LA Enlargement

- **Causes:****
  - Mitral Insufficiency
    - Endocardiosis
    - Dysplasia
  - Patent Ductus Arteriosus
  - Dilated Cardiomyopathy (mostly dogs)
  - Hypertrophic Cardiomyopathy (cats)
Right Ventricular Enlargement

- Greater than 3 intercostal spaces wide
  - < 3 1/2 for brachycephalic breeds (ie Eng Bulldogs)
  - < 2 1/2 for deep-chested breeds (ie Doberman)
  - Increased sternal contact is measured in intercostal spaces

- Rounded and full RV on VD view (6-9 o’clock)
  - Reverse D on VD view
RV Enlargement
RV Enlargement
RV Enlargement

- Causes:
  - Pulmonic Stenosis (with MPA enl.)
  - Heart Worm
  - Pulmonary Hypertension
  - Tricuspid insufficiency
  - Tetrology of Fallot
  - Second to Left Heart Failure
  - Dilated Cardiomyopathy

*RA enlargement alone is rare, seen with tricuspid dysplasia*
Main Pulmonary Artery “Bulge” (aneurysmal dilation)

- 2 o’clock
- Causes:
  - PDA
  - PS
  - HW
  - Pulmonary hypertension
Aortic “Bulge”

- 1-2 o’clock
- Causes:
  - PDA (descending aorta)
  - SAS (aortic arch)
  - Incidental in older cats
Globoid Silhouette

- Generalized cardiomegaly without distinct chamber enlargement.

- "Basketball" shaped heart
Globoid Silhouette

- Causes:
  - Pericardial effusion
  - Severe DCM
  - Peritoneopericardial Diaph Hernia
  - Tricuspid dysplasia
HW Radiographic Findings

- Pulmonary Arteries larger than Veins
- Right cardiac enlargement
- MPA Bulge (1-2 o’clock)
- Pulmonary Hypertension has similar radiographic appearance and may be present w/ HW
Heart Worm
Pulmonary Vessels

- Veins are Central and Ventral
  - Veins bigger than arteries
    - Pulmonary venous congestion (L CHF)
  - Arteries bigger than veins
    - Heart Worm, Pulmonary Hypertension
  - Arteries and veins both big
    - Over circulation- congenital L to R shunt
  - Arteries and veins small to normal
    - Underperfusion
    - Hypovolemic, PS
Venous congestion
Pulmonary Arterial Enlargement
Pulmonary Vasculature
Hypovolemia
Blood Flow

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Left-sided Heart Failure -

- Left Atrial Enlargement
- Left Ventricular Enlargement
- Pulmonary Venous Congestion
- Cardiogenic Pulmonary Edema
  - Caudodorsal, Perihilar
    - Except DCM (canine) and cats
- Pleural Effusion (only in cats)
Right-sided Heart Failure

- Right Sided Cardiomegaly
- Peritoneal Effusion (Ascites)
- Pleural Effusion
- Hepatic Congestion (Hepatomegaly)
- Enlarged Caudal Vena Cava