

Intracranial teratoma magnetic resonance imaging

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Primary [intracranial teratomas](#) are usually localized in the [pineal](#) and the [suprasellar regions](#), and often present an ovoid or lobulated [mass](#) with or without multilocularity on MRI. Marked [enhancement](#) of the solid portion or the thick wall of the tumor was the key feature for distinguishing [mature teratoma](#) and malignant teratoma ¹⁾

[MRI](#) has advantages in characterizing the shape, texture, outline, composition, and original position of the tumor, as well as its association with surrounding structures, particularly in enhanced scanning. MRI can identify the original position of the tumor and its invasiveness and subsequently guide surgery ²⁾.

T1

hyperintense components due to fat and proteinaceous/lipid-rich fluid

intermediate components of soft tissue

hypointense components due to calcification and blood products

T1 C+ (Gd)

solid soft tissue components show enhancement

T2

Again mixed signal from differing components.

Nevertheless, MR imaging does not allow differentiation of [germinomas](#) from other NGGCTs ³⁾ ⁴⁾.

¹⁾

Liu Z, Lv X, Wang W, An J, Duan F, Feng X, Chen X, Ouyang B, Li S, Singh S, Qiu S. Imaging characteristics of primary intracranial teratoma. Acta Radiol. 2014 Sep;55(7):874-81. doi: 10.1177/0284185113507824. Epub 2013 Oct 8. PMID: 24103916.

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<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3742749/>

³⁾

Liang L, Korogi Y, Sugahara T, et al. MRI of intracranial germ-cell tumours. Neuroradiology 2002;44(5):382-388.

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Douglas-Akinwande AC, Ying J, Momin Z, Mourad A, Hattab EM. Diffusion-weighted imaging characteristics of primary central nervous system germinoma with histopathologic correlation: a retrospective study. Acad Radiol 2009;16(11):1356-1365

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