The pathophysiology of VIIP remains unsolved. Intraocular pressure (IOP) and intracranial pressure (ICP) measurements are critical for the long-term risk of Visual Impairment and Intracranial Pressure (VIIP) in astronauts. Without countermeasures, the long-term risk of VIIP is unknown. Astronauts have an important stake because VIIP, if untreated, could prevent them from flying. Astronauts will be the first and most direct recipients of any benefits of this research, which also has the potential to help patients with similar disorders on Earth. Invasive ICP monitoring is indicated when noninvasive methods do not answer an important and clinically relevant question that, if answered, could change treatment or prognosis. VIIP meets this criterion. Invasive ICP methods are more accurate and require a sample size (n=7) that is less than half that needed for noninvasive ICP methods (n=17) to confirm whether ICP is abnormal in VIIP. After noninvasive ICP methods are validated, invasive ICP methods should no longer be needed.