



Cardiology

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Case #2

Chief Complaint

“Duke” is a 8 year old neutered male Doberman pinscher with a history of weight loss, lethargy, coughing, dyspnea, syncope and abdominal distention.

Duke





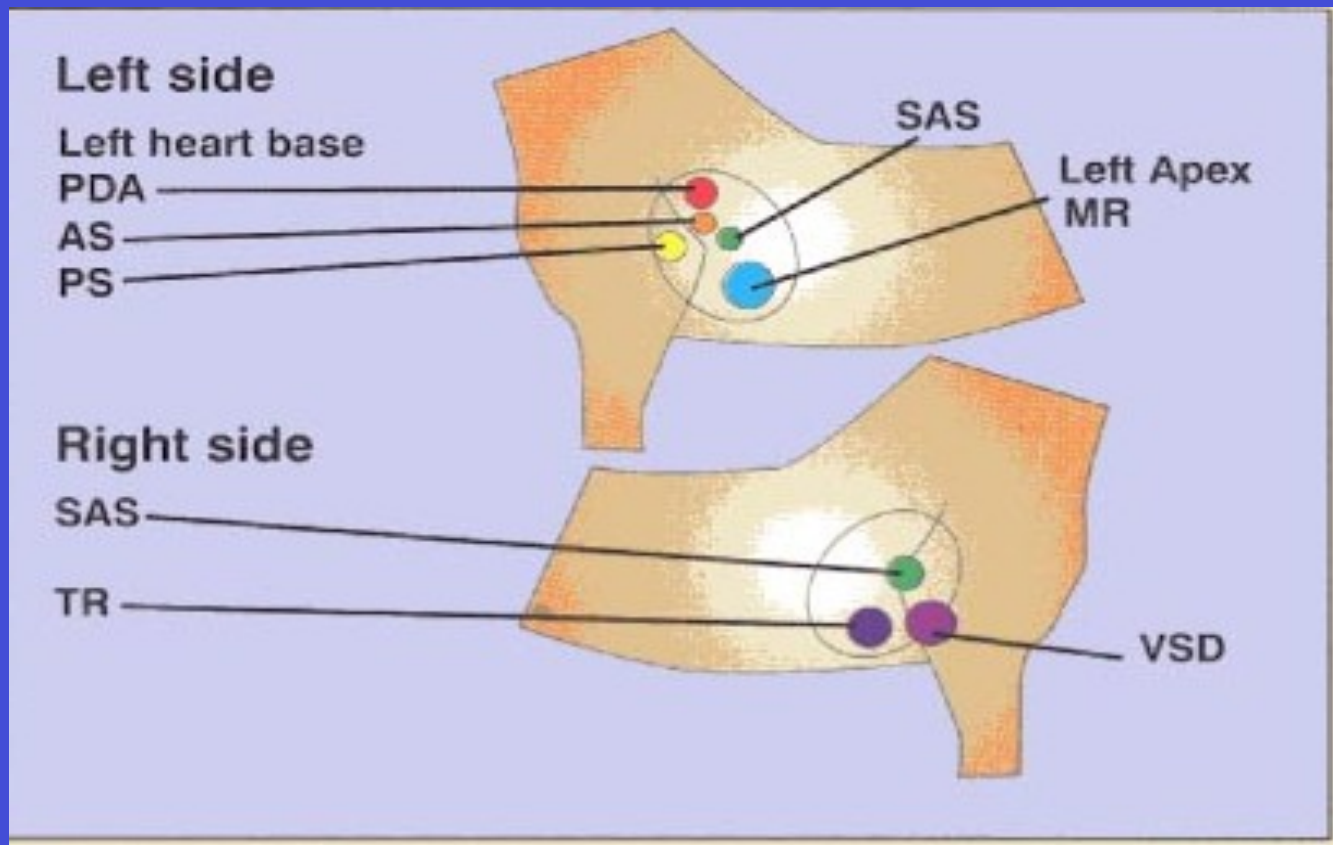
History

- Cough started about about a month ago
- Decreased exercise tolerance
- No history of being boarded in kennel
- DA2PVP, Rabies and Bordetella up to date
- Losing weight for the past 3 months
- One of Duke's litter mates - similar problem

Physical Examination

- Weak and Depressed
- Temperature 38.8 degrees C
- Heart Rate 110 bpm
 - Grade 2/6 soft systolic mitral murmur
- Pulmonary crackles posterior dorsal lobes
- Pulse deficits – femoral pulse does not equal the heart beats
- Ascites

Cardiac Murmurs



Abbreviations

- PDA - Patent Ductos Arteriosis
- AS- Aortic Stenosis
- PS - Pulmonary Stenosis
- SAS - Sub Aortic Stenosis
- MR - Mitral Regurgitation
- TR - Tricuspid Regurgitation
- VSD - Ventricular Scptal Defect

Problem List

- Weight loss
- Lethargy
- Coughing
- Dyspnea
- Syncope
- Abdominal distention - Ascites
- Systolic Mitral murmur
- Pulmonary crackles
- Pulse Deficits

Rule Outs

- List all the Possible Diagnoses
- *This list is your Rule Out list*

Rule Outs

- DCM – Dilated Cardiomyopathy
- Mitral valve endocardiosis
- Pericardial Effusion, Pleural Effusion - pyothorax
- HCM – Hypertrophic Cardiomegaly
- Tracheobronchitis – Kennel Cough
- Pneumonia, Neoplasia,
- Heartworm
- Trauma: Diaphragmatic Hernia

Eliminating Rule Outs

- Which diagnoses are unlikely from
- Clinical Signs
- History

Rule Outs Based on HX/PE

- DCM – likely because usually in large dogs
- MR –unlikely usually small dogs with murmurs
- Pericardial Effusion –unlikely because no murmur
- HCM – unlikely because usually in cats
- Tracheobronchitis –unlikely because no history of boarding
- Pneumonia – unlikely because pneumonia does not have a murmur

The Plan

- What is your PLAN ?

Plan

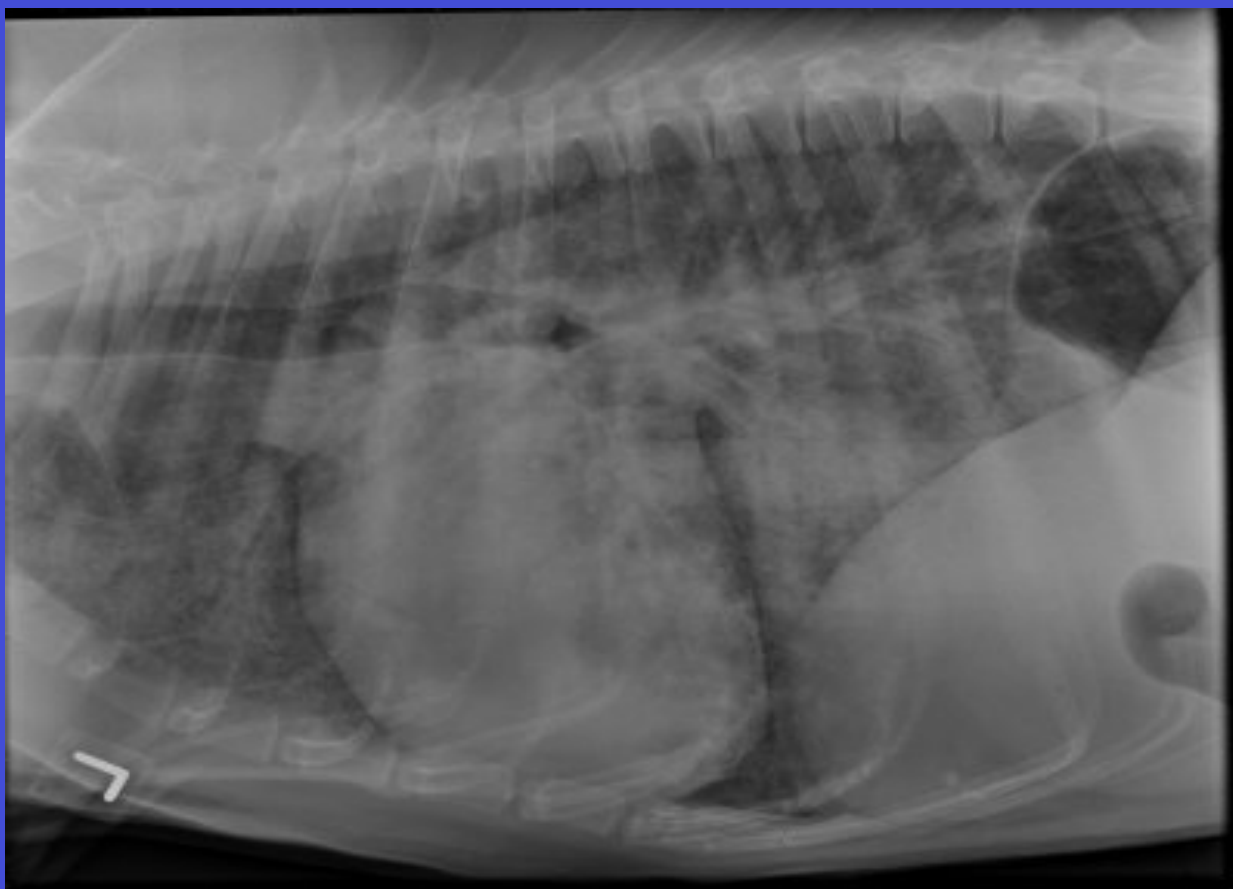
- Thoracic Radiograph
- CBC/Chemistry/Urinalysis
- ECG
- Echocardiogram

Radiographs

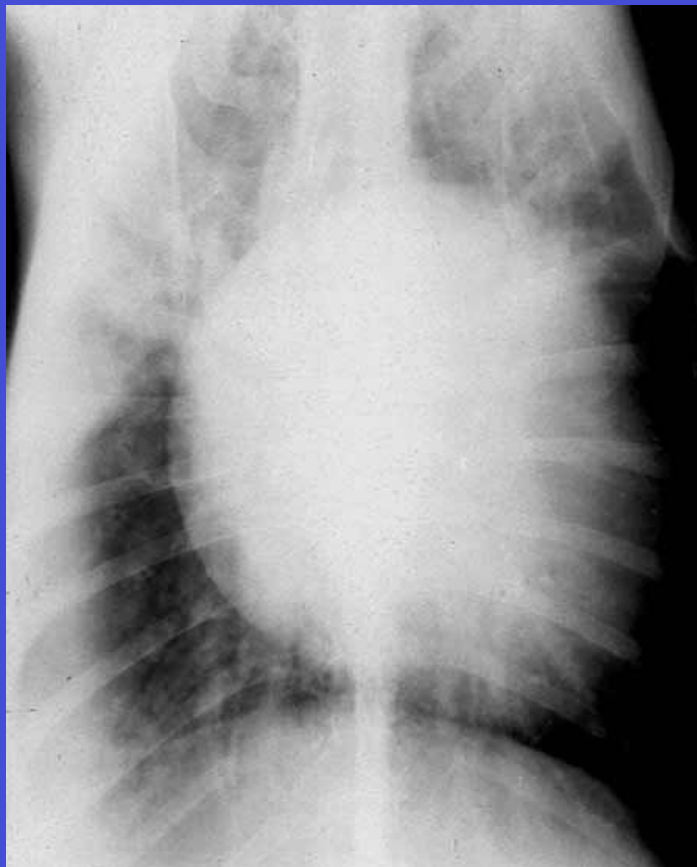
- Left Lateral View
- Dorsal Ventral View



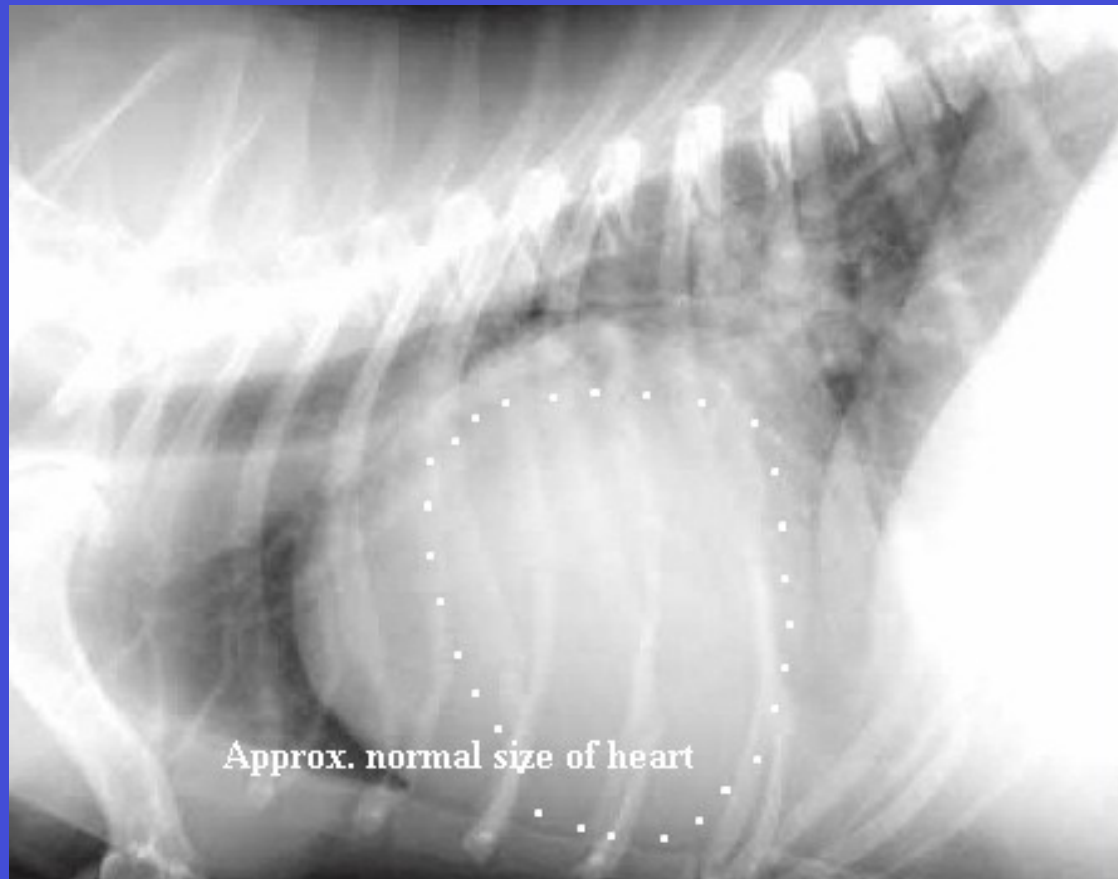
Left Lateral Thorax



Ventral Dorsal Thorax



Dilated Cardiomyopathy



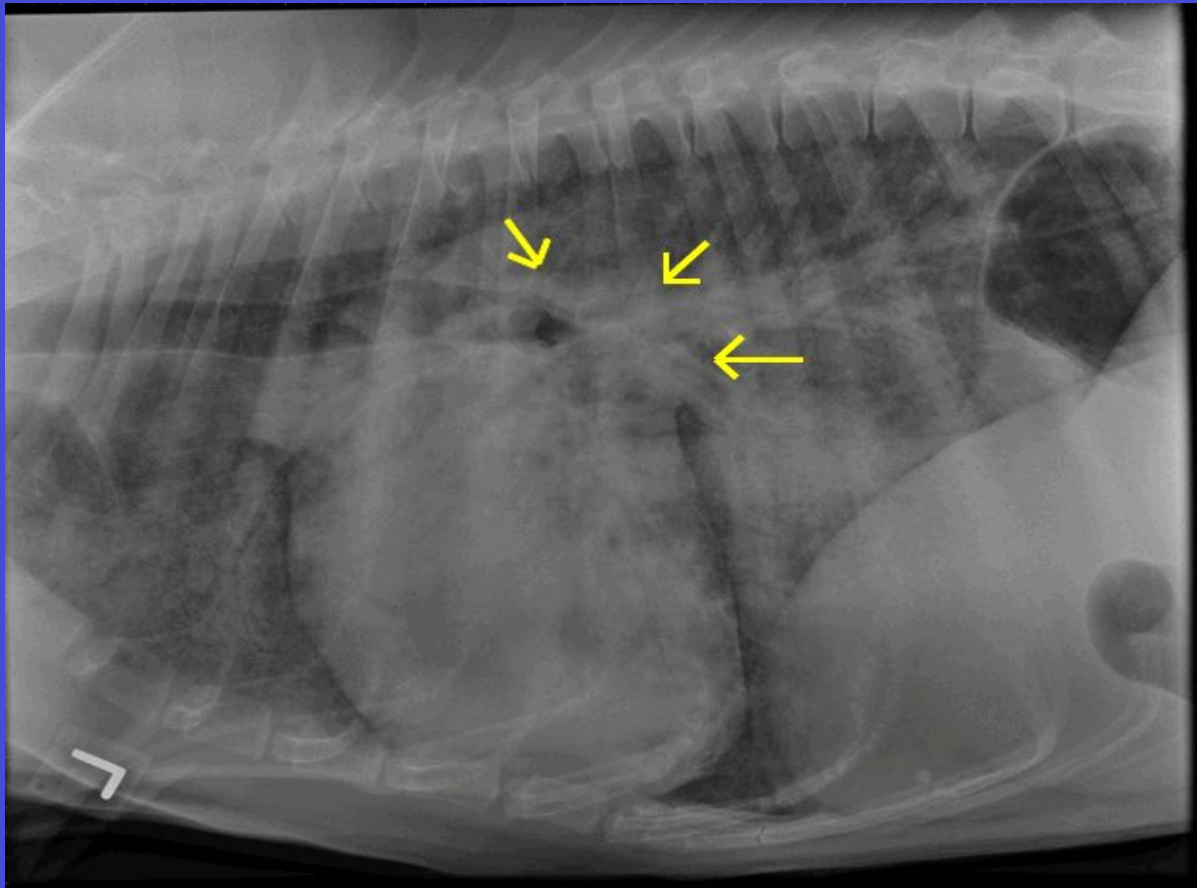
Radiograph Evaluation

- List all the abnormal radiographic signs that you see on the previous radiographs

Radiographic Signs

- Left Atrial Enlargement Left Ventricle Enlargement
- Pulmonary Edema
- See the next slide for abnormalities

Radiograph of DCM



See Next Slide for a Description of the Abnormalities

Radiographic Abnormalities

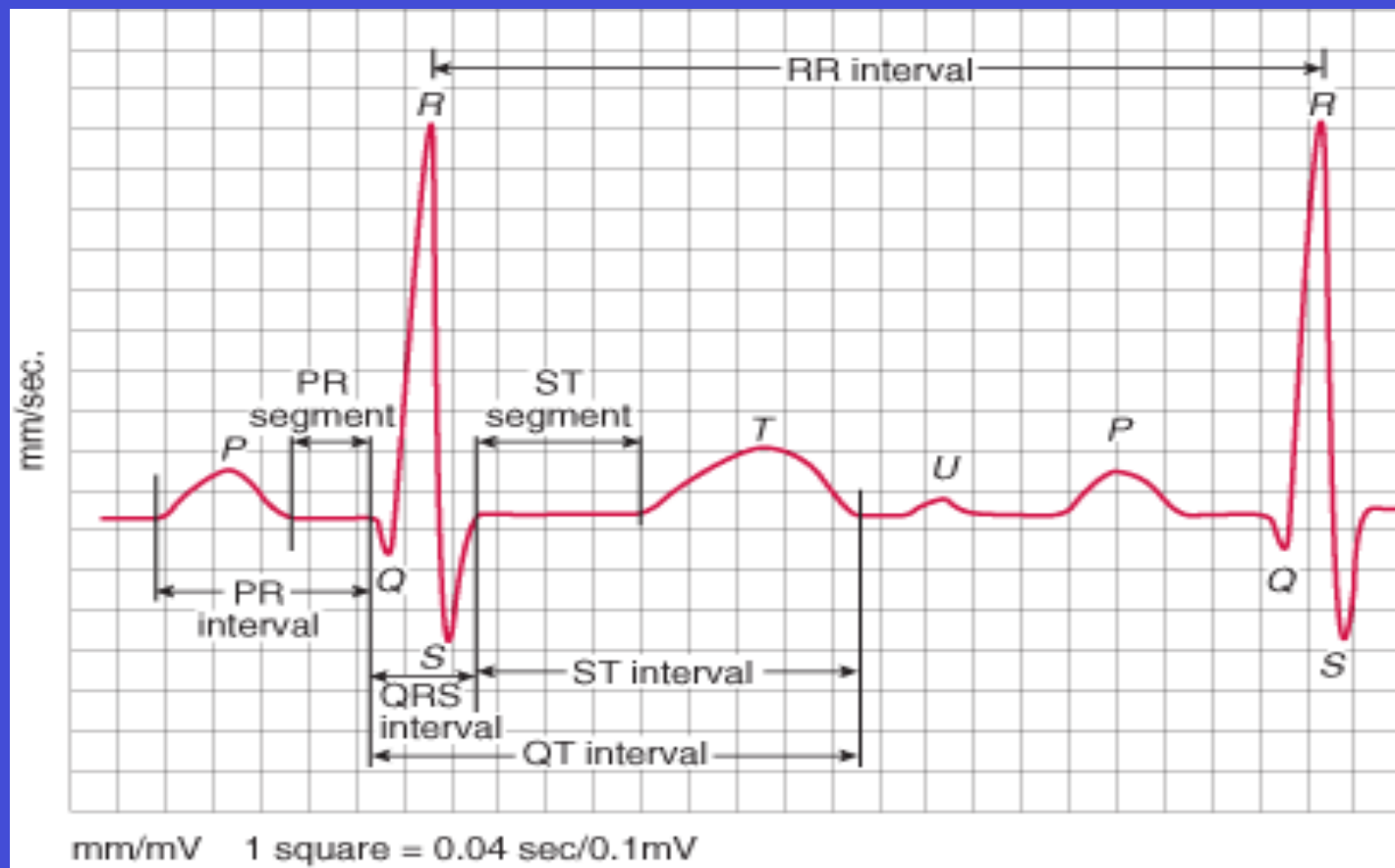
- The yellow arrows outline the enlarged left atrium.
- The left ventricle is also enlarged.
- There is a diffuse severe alveolar parenchymal pattern consistent with cardiogenic pulmonary edema – cloudy white shadow in the posterior dorsal lung lobes

Please see the previous slide of the radiograph

CBC/Chemistry/Urinalysis

- CBC- normal
- Stress leukogram :
 - Lymphopenia
 - Neutrophilia
- Mild increase in liver enzymes
- Mild increase in BUN - Prerenal

ECG is Normal in this Case



Echocardiogram



Echocardiogram

- What abnormalities do you see?

Echocardiogram Abnormalities

- Enlarged Left Atria – marked LA
- Left Ventricle walls are thin and the Left Ventricle is enlarged.

Problem List

- Mitral Systolic Murmur – left apex of the heart
- Cough
- Weight loss
- Left Atrial and Ventricle Enlargement
- Pulmonary Edema – white shadow posterior dorsal lung lobes
- Echocardiogram – enlarged left atria and ventricle .

What is your Diagnosis?

What is your diagnosis ?

What is the etiology?

Final Diagnosis

- Congestive Heart Failure due to
Dilated Cardiomegaly
 - Etiology
 - Unknown
 - Genetic basis suspected

Treatment Plan

- Diuretics – Furosamide
- Venodilators – Nitroglycerin
- ACE Inhibitors – Enalapril
- Pimobendan (Vetmedin)



The End





























































