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Glioblastoma and dementia may share a common cause.

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The cause of most glioblastomas is unknown. One cause might lie in the surrounding brain tissue. The interactions between glioblastoma cells and their micro- and macro-environment could create a context that promotes or suppresses tumor growth and protects or exposes the malignant cells to immune attack. Alzheimer's disease has been identified as a protein misfolding disorder (proteopathy), caused by accumulation of abnormally folded A-beta and tau proteins in the brain. These or other changed proteins or as yet unrecognized biochemical brain changes of dementia might promote glioblastoma development. Published data indicate that there is an association between Alzheimer's disease prevalence and malignant brain tumor incidence in 19 US states. Hypothetically, Alzheimer's and glioblastoma may share an as yet unknown peripheral tissue pathway that can promote the progression of both diseases. If this pathway can be identified, new treatments for both conditions may follow.

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