



Data Collection Worksheet

Please Note: The Data Collection Worksheet (DCW) is a tool to aid integration of a PhenX protocol into a study. The PhenX DCW is not designed to be a data collection instrument. Investigators will need to decide the best way to collect data for the PhenX protocol in their study. Variables captured in the DCW, along with variable names and unique PhenX variable identifiers, are included in the PhenX Data Dictionary (DD) files.

Imaging Transcranial Doppler Ultrasonography

Identifying Intracranial Landmarks and Major Cerebral Arteries

Krejza et al. (2000) provide standard parameters for the visualization of the anterior, middle, and posterior cerebral arteries through the temporal acoustic window in the thin temporal region of the skull.

Recording Imaging Transcranial Doppler Ultrasonography Results

Examiners should record the highest time-averaged mean blood-flow velocity using a 3-millimeter sample volume placed at the point of highest velocity as determined by color aliasing artifacts in the following arteries:

- middle cerebral artery,
- distal internal carotid artery,
- anterior and posterior cerebral arteries, and
- basilar artery.

Angle-corrected mean velocities can be obtained by automatic or manual tracing of the Doppler waveform. Uncorrected flow velocities are calculated for each artery as the product of angle-corrected velocities and the cosine of the recorded angle of insonation based on the Doppler equation.

Scoring of Uncorrected Flow Velocities

Normal: blood velocities less than 165 centimeters per second in all arteries.

Conditional: blood velocities greater than 165 centimeters per second but less than 200 centimeters per second in all arteries.

Abnormal: blood velocity of 200 centimeters per second or greater in either the internal carotid artery or the middle cerebral artery.