

Dynamic susceptibility contrast-enhanced perfusion-weighted imaging

Dynamic susceptibility-weighted contrast-enhanced (DSC) [perfusion MR](#) (pMR) imaging provides hemodynamic information that complements traditional structural MR imaging and is becoming increasingly used in clinical practice to diagnose, manage, and understand brain tumors in the pediatric patient group. pMR imaging-derived regional cerebral blood volume (rCBV) maps provide quantitative estimates of rCBV that can grade gliomas, differentiate between different brain tumor types, and distinguish tumors from nonneoplastic lesions. There are a few minor limitations of the DSC pMR imaging technique, such as susceptibility artifacts, relative rather than absolute quantification of cerebral blood volume (CBV), and inaccurate estimation of CBV in situations of severe disruption or absence of the blood-brain barrier. Recognizing its strengths and potential pitfalls, pMR imaging can be used as part of the routine evaluation of brain tumors to improve diagnostic accuracy, understand tumor pathophysiology, detect and quantify tumor angiogenesis, and, with further work, serve as a judge to assess existing and novel cancer therapies that target blood vessels ¹⁾

¹⁾

Cha S. Dynamic susceptibility-weighted contrast-enhanced perfusion MR imaging in pediatric patients. *Neuroimaging Clin N Am*. 2006 Feb;16(1):137-47, ix. doi: 10.1016/j.nic.2005.11.006. PMID: 16543089.

From:
<https://neurosurgerywiki.com/wiki/> - **Neurosurgery Wiki**

Permanent link:
https://neurosurgerywiki.com/wiki/doku.php?id=dynamic_susceptibility_contrast-enhanced_perfusion-weighted_imaging

Last update: **2025/04/29 20:24**

