BILATERAL DUPLEX CAROTID ULTRASOUND:

- Prep: None
- Basic Principles: Use appropriate linear transducer for patient body habitus. Evaluate carotid system using gray scale, color and pulsed wave Doppler. Patient supine, head extended and slightly rotated away from the side being imaged.
- The examination should include the following:
    - Transverse and longitudinal gray scale images of the carotid vessels:
        - Common carotid artery – proximal, mid and distal
        - Bulb
        - Bifurcation
        - ICA and ECA
        - If atherosclerotic plaque is present, the extent, location, and characteristics should be documented with gray scale imaging in both transverse and longitudinal planes.
    - Angle adjusted color and pulsed wave Doppler with sample velocities taken at:
        - Common carotid artery – proximal, mid and distal (2-3cm below bifurcation)
        - Bulb
        - ICA – proximal, mid and distal
        - ECA
        - Measure velocities using a Doppler angle of 60 degrees or less. Measure peak systolic velocity and peak end diastolic velocity. Obtain ICA/CCA systolic using distal CCA velocity and the highest obtained ICA velocity.
        - If there are significant stenoses, Doppler spectra should be sampled proximal, within and distal to each stenosis and the highest velocity determined and recorded. The location of each stenosis should be documented.
    - The vertebral artery should be imaged in the longitudinal plane, and the velocity spectrum and flow direction in each of the vertebral arteries should be recorded.
    - Include additional representative images of the thyroid gland as well as the lateral neck area if abnormal.