# **QMENTA** Trials

## **CASE STUDY**

Creating a Fast and Easy Way to Measure Gadolinium Retention In the Brain Via a Bayer-Sponsored Safety Study





### **Overview**

Gadolinium-based contrast agents (GBCAs) have significantly transformed MRI, delivering critical clinical data that often surpasses the scope of other imaging modalities. However, the precision of data-driven decisions can be affected if the measured signals fluctuate over time or differ among sources, a problem often encountered when integrating diverse data types. The goal was not only to utilize Al biomarkers that enhance the standard, but also to improve the method of collecting and managing information across multiple global sites and collaborators.

## **The Solutions**

The QMENTA Imaging Hub served as the foundational infrastructure, enabling universities to exchange real-world data on rare clinical instances, thereby enhancing insights. This case study proved how our platform can efficiently standardize data on rare events from various sources in the cloud, eliminating the need for strict consistency among data sharing institutions and minimizing the risk of human error.

In a collaborative effort with Bayer and Cedars-Sinai, QMENTA developed a robust tool capable of quantifying the deposition of any contrast agent in the brain. This innovative solution not only accelerates research in gadolinium use, but also addresses safety concerns raised by regulatory bodies like the FDA and EMA. It provides a swift and user-friendly approach to enhance the safety and efficacy of MRI procedures.

## **Longitudinal Analysis**









#### Results



#### FAST

90% time savings (QMENTA supported reads = 10h vs manual reads = 100h)



#### **COST-EFFECTIVE**

76% cost reduction (\$3.6k vs \$15k for manual reading)



#### **MULTIPLE USER BENEFITS**

Complex imaging workflow simplified enabling focus on quantitative results; accuracy and speed significantly improved



- Bayer Sponsored Safety Study
- Bayer MR Safety
- Tool validated by Bayer
- Exact matched results in 94% of the cases
  Already in use by US hospitals and German Cancer Research centers

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Background Reference: Jinnan W. et al. Automated signal intensity quantification software – initial "real world" clinical validation.