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## **Interaction of Brain Cancer Stem Cells and Tumour Microenvironment: A Computational Study**

Glioblastoma Multiforme (GBM) is one of the most common and aggressive primary brain tumors, with a median patient survival time of 6-12 months in adults. It has been recently suggested that a typically small subpopulation of brain tumour cells, in possession of certain defining properties of stem cells, is responsible for initiating and maintaining the tumour. More recent experiments have studied the interactions between this subpopulation of brain cancer cells and tumour microenvironmental factors such as hypoxia, in addition to their contribution to angiogenesis and vasculogenesis. We propose a computational model that includes a heterogeneous population of cancer cells and investigate the dynamics of tumour growth as well as the effects of the tumour microenvironment. The model is compared with available experimental data.

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