Lay Summary

BRAIN UK Ref: 23/006

Ascertaining the role of SSTR2 in skull base tumours and brain cancer and potential utility as a diagnostic and/or prognostic biomarker and therapeutic target

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There is a group of cancers, including those of the nose, gut, lung, and prostate, which show particular features that define the way they behave ('neuroendocrine features') and set them apart from other cancer types. However, our understanding of why and how they arise is extremely limited. This is important as advances for the treatment of these have been lacking, leaving patients with limited treatment options. We and other researchers have identified one feature, somatostatin receptors (SSTRs), that have been found to be expressed in several tumour tissues, which can be detected microscopically and have been shown to be helpful in the development of targeted therapies. These new therapies target the cancer cells and leave the surrounding normal tissue relatively unscathed, which is a significant problem with certain methods, including chemotherapy. This study aims to utilise the tissue and corresponding data at Brain UK to evaluate SSTR2 expression and that of other tumours in the brain, particularly focusing on pituitary adenomas and high grade glioblastomas, as well as looking at meningiomas and low grade gliomas and other tumours, and to determine SSTR2 expression and its potential to be used as a targeted therapy in brain cancer.