

Lay Summary

BRAIN UK Ref: 23/023

Understanding microenvironmental determinants of glioblastoma invasion.

Mr Ciaran Hill, University College London

Glioblastoma is a highly aggressive type of brain cancer, and current treatments are not very effective, leading to short survival times for patients. There's a critical need to develop better ways to manage the disease and prevent it from coming back.

When cancer cells invade the healthy brain, they interact with the surrounding environment. This interaction can trigger responses in normal brain cells, like inflammation, damage to nerve cells, and the arrival of immune cells. We do not fully understand how these responses affect the growth and spread of the tumor. But if we can figure it out, we might be able to use drugs to change these responses and slow down the cancer's progress, which could be a new way to treat the disease.

In this study, researchers will examine brain tissue samples from patients with a specific type of brain tumor called Astrocytoma. They will look at different areas within the tumor, including those with fewer tumor cells and areas where the tumor has become more aggressive. Using special stains and imaging techniques, they will study the relationship between the tumor, the surrounding brain, and the responses to injury to learn more about how the tumor behaves and how we might target it in the future.