

# Risk signature predicts prognosis, drug resistance in patients with glioma

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## Video Byte

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# Abstract

Gliomas are the most common brain tumors. They're also the most aggressive, able to resist various forms of chemotherapy. Part of that ability comes from cancer stem cells, rare cells with the capacity to form new tumors. Researchers recently set out to understand how these cells are linked to drug resistance and prognosis among patients with glioma. Using data from gene atlases, they developed a so-called risk signature. This signature was designed to identify genetic factors tied to an increased risk of resistance to the popular chemotherapy drug temozolomide. Tests showed that the risk signature could well predict the prognosis of patients with drug-resistant gliomas, with a high risk score indicating shorter survival and malignant traits. The risk signature also provides new ways to classify gliomas, which could help clinicians deliver targeted treatment sooner. With further refinement, the signature could serve as a stand-alone biomarker for the personalized treatment of patients with glioma.