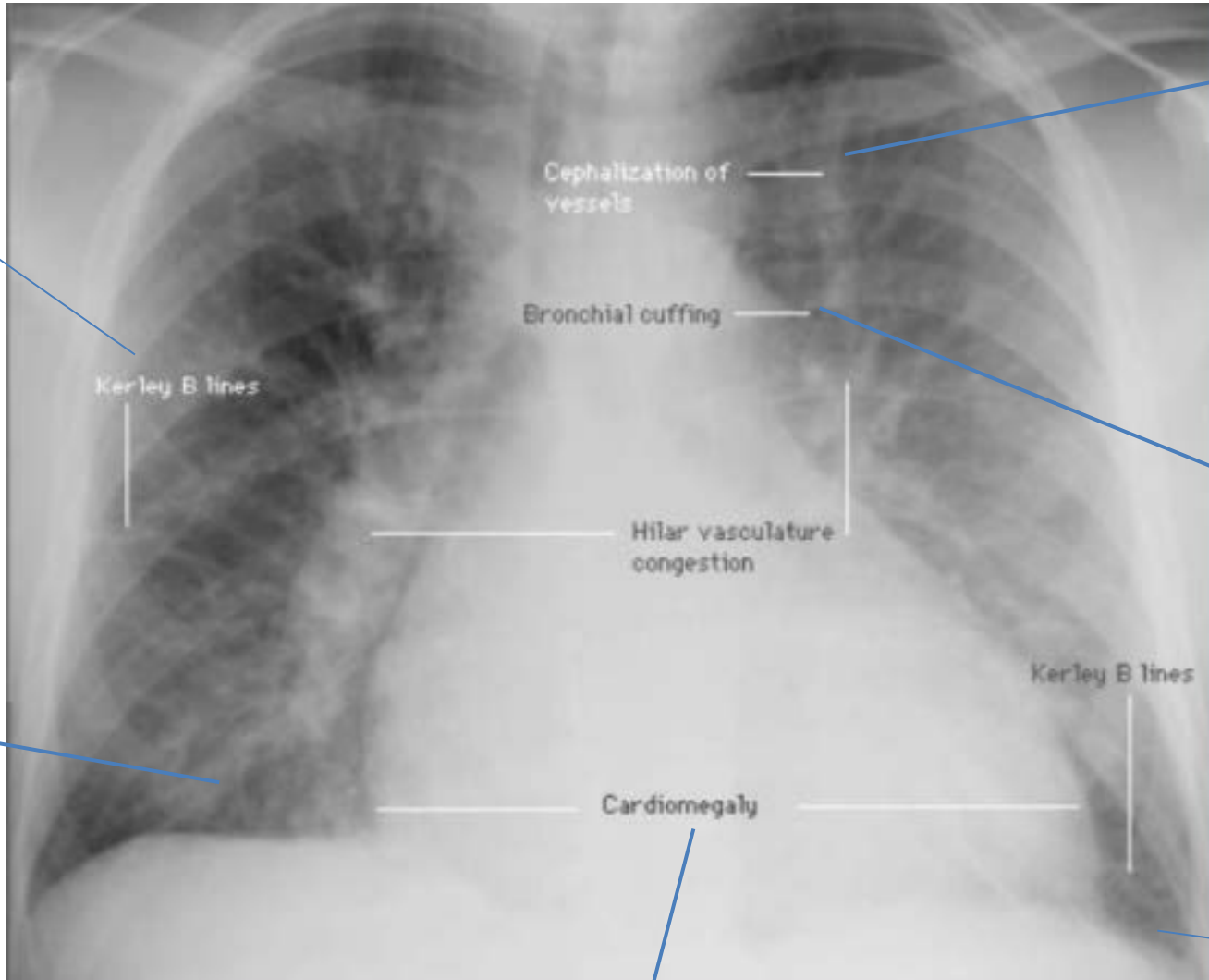


CXR of Heart Failure

– 7 classic signs of HF on Chest X-ray!

Note: Normal mean LA pressure <10mmHg



Kerley B Lines – Short, linear white lines on the periphery of the lower lung fields, represents edema in the inter-lobular septa (occurs if LA pressure > 20mmHg)

Pulmonary Edema – LA pressure > 25mmHg causes transudate into alveoli, causing airspace opacification. Usually bilateral, affecting lower lobes (white opaque infiltrates in lower lobes > infiltrates in upper lobes)

Vascular Redistribution – As LA pressure > 15mmHg & interstitial and perivascular edema compress lung-base vasculature, forcing more blood into upper-lobe vessels, making them seem larger.

Air-bronchograms – edema in small airways and alveoli fill them up, cause consolidation → white opacification in tissue surrounding adjacent bronchi → air (dark) in patent bronchi contrasted against white consolidation

Peri-bronchial cuffing is due to increased blood volume and hydrostatic pressure in pulmonary arteries around the bronchi

Pleural Effusions – **transudative! Low protein!** present because of increased hydrostatic pressure in the pulmonary vessels

Cardiomegaly: cardiothoracic ratio > 0.5 on the PA CXR