

## Journal Article



## The History, Evolution, and Clinical use of Dendritic Cell-Based Immunization Strategies in the Therapy of Brain Tumors

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**Abstract** Despite advancements in therapeutic regimens, the prognosis remains poor for patients with malignant gliomas. Specificity has been an elusive goal for current modalities, but immunotherapy has emerged as a potential means of designing more tumor-specific treatments. Dendritic cells (DC) are the specialized antigen presenting cells of the immune system and have served now as a platform for therapeutic immunizations against such cancers as lymphoma, multiple myeloma, melanoma, prostate cancer, renal cell carcinoma, non-small cell lung carcinoma, colon cancer, and even malignant gliomas. DC-based immunizations offer a number of advantages over traditional immunotherapeutic approaches to brain tumors, approaches that have proved promising despite concerns over central nervous system immune privilege and glioma-mediated immunosuppression. The future success of clinical trials will depend on the optimization and standardizing of procedures for DC generation, loading, and administration.

dendritic cell - immunization - brain tumor - glioma - clinical trial