestive hepatopathy pattern with intermittent non-specific parenchymal nodules- suspect benign nodules such as areas of hematopoiesis or nodular/regenerative hyperplasia, neoplasia considered unlikely
- Mild peritoneal and pericardial effusion

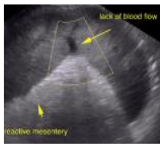
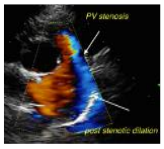
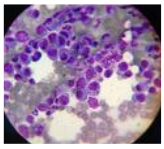
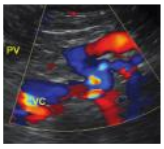
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The echocardiogram is consistent with advanced to end stage cardiomyopathy and systolic dysfunction with secondary significant left heart volume overload. Concurrent mitral, tricuspid and aortic valve insufficiencies are present with mildly elevated pulmonary arterial pressures, not overtly consistent with clinical pulmonary hypertension. This may indicate primary cardiomyopathy such as advanced to end-stage large breed chronic mitral valve disease or primary DCM. Potential for secondary cardiomyopathy owing to taurine deficiency, hypothyroidism, myocarditis or infiltrative disease also possible. Regardless, the cause of ascites is CHF and treatment is recommended although a very guarded to potential poor long-term prognosis is indicated.

Hospitalization with IV diuretic therapy and as needed oxygen until stabilized would be appropriate. Combination diuretic protocol including Lasix and spironolactone at 1-2 mg per kg POBID, Pimobendan at 0.3 mg per kg POBID +/- Ace-inhibitor medication, if systemic blood pressure >130, 0.5 mg per kg POBID recommended. Taurine supplementation could also be considered if clinically indicated. Monitoring of systemic blood pressure as well as renal parameters suggested with recheck echocardiogram in 3-4 months or sooner if consistent signs of CHF are noted.



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

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

PATIENT

Boo Caltagirone

SPECIES

Canine

BREED

Shepherd Mix

SEX

Spayed Female

AGE

12 Years

WEIGHT

49 pounds

INTERPRETED BY

R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

North Jersey AH

REFERRING VET

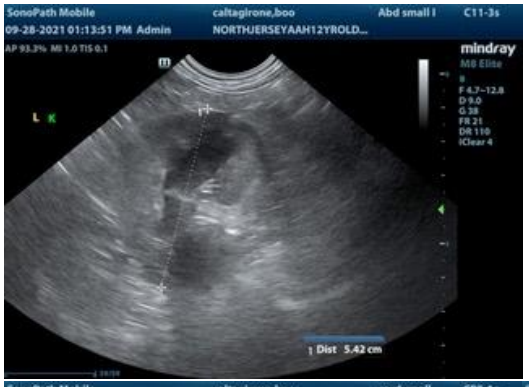
Dr. Mark Reidel

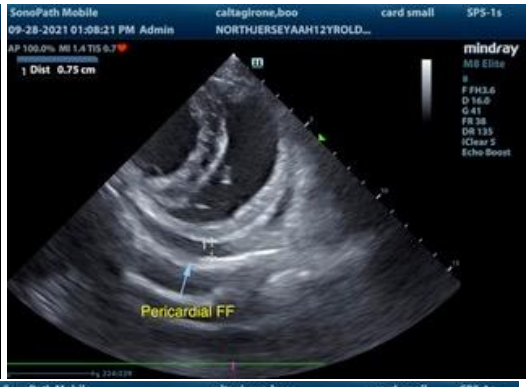
INVOICE

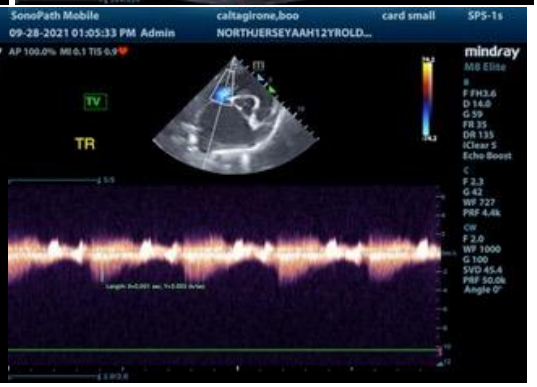
13315

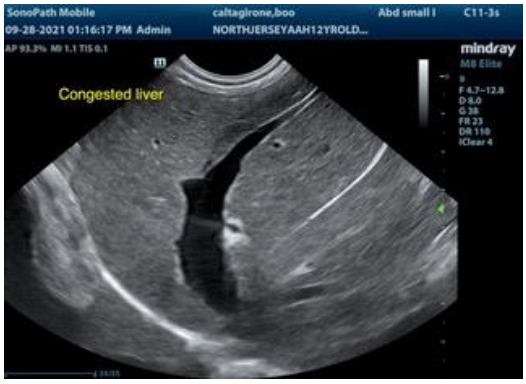
DATE

9/28/21









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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com