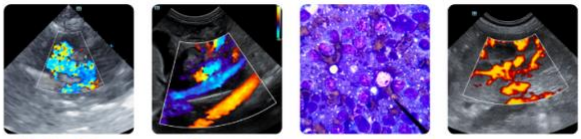



**PATIENT**

Frankie Kwan

**SPECIES**

Canine

**BREED**

Lab Mix

**SEX**

Neutered Male

**AGE**

16 Years

**WEIGHT**

28 kg

**INTERPRETED BY**

Bradley Harris, DVM, DACVECC, DACVIM (cardiology)

**IMAGING PERFORMED BY**

Andrea Nicastro, DVM, DACVIM

**HOSPITAL NAME**

VCA Palmetto

**REFERRING VET**

Dr. Leavis

**INVOICE**

12934

**DATE**

01/02/2026

## PRESENTING CLINICAL SIGNS

Two episodes of fainting within the past 2 weeks. Both occurred from excitement. Exam shows grade III/VI left systolic murmur but possibly a flutter with it. Pulses synchronous and strong. History of murmur. Osteoarthritis noted in stifles/elbows/hips but no ambulatory concerns noted.

Current Rx – Carprofen

Abnormal PE/Chem/CBC/UA Results: CBC, chem, T4 from 8/25 - unremarkable; Usg - 1.015

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART

| CANINE CARDIAC PARAMETERS | BW | HR BPM | LAD 4 ch Long | RAD 4 ch Long | La/Ao Heart Base | LVIDd | LVIDs |
|---|---|---|---|---|---|---|---|
| NORMAL PARAMETER | | 50-100 | | | <1.6 | | |
| PATIENT | 28.0 | 100 | 5.67 | 2.9 | 1.06 | 4.26 | 2.17 |
| **CANINE CARDIAC PARAMETERS** | **FS** | **EPSS** | **PV V MAX (m/s)** | **AV V Max (m/sec)** | **MR Vmax** | **TR Vmax** | **RPA distensibility (normal >30%)** |
| NORMAL PARAMETER | 28-40 | <0.6 | 0.7-1.6 | 0.7-1.7 | 4.5-5.5 | < 2.7 | |
| PATIENT | 49 | 0.3 | 1.0 | 1.0 | 5.6 | 3.2 | 29 |

### *Cardiac Presentation*

The left atrium is mild to moderately enlarged. The left ventricle is normal in dimension, with normal systolic function. The right atrium and ventricle are normal in dimension, with normal systolic function. The mitral valve is thickened and redundant consistent with myxomatous changes, and there is mild prolapse. There is evidence of mild mitral regurgitation. The tricuspid valve leaflets are minimally thickened with mild tricuspid regurgitation and evidence of mild pulmonary hypertension. The left ventricular outflow tract demonstrated normal laminar flow and the visible aorta is unremarkable. The right ventricular outflow tract assessment revealed normal laminar flow, and appropriate diameter and distensibility. No evidence of hepatic venous congestion is noted. There is no pulmonic and no aortic valve insufficiency documented. There is no visible pericardial, pleural, or free peritoneal fluid noted. The cardiac chambers, pericardial and visible extra-cardiac regions were free of masses, spontaneous echo contrast, or thrombi.

## ULTRASONOGRAPHIC FINDINGS

- These findings identify left atrial dilation in the presence of mild pulmonary hypertension (PH). Pulmonary hypertension in dogs is most commonly secondary to primary respiratory disease (chronic bronchitis, pulmonary fibrosis, or other forms of pulmonary interstitial disease).

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Pulmonary hypertension can also develop in dogs with severe heartworm disease or secondary to pulmonary thromboembolism (PTE). Less commonly, pulmonary hypertension is identified in dogs as an idiopathic condition. Pulmonary hypertension commonly causes syncope, and the patient's signs may be attributable to this condition.

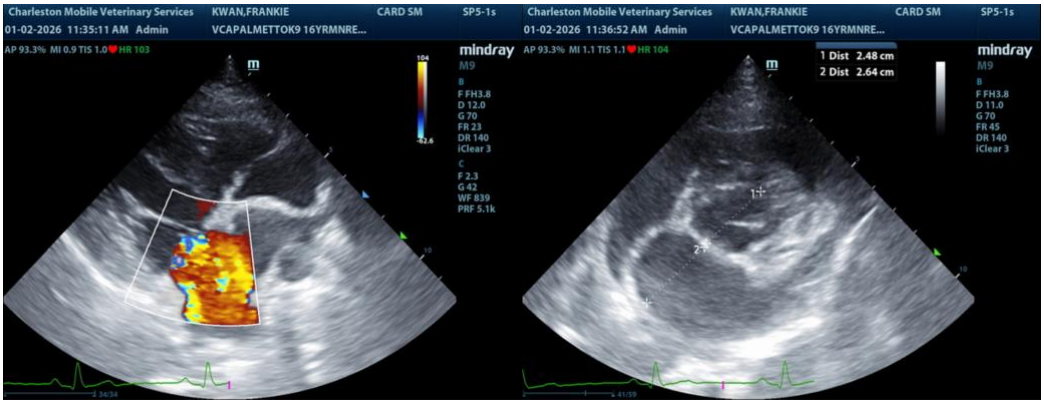
## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the chamber dilation, and mild pulmonary hypertension, cardiac therapy will be recommended at this time. Treatment for the PH/presumed respiratory disease is warranted, as clinical signs are present. The use of Vetmedin (0.25-0.35 mg/kg BID) is appropriate in the absence of more overt clinical signs. A repeat echo is indicated in another 6 months, or sooner if progression is suspected, clinical signs develop/worsen, or cardiac therapy is being contemplated.

Anesthesia considerations:
While there is no CHF present, there is likely an increased anesthetic risk which must be considered prior to any anesthetic procedure. If anesthesia is necessary, then alpha-2 agonists, ketamine, and Telazol should be avoided. Fluid therapy during anesthesia does not necessarily need to be adjusted. A shorter anesthetic duration will reduce the risk of complications. Pre-oxygenation is mandatory. Premedication with an opioid (e.g., butorphanol, hydromorphone, oxymorphone) with or without a benzodiazepine is generally the safest protocol. An induction agent such as Propofol, alfaxalone, or diazepam/etomidate can be used to effect. Maintenance of anesthesia with isoflurane or sevoflurane is reasonable.

Diet:
No special considerations are necessary. Any high-quality food from Hills, Royal Canin, Science Diet, Eukanuba, Iams, or Purina is reasonable.

Activity:
Moderate physical activity (meandering walks, exploring the backyard, playing with toys inside, getting excited when family gets home, etc.) is encouraged, but periods of strenuous aerobic activity (jogging, strenuous outdoor ball play, prolonged play at the dog park, etc.) should be avoided, especially during periods of high heat (> 80 F) and humidity. Dogs with heart disease tend to tolerate cool and cold temperatures much better than high temperatures. Avoid sudden increases in activity (e.g. 2 block walks during the week but 2 mile walks followed by 30 minutes at the dog park on the weekends) as this may be difficult for the cardiovascular system to deal with.



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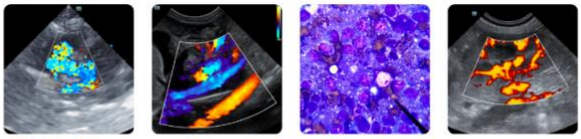

Clinical Sonography & Telecytology
Educational Teleconsultation Services™

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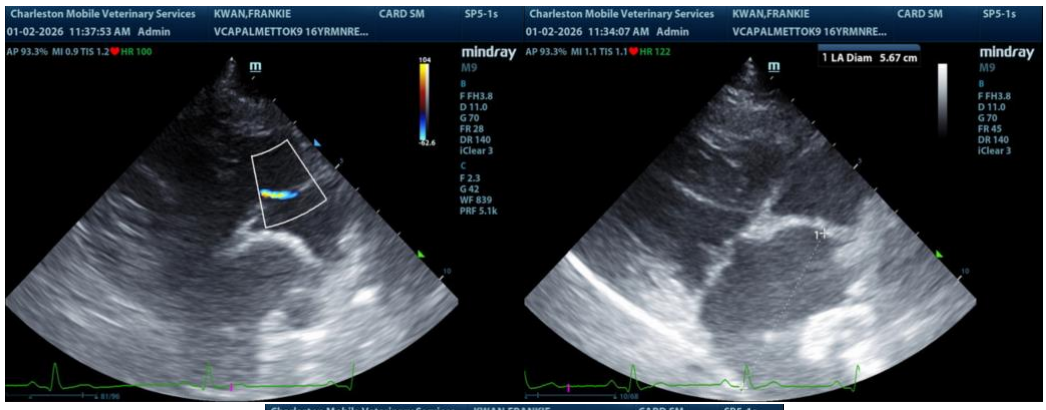


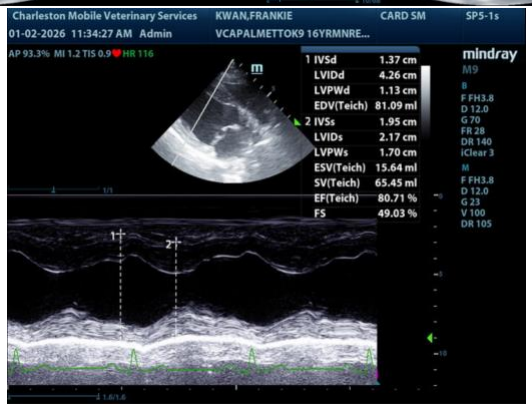


**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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.

**Bradley Harris**, DVM, DACVECC, DACVIM (cardiology)

info@SonoPath.com