

Immune checkpoint blockade improves antitumor vaccine response in mouse glioblastoma model

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Glioblastoma has an extremely poor prognosis, and there is a critical need for new therapies to treat the disease. Immunotherapy helps the immune system destroy cancer cells, and recent clinical evaluation of an immune cell-based vaccine has shown some benefits in early stage trials. Unfortunately, the response to this vaccine varies greatly amongst patients.

In this issue of *JCI Insight*, Robert Prins of UCLA and colleagues tested whether they could improve the efficacy of an antitumor vaccine in a murine glioblastoma model by simultaneously administering therapeutic antibodies that turn off so-called immune checkpoint molecules, known as PD-1 and PD-L1, which attenuate immune responses.

Using mice with established tumors, the research team showed that immune checkpoint blockade in combination with an antitumor [vaccine](#) improved survival and promoted infiltration of [immune cells](#) into the tumors.

These results of this study suggest that PD-1 and PD-L1 may help tumors become resistant to antitumor vaccines. Moreover, this study supports testing of such therapeutic combinations in clinical trials.

More information: Joseph P. Antonios et al, PD-1 blockade enhances the vaccination-induced immune response in glioma, *JCI Insight* (2016).

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