

A comparative imaging study of pediatric patients with hydrocephalus and pediatric patients with normal brain structure utilizing MRI Image Sequencing of Cerebrospinal Fluid (CSF) Dynamics

- The purpose of this study is to evaluate the flow, or pulsations, of CSF at the cerebral aqueduct. This study will allow us to better understand the net flow direction of CSF in the pediatric patient population, as well as any changes in the flow direction due to aging and/or surgical intervention (in patients with hydrocephalus).

Specific Aim 1: Compare the net flow direction of CSF in pediatric patients newly diagnosed with hydrocephalus (Group A) to pediatric patients identified with normal brain structure (Group B).

Specific Aim 2: Assess whether the aging of a child and/or surgical intervention alter the flow direction of CSF.