



PATIENT

Thumper Santiago

SPECIES

Canine

BREED

Yorkie

SEX

Neutered Male

AGE

13 Years

WEIGHT

8.6 pounds

INTERPRETED BY

Eric Lindquist, DMV,
DABVP(CFM), Cert.
IVUSS

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

Magnolia Veterinary
Practice

REFERRING VET

Dr. Goldstein

INVOICE

12358

DATE

11/20/25

PRESENTING CLINICAL SIGNS

BCS 6/9. Coughing, potbellied, hx of hypertension, PU/PD. Crackles in cranial ventral lung, Chest rads: Pen-hiler edema, possible widening of mediastinum (could be positioning) . Cushing's neg (tested 2 years ago). Receiving Benazepril 5mg (1/2 t am; 1/4t pm); Amlodipine 1.5mg (1/4t pm); Lasix.

Abnormal PE/Chem/CBC/UA Results: No labs

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (M-Mode)	LA/AO (Heart Base; Swe)	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	--	--	NM	1.4	--	--	NM
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LAD LA MAX 4 Chamber	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	80	--	--	--	1.9	--	--

Cardiac Presentation

The **echocardiogram** presented a prominent **right heart** with mild **right ventricular** hypertrophy, **tricuspid** regurgitation was evident with relatively contained **right atrial** size. No evidence of neoplasia was noted in the right auricle, or elsewhere in the heart. The **pulmonary artery** was uniformly prominent. No overt heartworms were noted in the main or visible deep pulmonary arteries. Yet, theoretically heartworms could be present in the deep pulmonary vasculature out of visible sonographic range. More likely, however, this prominent right heart is due to excessive intra-thoracic pressures caused by respiratory disease or other causes of increased thoracic vascular pressure. The **left heart** demonstrated a linear **ventricular septum**. Contractility was functionally adequate demonstrated by the FS% measurement. The **mitral valve** was not significantly insufficient, and no significant **left atrial** dilation was evident. The **left ventricular outflow** demonstrated normal flow patterns and velocities through the aortic valve. No evidence of tumor, pericardial or pleural effusion was noted. The visible **extra-cardiac** tissues were uniformly linear without evidence of masses, infiltrative or inflammatory mediastinal tissue. No evident arrhythmic activity was noted during the exam.

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



PATIENT	was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal.
Thumper Santiago	
SPECIES	The kidneys revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The left kidney measured 3.5 cm in length. The right kidney measured 3.5 cm in length.
Canine	
BREED	Adrenal Glands
Yorkie	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 left adrenal gland measured 1.52 cm x 0.37 cm width at the cranial pole and 0.55 cm width at the caudal pole. The right adrenal gland measured 1.53 cm x 0.67 cm width at the cranial pole and 0.57 cm width at the caudal pole.
SEX	
Neutered Male	
AGE	Spleen
13 Years	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.
WEIGHT	
8.6 pounds	
INTERPRETED BY	Liver
Eric Lindquist, DMV, DABVP(CFM), Cert. IVUSS	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. 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. Multifocal hyperechoic nondisruptive nodular changes were noted measuring up to 1.0 cm each (likely lipid plaques).
IMAGING PERFORMED BY	
Shari Reffi, CVT	
HOSPITAL NAME	The gallbladder was mildly over distended with suspended and dependent debris, yet not to the level of emerging mucocele, yet sludge appears to be mildly excessive. No adjunctive inflammation was noted.
Magnolia Veterinary Practice	
REFERRING VET	Gastrointestinal
Dr. Goldstein	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.
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DATE	Pancreas
11/20/25	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



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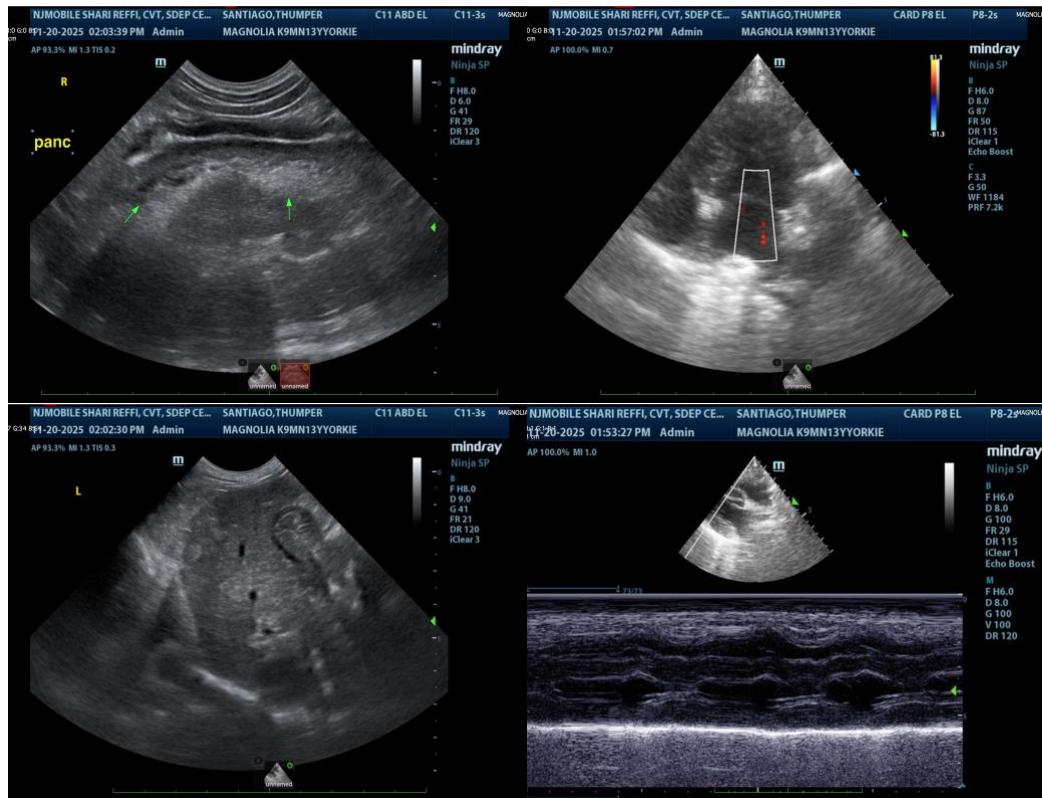
upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxiphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

ULTRASONOGRAPHIC FINDINGS

- Benign abdomen.
- Gallbladder debris.
- Pancreatic remodeling.
- Age-related hepatic changes with nodular changes.
- Cor pulmonale- no evidence of clinical cardiac disease.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the hypertension is unclear. There is no evidence of left sided heart failure. Primary respiratory protocol is recommended. The noted lung edema is likely fat or noncardiogenic pulmonary edema.





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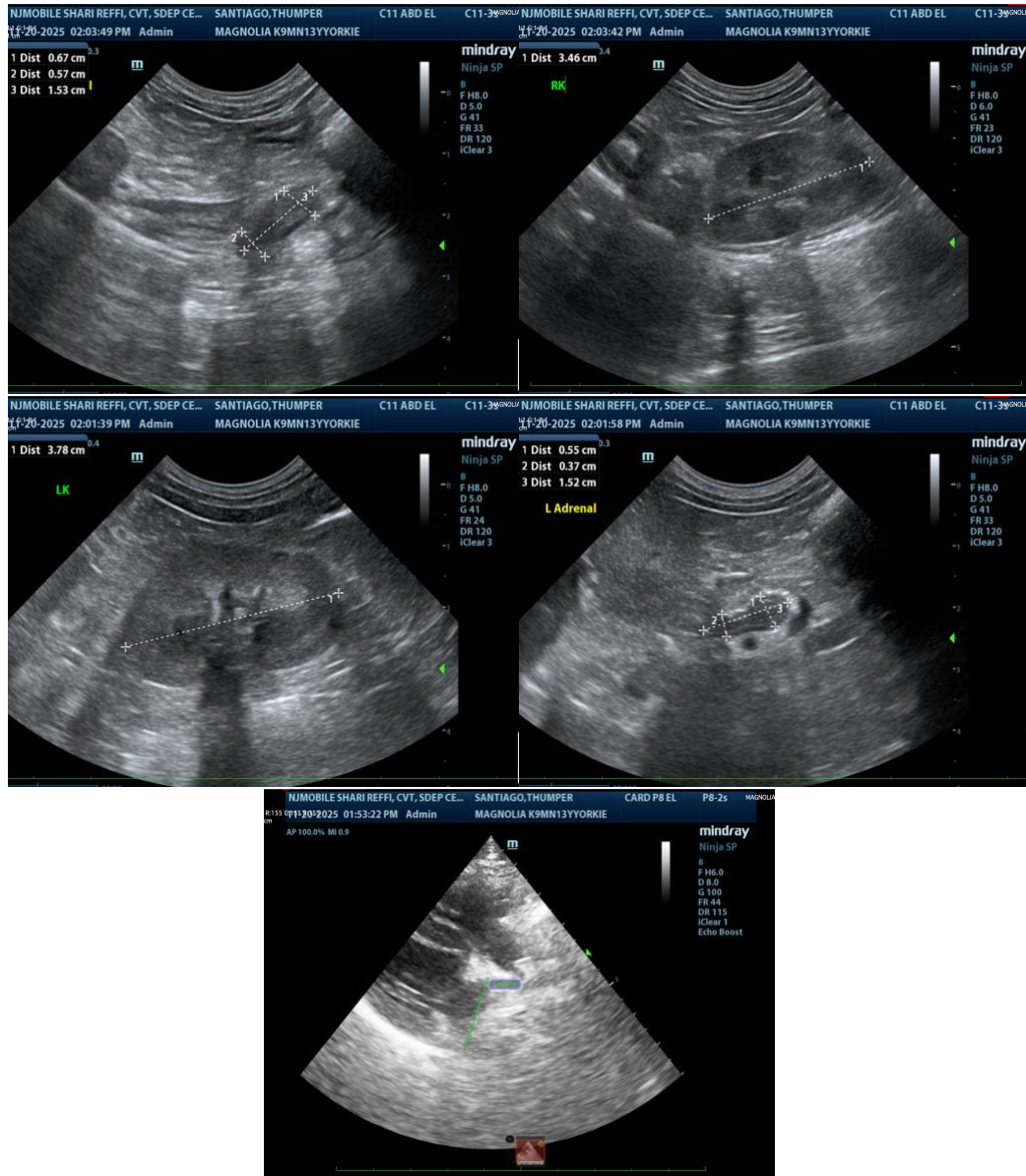
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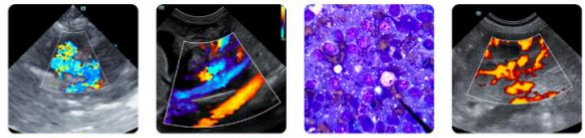
The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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(CFM), Cert. IVUSS,

CEO, Owner, Founder -- SonoPath.com

info@SonoPath.com



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