



PATIENT

Oliver Jouravleva

PRESENTING CLINICAL SIGNS

History: Dyspnea/cough - prev ultrasound - pulmonary hypertension/ diaphragmatic hernia Current meds: temaril P BID

Abnormal PE/Chem/CBC/UA Results: ALK 737, PSL 336, WBC 18,00

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

BREED

Puggle

The **echocardiogram** presented a prominent **right heart** with mild **right ventricular** hypertrophy, with minor **tricuspid** insufficiency, and normal **right atrial** size. No evidence of neoplasia was noted in the right auricle, or elsewhere in the heart. The **pulmonary artery** was uniformly prominent with mildly depressed pulmonic velocity measured on PW Doppler. 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 chronic respiratory disease or potentially excessive intra-thoracic fat (Pickwickian syndrome). The **left heart** demonstrated a linear **ventricular septum**. Contractility was functionally adequate demonstrated by the FS% measurement. The **mitral valve** revealed mild insufficiency. No significant **left atrial** dilation was noted. 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. Arrhythmogenic activity was noted during the exam. A large amount of thoracic fat was noted. A trace amount of pericardial effusion was noted in this patient, yet no overt masses.

SEX

Neutered male

AGE

11 years

WEIGHT

40.1 lbs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Valeryia Shumskaya

HOSPITAL NAME

East Plane AH AH

REFERRING VET

Dr. Rosen

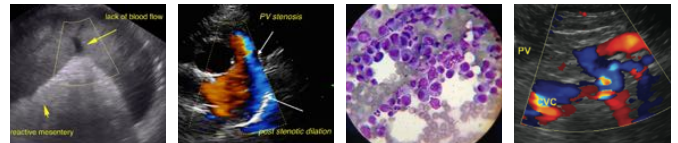
INVOICE

43550

DATE

3/28/23

| 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 | <1.6 | 28-40 | 40-100 | <0.6 |
| PATIENT | | 2.8 Approx | 1.1 | 1.28 | 50 | | 0.1 |
| CANINE CARDIAC PARAMETERS | HR (BPM) | AV VMAX (m/s) | PV MAX (m/s) | BODY WEIGHT | 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 | | 2.17 | 1.56 | 40.1 lbs | 2.75 | | |



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ULTRASONOGRAPHIC FINDINGS

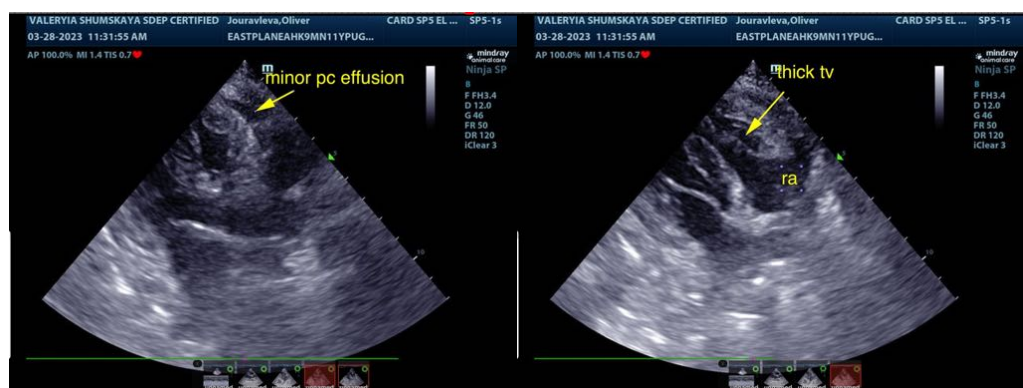
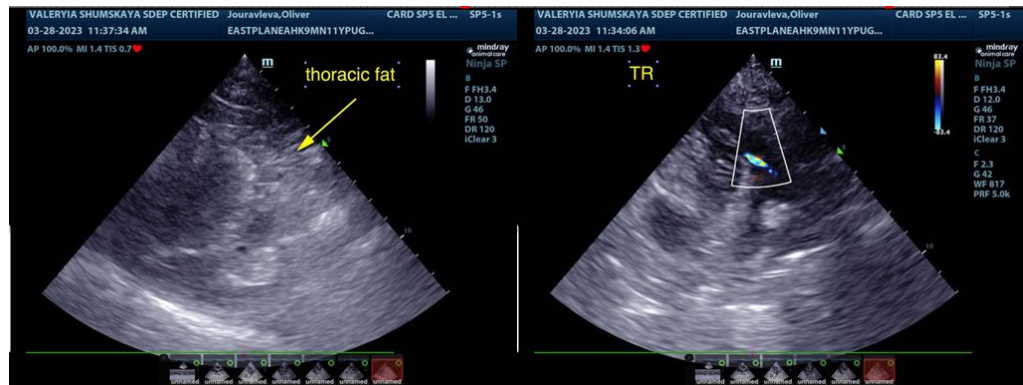
Normal cardiac function with a large amount of thoracic fat and arrhythmogenic activity. Tricuspid velocity is approximately 2.8 m/sec at this time, which would not be consistent with pulmonary hypertension, yet it may be underestimated.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

EKG is indicated as well as blood pressure measurements if not already performed. The tricuspid insufficiency was variable in this patient with a large amount of thoracic fat present and history of pericardial diaphragmatic hernia the passive congestion pattern in the liver may be owing to the hernia itself and not necessarily a clinical pulmonary hypertension. EKG is indicated prior to any surgical intervention. Chest and abdominal CT is indicated. I am most concerned about arrhythmogenic activity in this patient from a functional standpoint. Trace pericardial effusion is likely owing to the hernia, yet this is not a functional issue.

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/resources/sonopaths-teleconsultation-services-and-sdep-certification/sonopath-ct-services>





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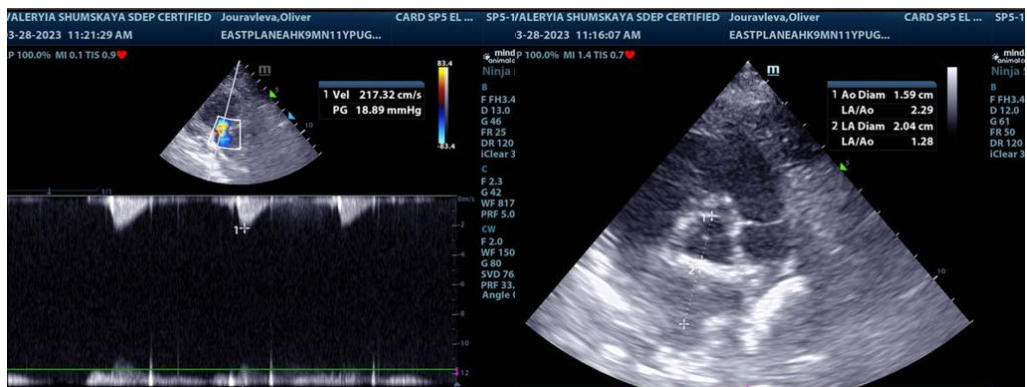
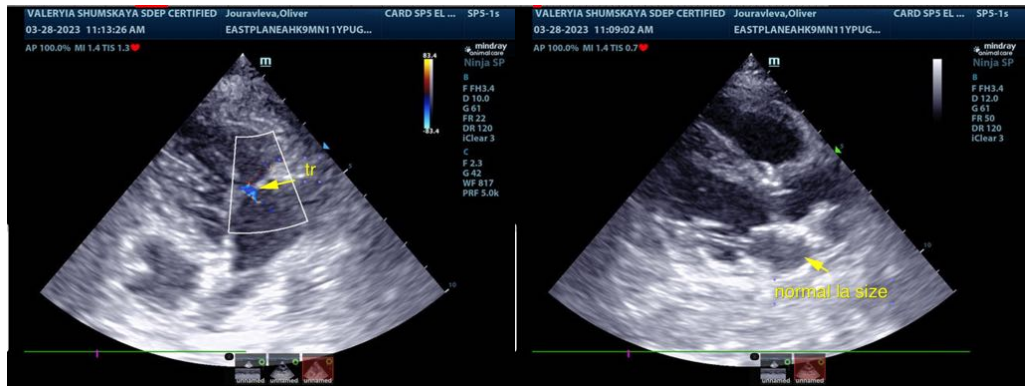
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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, Cert. IVUSS
info@SonoPath.com