Bevacizumab does not increase the risk of remote relapse in malignant glioma.

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Abstract
Preclinical evidence and uncontrolled clinical studies suggest an increased risk for distant spread and development of a gliomatosis-like phenotype at recurrence or progression of malignant glioma patients treated with bevacizumab (BEV), an antibody to vascular endothelial growth factor (VEGF). Here we asked whether BEV treatment of recurrent malignant glioma increases the risk of distant or diffuse tumor spread at further recurrence. BEV-treated patients were compared with matched pairs of patients treated without anti-VEGF regimens. T1 contrast-enhanced (T1+c) and fluid-attenuated inversion recovery (FLAIR) images were analyzed using a novel automated tool of image analysis. At the start of the study, 20.5% of BEV-treated and 22.7% of non-BEV-treated patients had displayed distant or diffuse recurrence. Distant or diffuse recurrences were observed in 22% (BEV) and 18% (non-BEV) on T1+c and in 25% and 18% on FLAIR (p > 0.05). The correlation between changes on T1+c and FLAIR at progression was high. The risk of distant or diffuse recurrence at the time of failure of BEV-containing treatments was not higher than with anti-VEGF-free regimens, arguing against a specific property of BEV that promotes distant tumor growth or a gliomatosis-like phenotype at recurrence. Ann Neurol 2010;69:586-592.

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