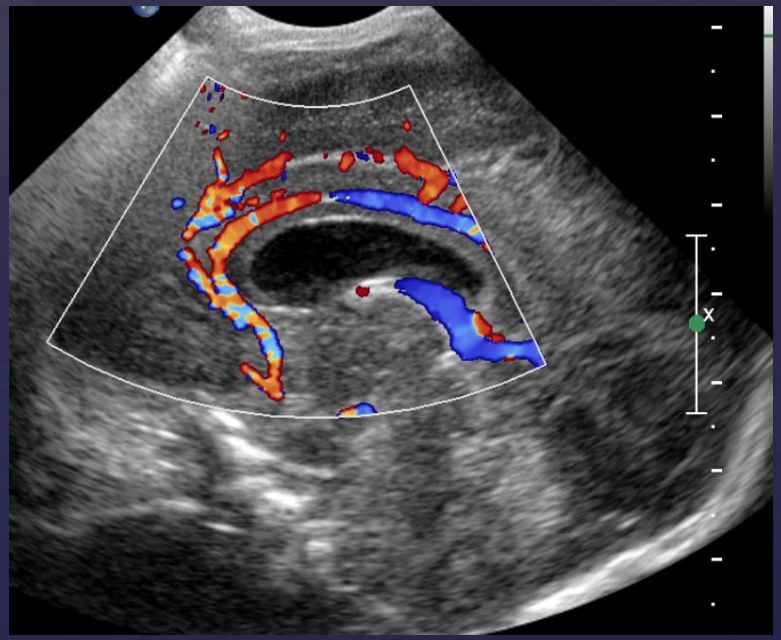
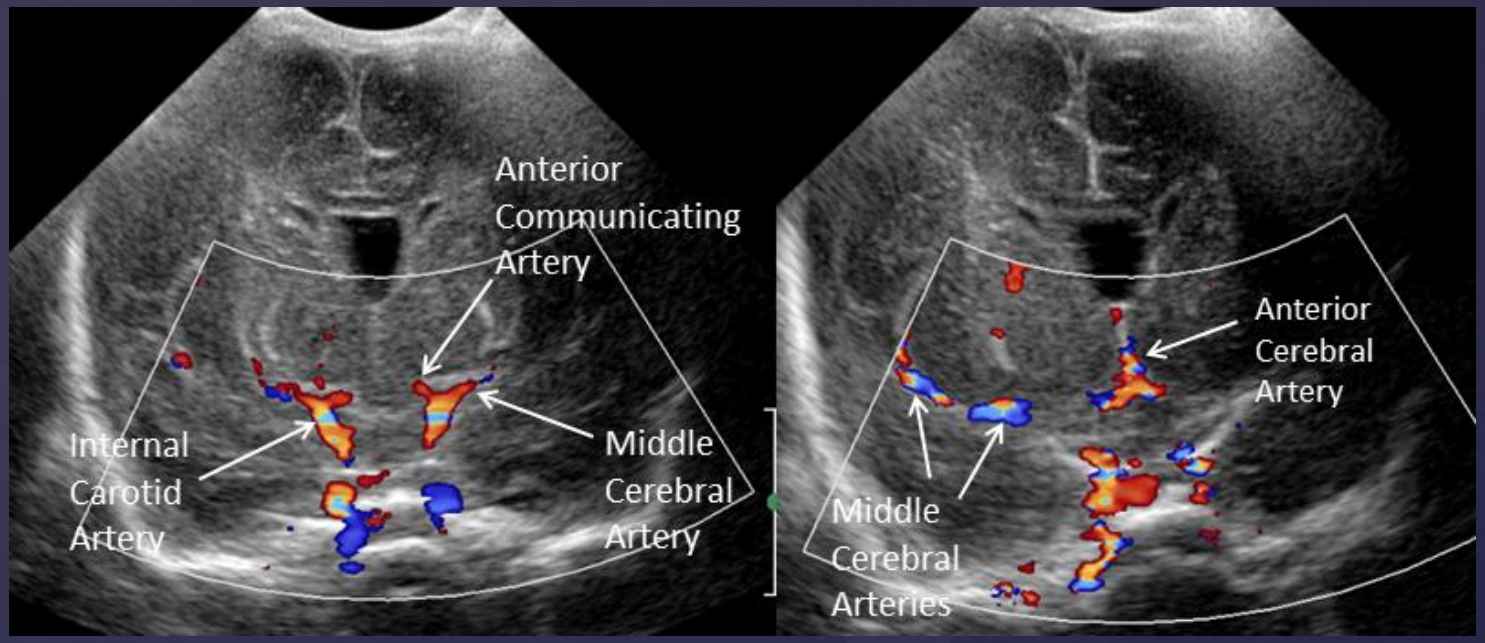
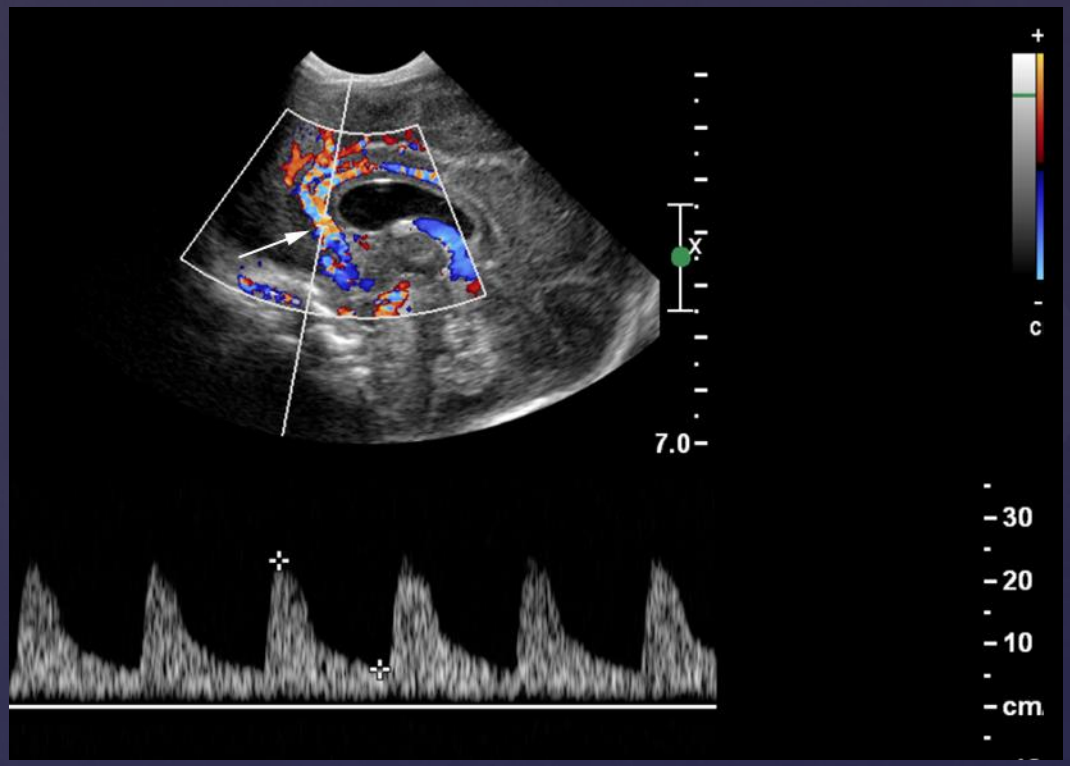
AIUM Image Library: Transcranial Doppler for Adults & Children

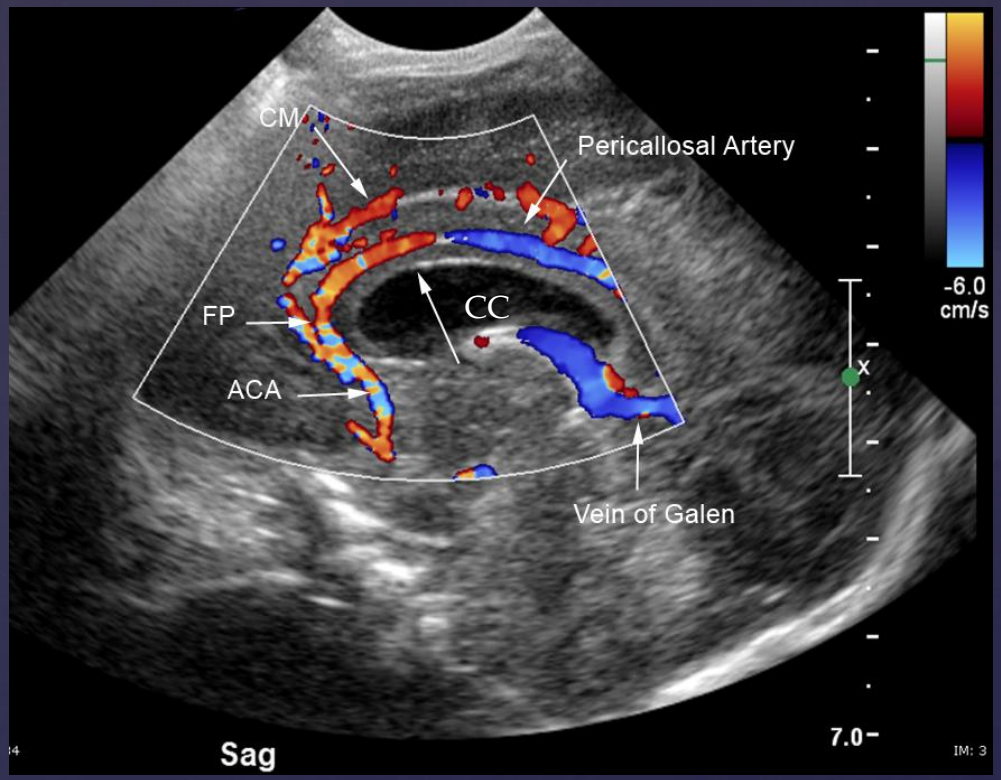




Coronal color Doppler flow images of the circle of Willis via the anterior fontanelle.



Midline sagittal duplex image through the anterior fontanelle with sampling gate evaluating flow velocities in the anterior cerebral artery (arrow).



Sagittal midline view through the anterior fontanelle demonstrating the pericallosal artery. CC: corpus callosum, ACA: anterior cerebral artery, FP: frontopolar artery, CM: callosomarginal artery.

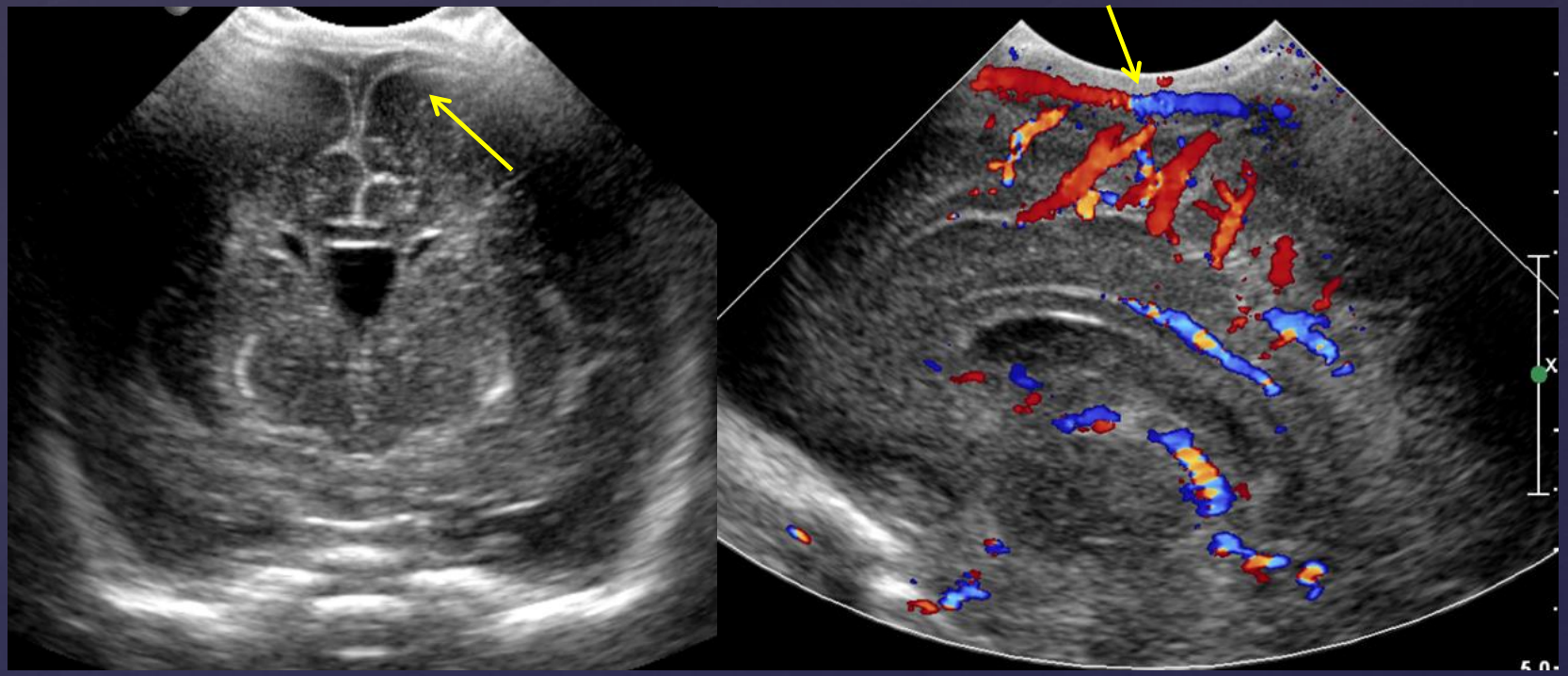
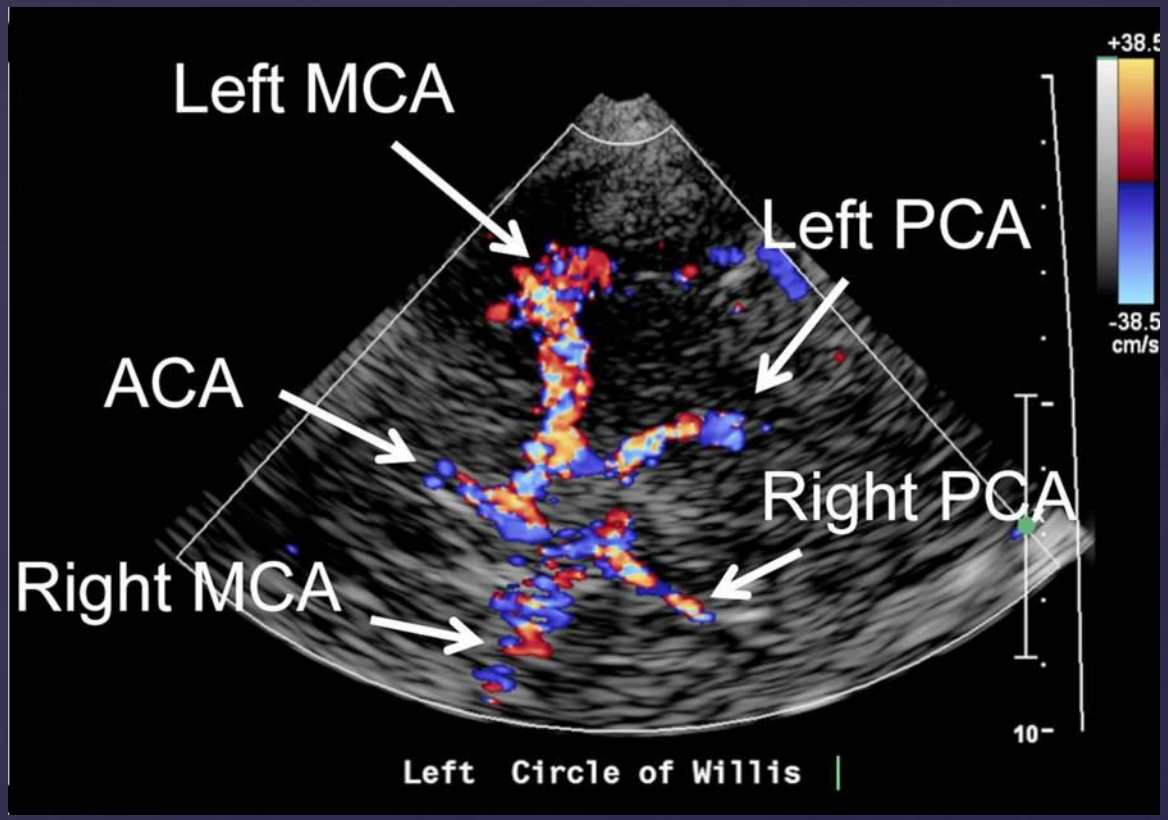
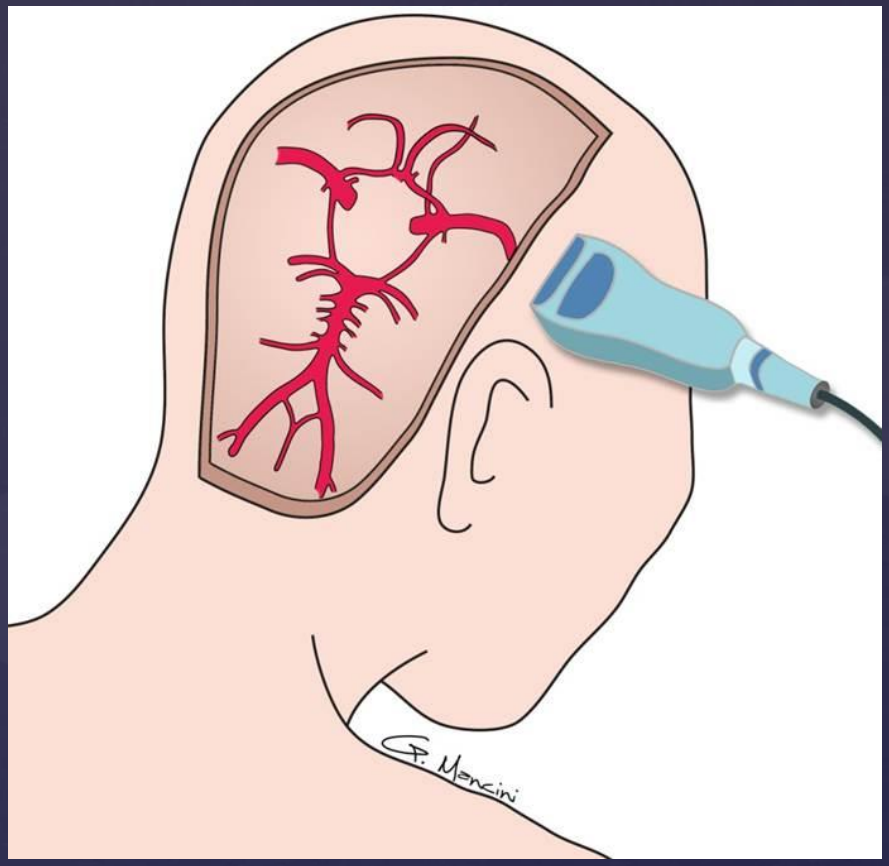


Fig. a Fig. b

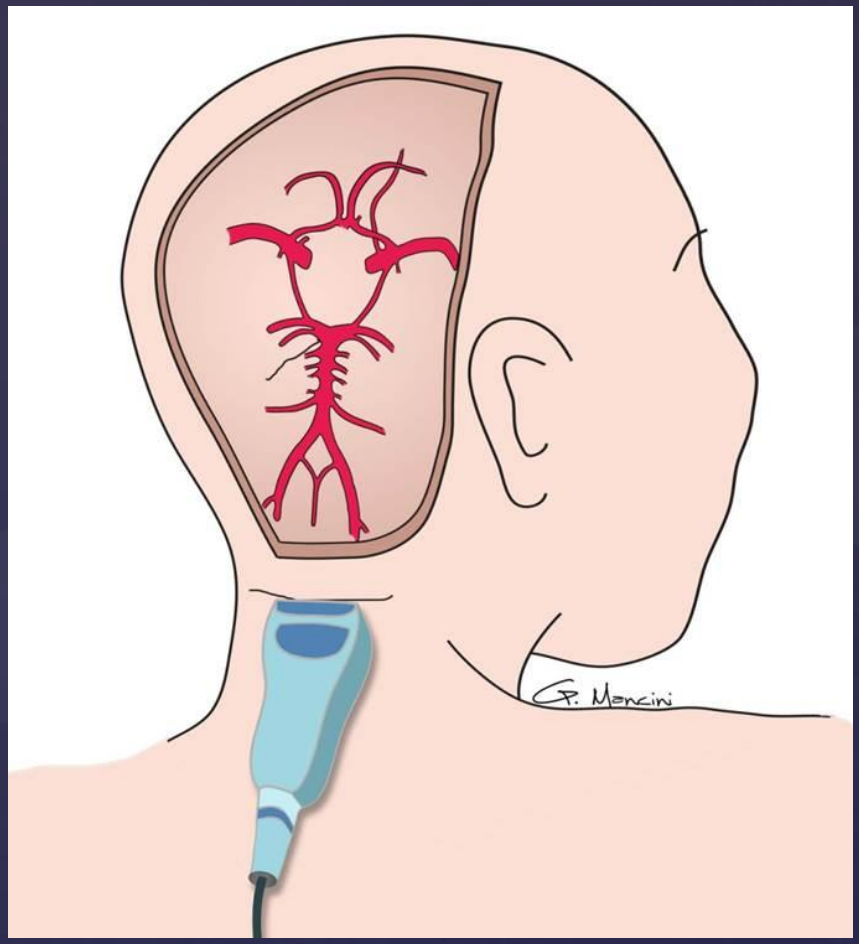
Gray scale coronal (a)and color Doppler sagittal (b) images obtained through the anterior fontanelle demonstrates the superior sagittal sinus (arrows).



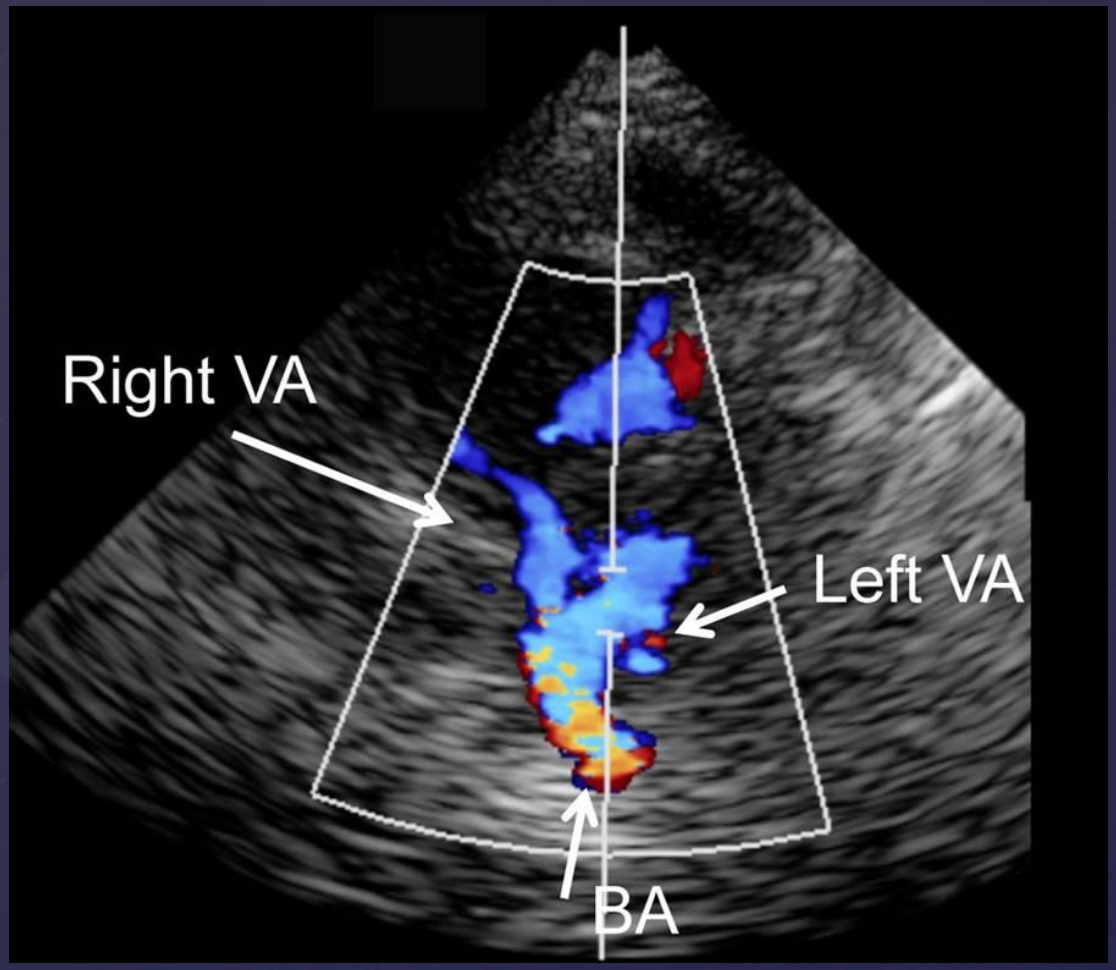
Color Doppler flow imaging demonstrating blood flow through the circle of Willis via a left transtemporal window. (MCA: middle cerebral arteries, ACA: anterior cerebral arteries, PCA: posterior cerebral arteries.)



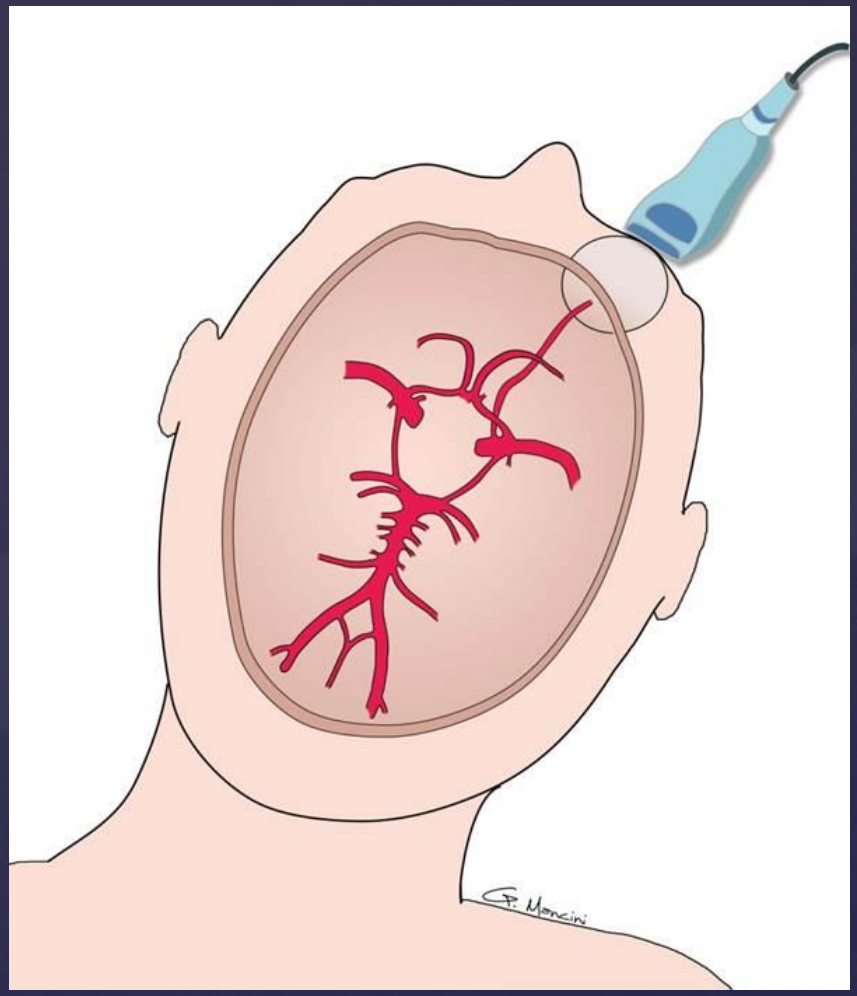
Transtemporal window: the transducer is placed over the thinnest portion of the temporal bone anterior to the external auditory canal and superior to the zygomatic arch.



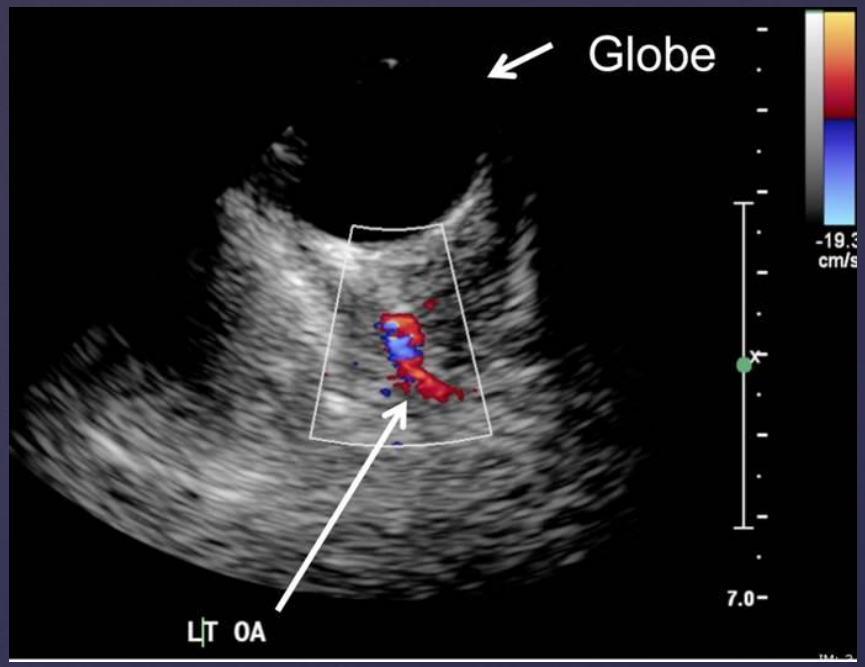
The foramen magnum can be utilized as an acoustic window (transforaminal) to evaluate the vertebral and basilar arteries. The transducer is placed in the midline below the occiput and angled cephalad.

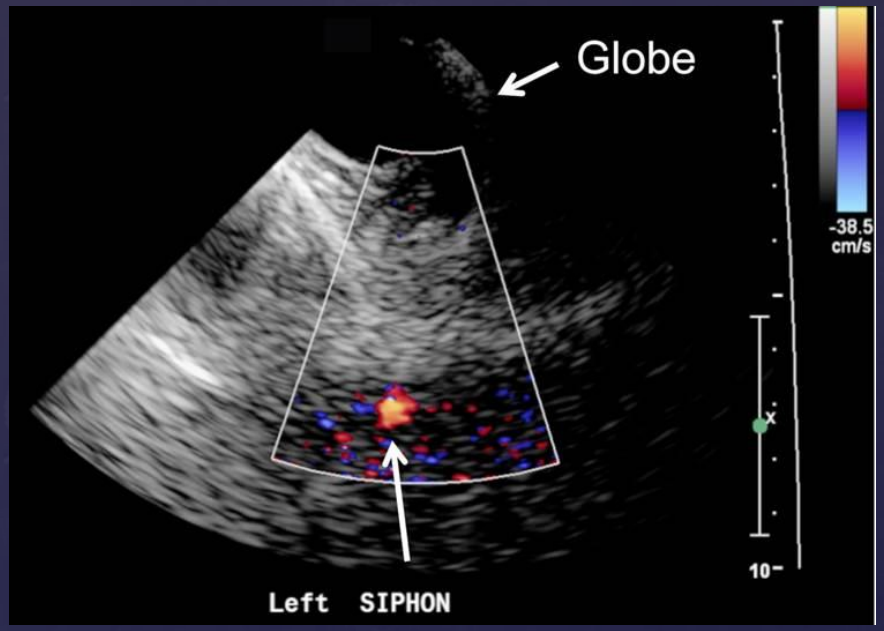


Color Doppler flow imaging via the transforaminal approach demonstrates the vertebral and basilar arteries (VA: vertebral artery, BA: basilar artery)



The transorbital approach can be utilized to visualize the ophthalmic artery and carotid siphon. The transducer is placed lightly over the closed eyelid.





Color Doppler flow imaging via the transorbital approach demonstrates the left ophthalmic artery (OA) and carotid siphon.