

Lay Summary

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Evaluation of the prognostic power of protein markers of invading glioblastoma cells

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Glioblastoma is the most frequent brain cancer in adults. The tumour is characterized by a poor prognosis and a lack of effective treatment options. In the affected patient, a glioblastoma expands gradually through the brain tissue, disrupting vital functions. One of the central goals of glioblastoma research, is to understand how the tumour growth occurs, and if it can be prevented by drugs. In this project, our goal is to evaluate a new set of protein biomarkers of invading glioblastoma cells. Specifically, our laboratory has identified a set of proteins that are specifically associated to different types of invasive growth. In one type, the tumour cells invade along small blood vessels. In another type, the tumour cells invade directly through the brain tissue. Our hypothesis is that the presence or absence of each invading cell type can be used to improve the accuracy of patient prognosis. To test the hypothesis, we will use antibody-based methods to evaluate our protein markers in samples obtained from over 30 glioblastoma cases. The study will help us understand how tumour invasion affects patient outcome. This, in turn, may ultimately lead to improved prognostics and therapy for glioblastoma patients.