

Automatic MRI scan positioning for the Measurement of Global Cerebral Blood Flow

Cerebral blood flow is traditionally measured by PET, which is invasive and expensive. Phase-Contrast MRI (PC-MRI) is a noninvasive technique to measure blood flow. However, a major obstacle before wider applications of this method is that the slice positioning of the scan, ideally placed perpendicular to the feeding arteries, requires considerable expertise and can present a burden to the operator. We developed an automatic algorithm which is capable of producing precise and accurate scanning guidance compared to manual positioning and feasible to utilize in typical clinical populations.