



# Early detection of GBM progression using multi-modal MRI of the invasive margin

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# Objective

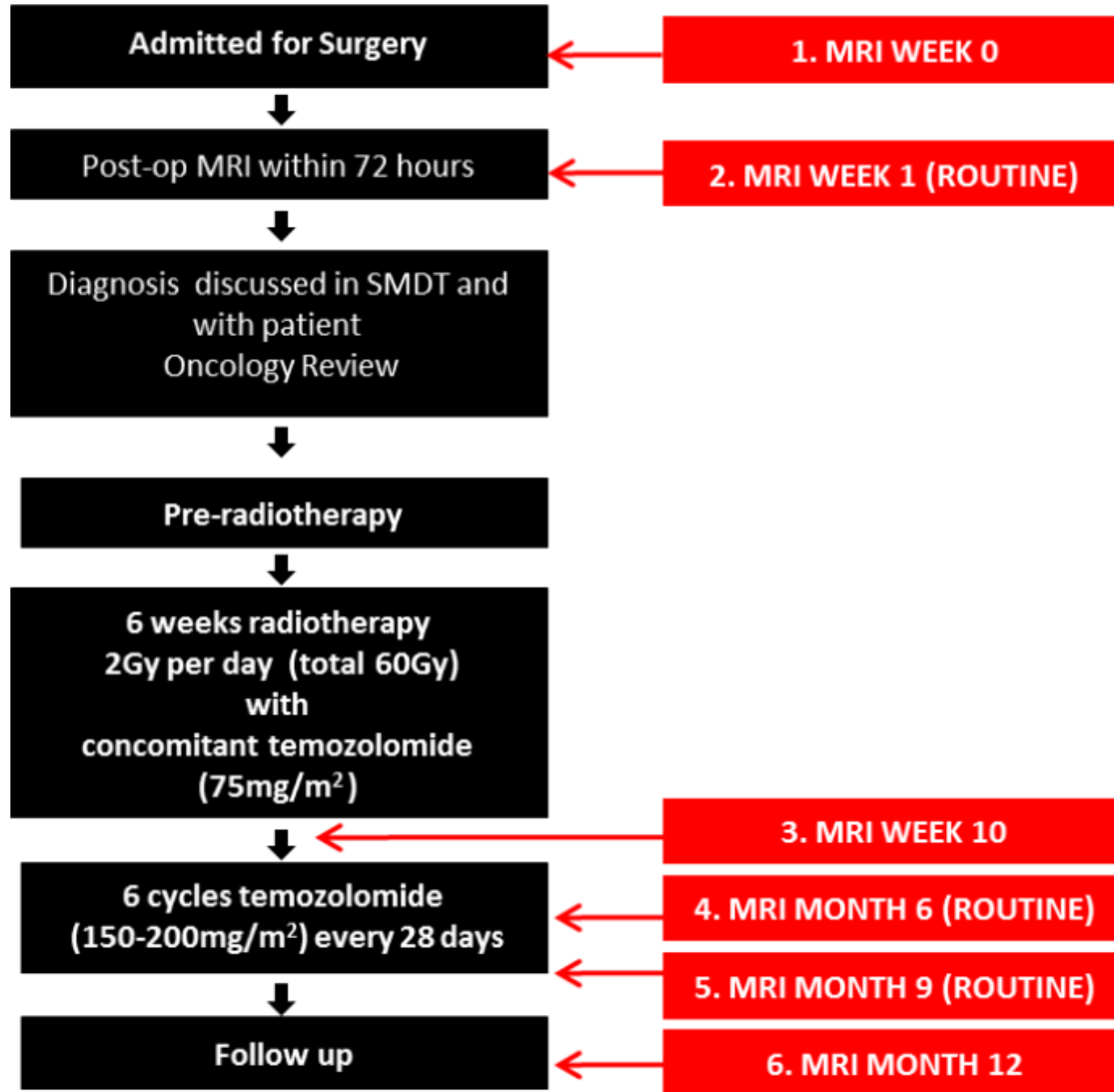
- Study cohort of **glioblastoma** patients
- Adjuvant **chemoradiotherapy**

## Can we:

- observe tumour invasion (DTI) and changes in blood flow (perfusion MRI (DSC))?
- use DTI/perfusion MRI to detect changes **before** progression occurs?



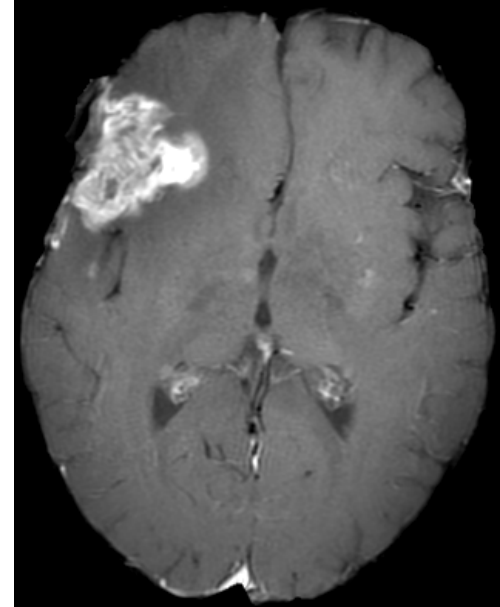
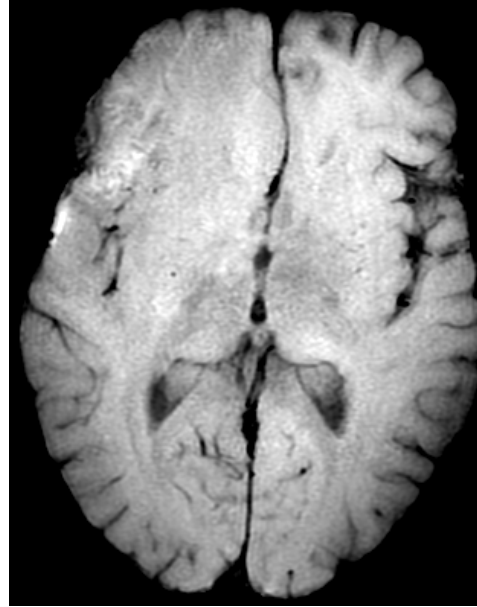
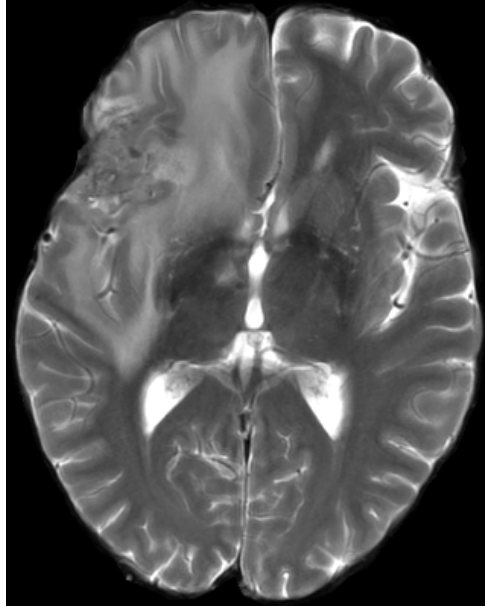
# Project structure



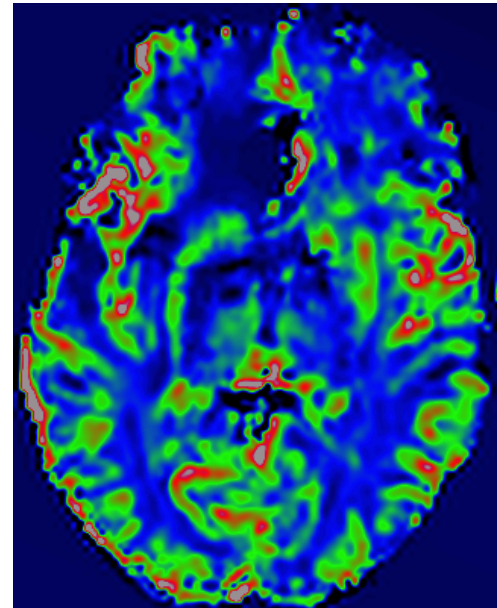
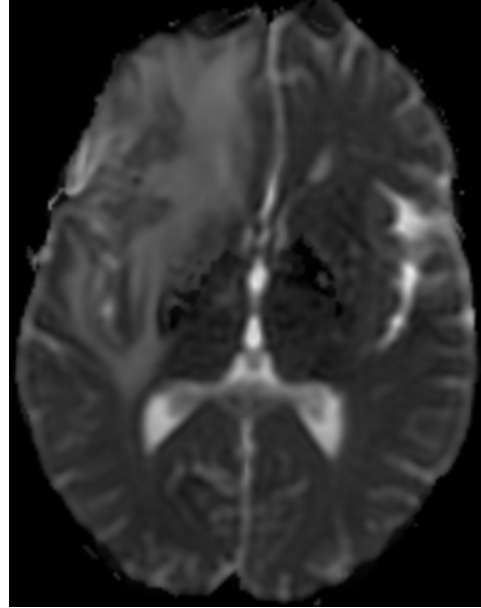
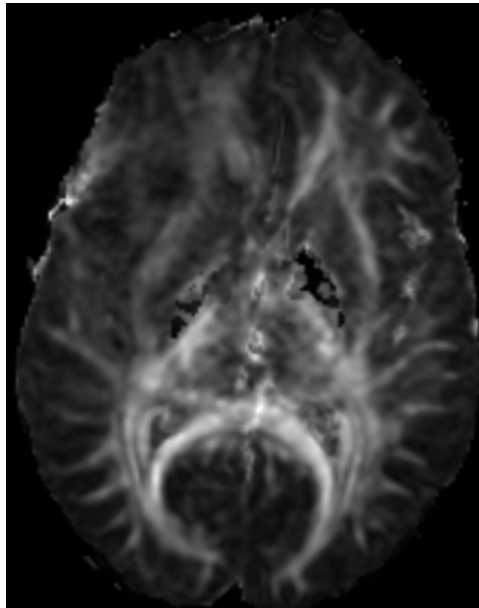
# MRI Methods



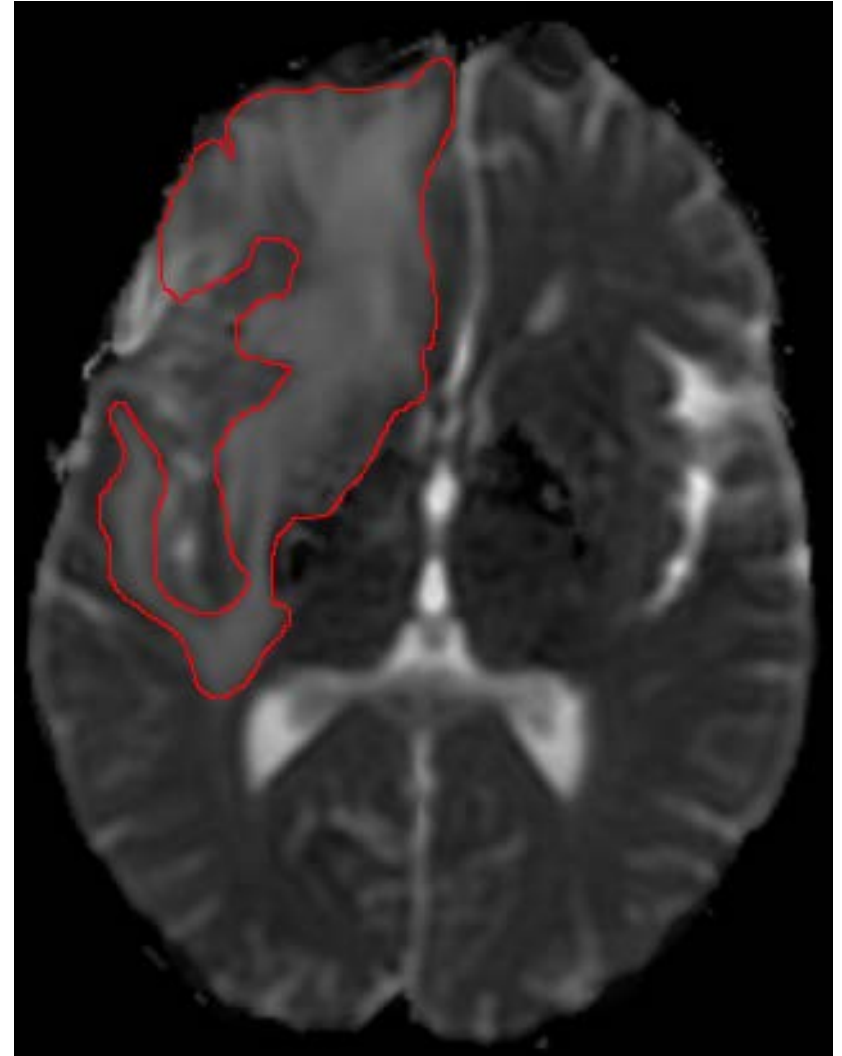
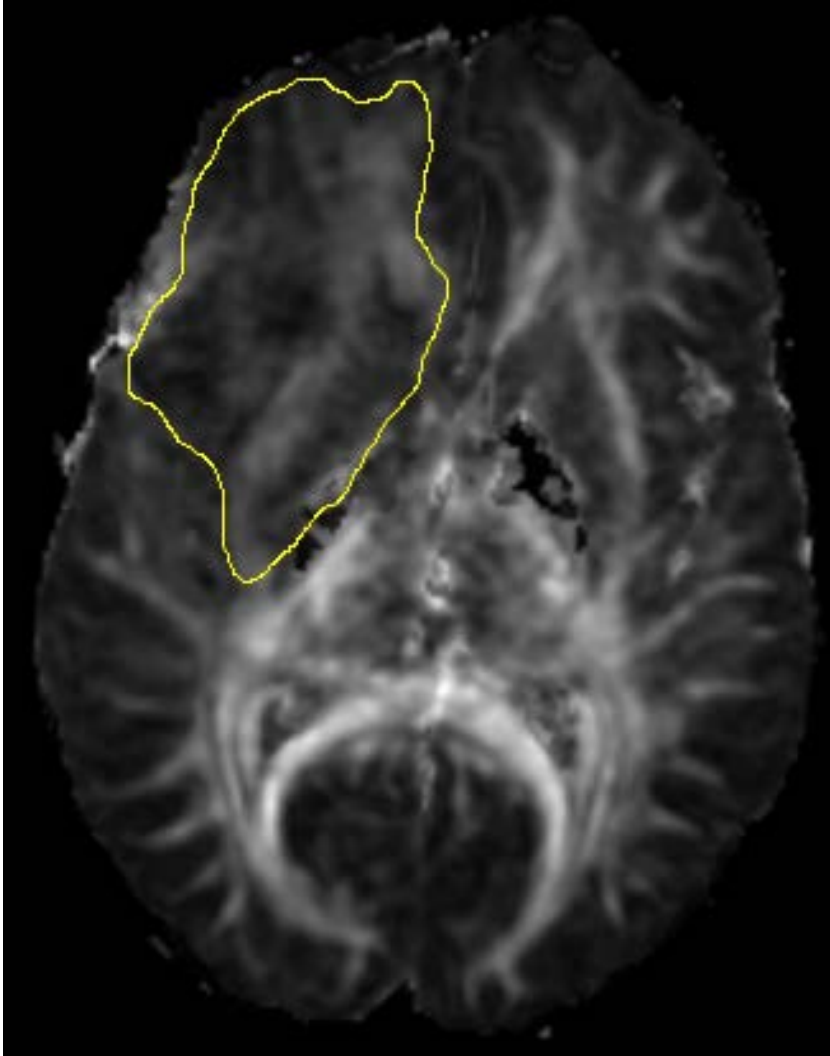
Clinical



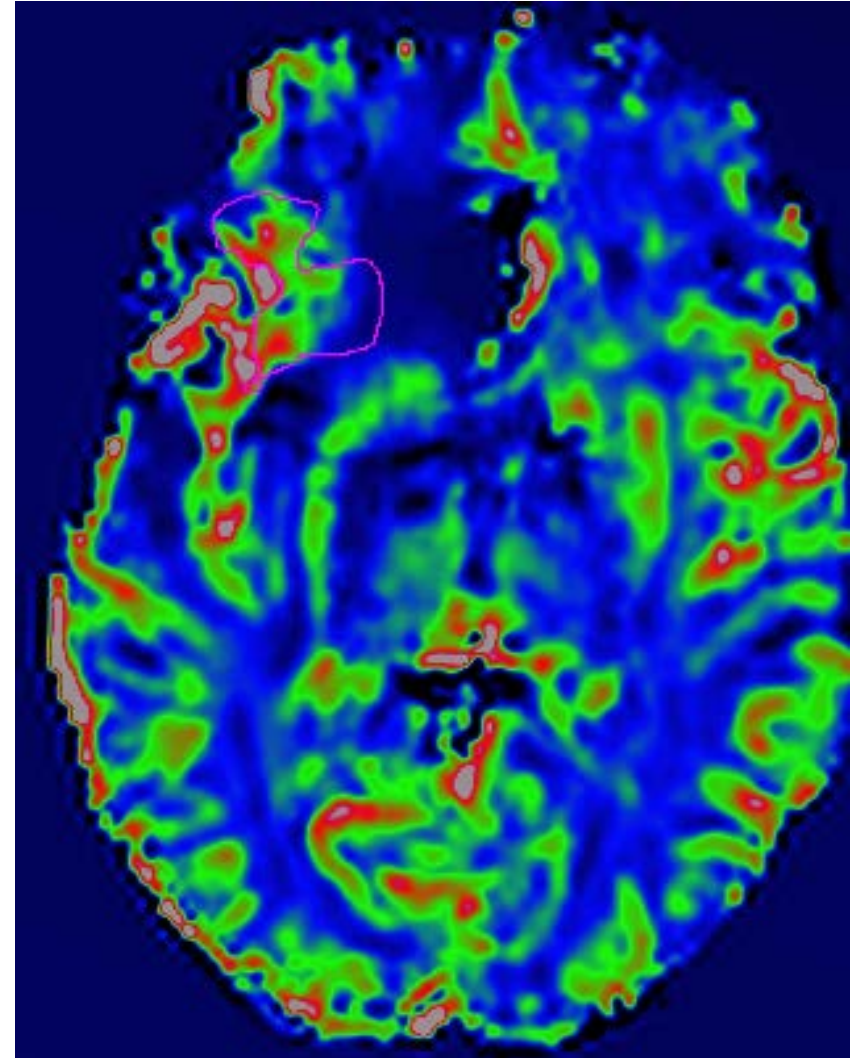
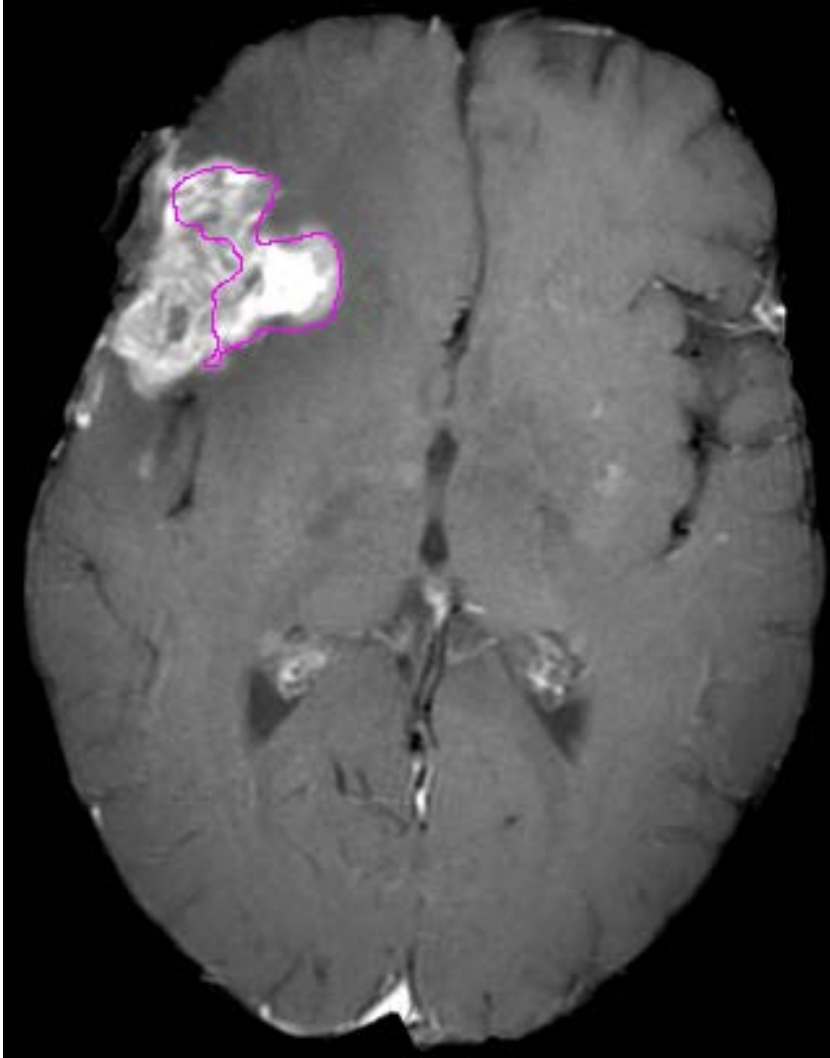
Advanced  
DTI  
Perfusion



# Imaging analysis : ROI

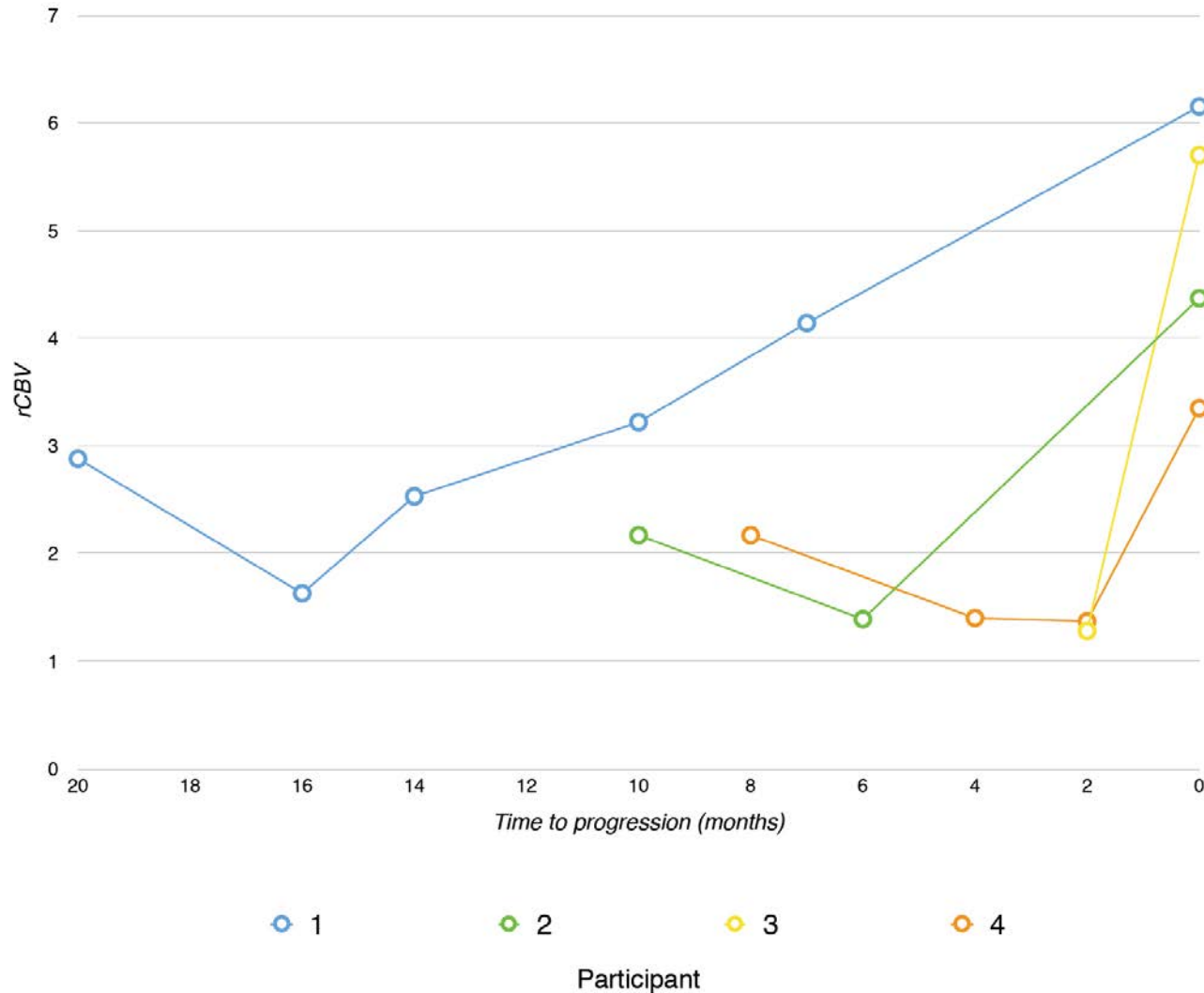


# Imaging analysis : ROI





# Relative cerebral blood volume (rCBV) in area of future contrast enhancement





# Conclusion

## **DTI/Perfusion MRI for monitoring GBM:**

- Potential role
- Identify changes earlier before clinical sequences
- Allow for modification of therapy
- Requires further evaluation in a larger cohort