Neuro Research Suite

CASE STUDY

Co-development of Digital RANO Tumor Segmentation Tool and Execution of the Brain Matrix Consortium Study with the University of Edinburgh

THE UNIVERSITY of EDINBURGH

Overview

The Brain-Matrix consortium is running a series of clinical trials on glioma. The University of Edinburgh leads imaging aspects of the study, and developed a digital Response Assessment in Neuro-Oncology (RANO) tool in partnership with QMENTA.

The Challenge

Efficiently manage a 4-year study over 10 sites, reaching a total of approximately 1500 patients with 30 to 40 patients per year from each site.

Co-develop and deploy a new digital RANO brain tumor segmentation tool longitudinally to provide volumes of tumor sub-regions for therapeutic response assessment and comparison with standard RANO provision.

Results

Study data collated, classified, analyzed and stored on the QMENTA platform, including the development of an industry-first digital RANO tool.

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> **"The great appeal of working with QMENTA was a collaboration which would bring together their expertise in image analysis and cloud-based platforms and infrastructure with our own interests and expertise in quantitative imaging analysis"**
>
> –Professor Adam Waldman, Chair of Neuroradiology, University of Edinburgh

The AI-powered **QMENTA** platform delivering data management and quantitative analysis using a cloud-based workflow and digital RANO to evaluate 1500 patients for the progression of glioma brain tumors.

- **Images are directly uploaded to the QMENTA cloud platform** where they are de-identified, automatically recognized and classified. Data are standardized and integrated to make be highly usable and meaningful for use in traditional and advanced AI analysis.
- **Processing** and **storage** of 1500 patient study data.
- **Quantitative analysis with digital RANO Brain-Tumor Segmentation Tool** developed by QMENTA and Edinburgh neuroscientists.
- **Download of subjects results** in CSV format for statistical analysis.

Results

- Faster, higher quality, digital RANO criteria analysis
- Multi-modal data aggregation and integration
- Highest data protection and compliance