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# The paradoxical effect of bevacizumab in the therapy of malignant gliomas.

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### Abstract

One rationale behind the use of agents that inhibit vascular endothelial growth factor in the therapy of primary CNS malignancies is based upon the concept that normalization of tumor vasculature with a decrease in tumor interstitial pressure will improve access of cytoreductive drugs and improve radiotherapy efficacy due to increased oxygen delivery. However, several studies have raised the concern that these agents may both rapidly restore the low permeability characteristics of the blood-brain barrier and counteract the beneficial effect of pseudoprogression. The result may be decreased therapeutic efficacy while increasing infiltration by co-opting normal vessels. In this discussion, we examine both histologic and radiographic tumor progression in the context of antiangiogenic agents. Issues dealing with the safety of bevacizumab (Avastin®, Genentech, South San Francisco, CA) and its potential to decrease efficacy of standard radiochemotherapy when used to treat patients with newly diagnosed malignant glioma are emphasized.

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