

Adjuvant Therapy For Lower-Grade Gliomas

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Lower-grade gliomas encompass WHO grade II and III diffuse gliomas. Recent integrated genomic analyses characterized lower-grade gliomas by using the two genetic markers, mutation of isocitrate dehydrogenase (*IDH*) and co-deletion of chromosomes 1p and 19q, into three groups as following: Oligodendroglioma with *IDH* mutation and co-deletion of 1p/19q; Astrocytoma with *IDH* mutation; and *IDH* wild-type astrocytoma. These two markers have been incorporated into the updated WHO classification of CNS tumors in 2016. Adjuvant therapy for lower-grade gliomas following surgery has also changed during the past 5-10 years. Chemotherapies such as procarbazine, CCNU and vincristine (PCV) and temozolomide have been demonstrated in phase III clinical trials to improve survival in patients with lower-grade gliomas and set up as new standard of care treatments for these tumors. Several novel approaches such as immunotherapy and targeted therapy are under preclinical and clinical development for lower-grade gliomas.