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# Paediatric-type diffuse low-grade gliomas: A pictorial review

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## Abstract

The fifth edition of the World Health Organization (WHO) Classification of Tumours of the Central Nervous System (WHO CNS5) introduces a revised framework for classifying brain and spinal cord tumours, emphasizing the crucial role of molecular diagnostics in accurately identifying neoplasms. A key advancement in this edition is the clear distinction between paediatric-type diffuse low-grade gliomas (pDLGGs) and paediatric-type diffuse high-grade gliomas (pDHGGs) as separate tumour entities. Although histologically and morphologically similar, paediatric diffuse gliomas differ significantly from their adult counterparts in terms of molecular genetics, prognosis, and treatment approaches. The pDLGG category comprises four tumour types: diffuse astrocytoma with MYB- or MYBL1-alterations, angiocentric glioma, polymorphous low-grade neuroepithelial tumour of the young (PLNTY), and diffuse low-grade glioma with MAPK pathway alterations-three of which have been newly recognized. As imaging plays a critical role in the initial diagnosis, surgical planning, and post-treatment monitoring, it is essential for radiologists to be familiar with the imaging hallmarks that distinguish pDLGGs from other paediatric brain tumours, including high-grade gliomas and non-glial neoplasms. This pictorial review aims to provide an updated, image-rich overview of paediatric diffuse low-grade gliomas, emphasizing their typical and atypical imaging findings in MRI, offering valuable diagnostic insights for clinical practitioners and Radiologist.

**Keywords:** angiocentric glioma; diffuse astrocytoma, MYB- or MYBL1-altered; diffuse low-grade glioma, MAPK pathway-altered; low-grade epilepsy associated tumours (LEAT); paediatric-type diffuse low-grade glioma; polymorphous low-grade neuroepithelial tumour of the young (PLNTY).

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