

Comparison of constant infusion to bolus FDG delivery to evaluate inflammation of the infarcted myocardium

Ben Wilk

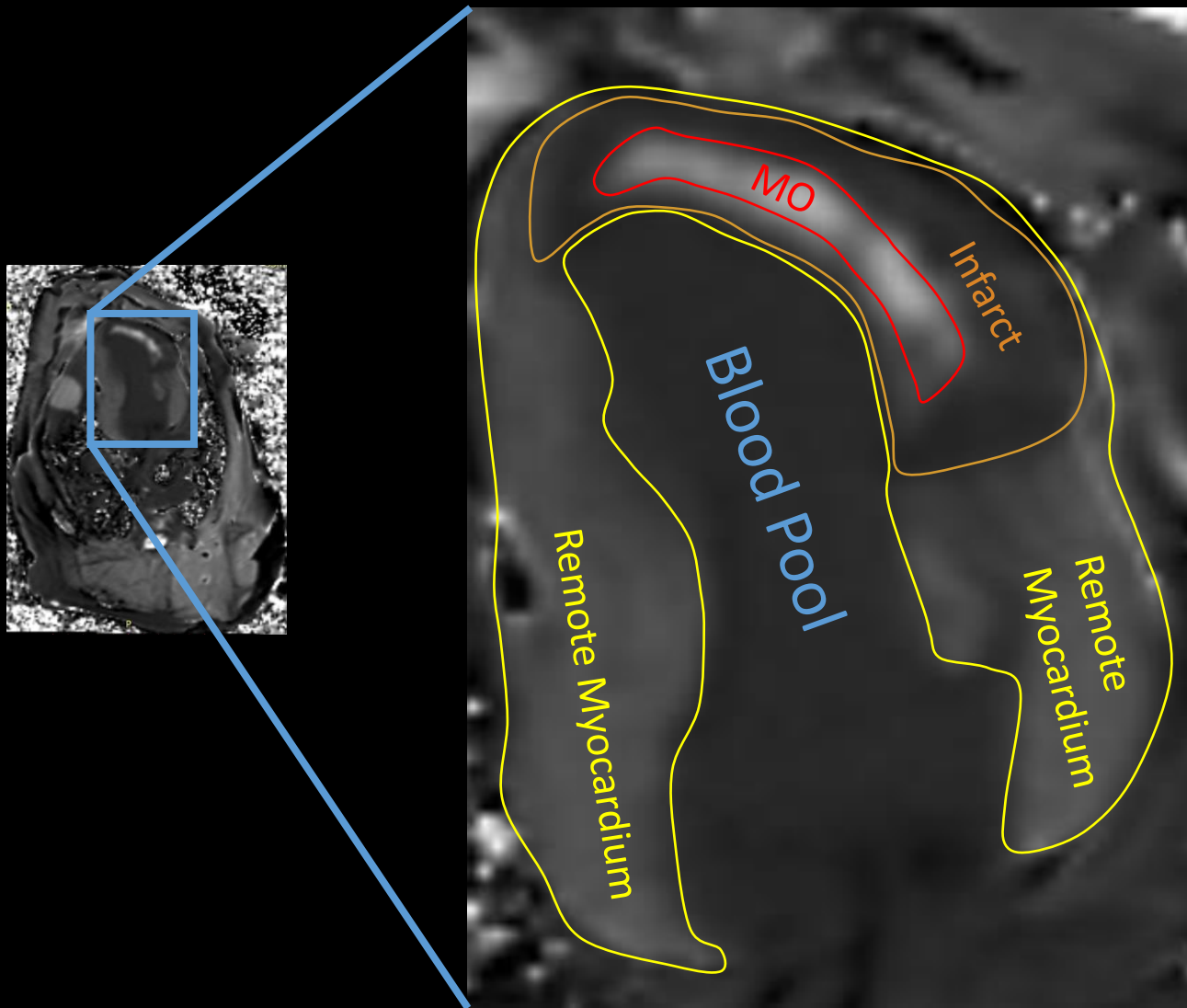
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Regions of interest

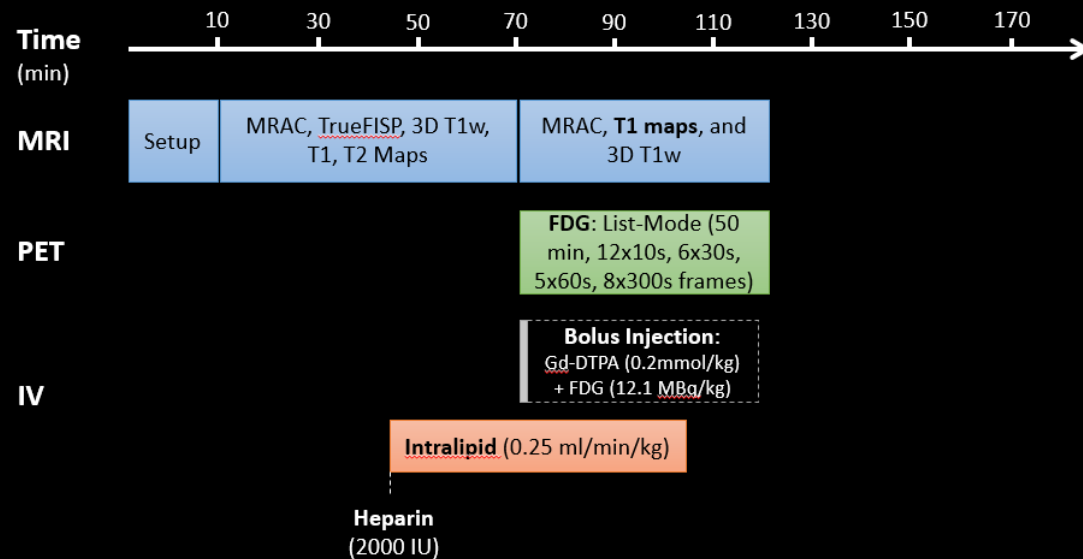


Goals

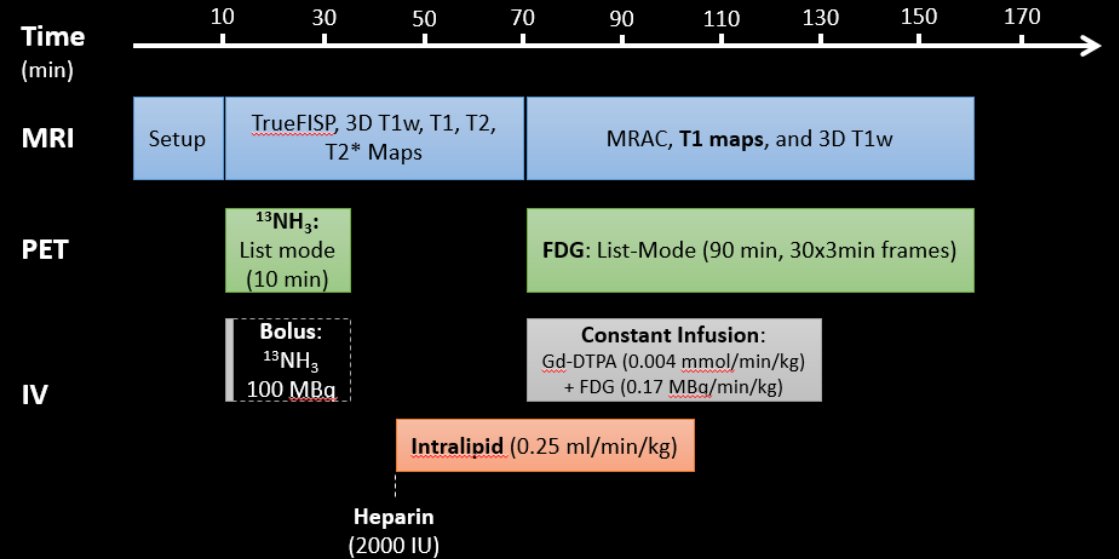
- Study the inflammatory process in the myocardium, even in the microvascular obstruction, after a “Heart Attack”.
- Compare limits of evaluating inflammation in MO and infarct with bolus injections and constant infusions

Protocol

Bolus Injection



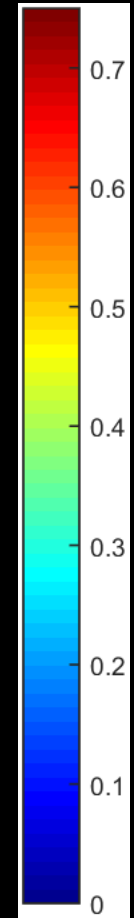
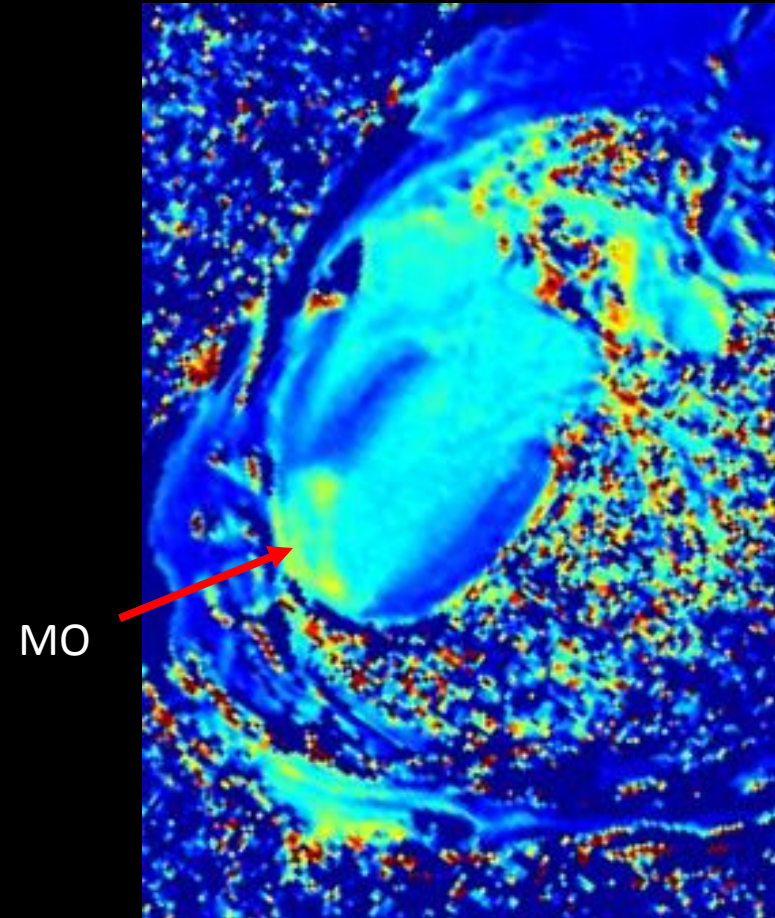
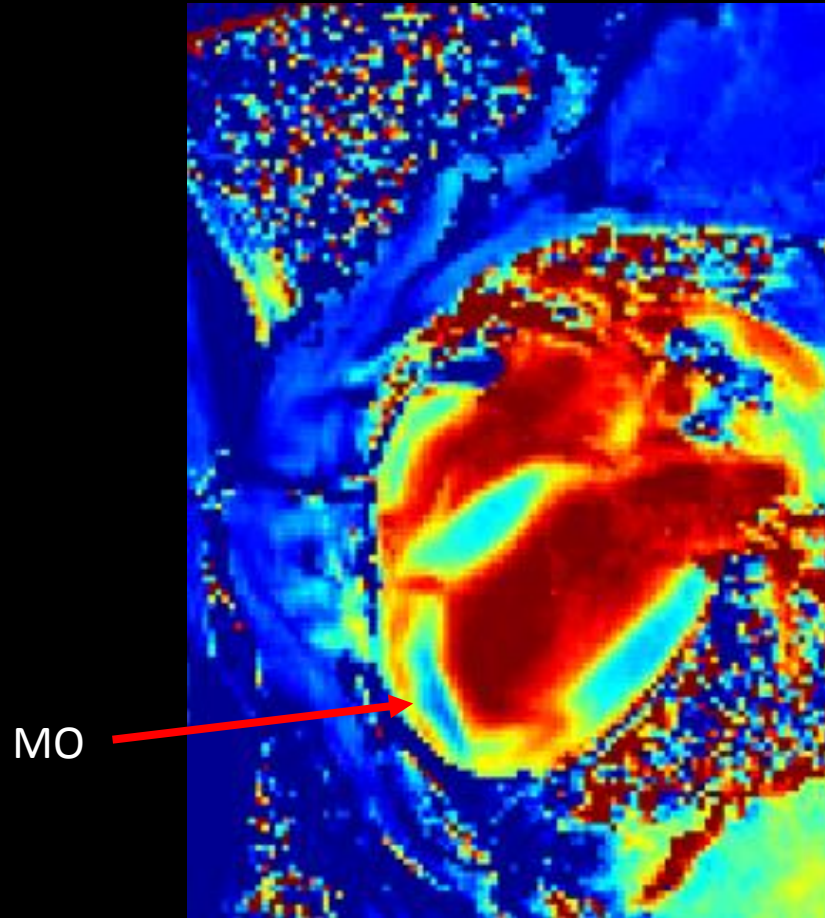
Constant Infusion



Gadolinium Concentration Maps

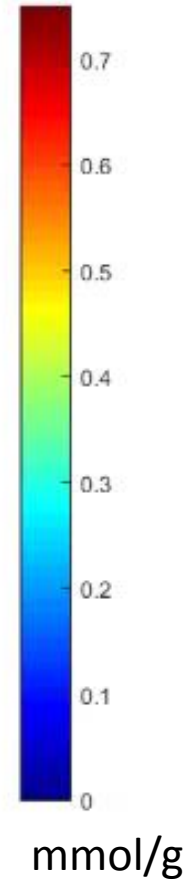
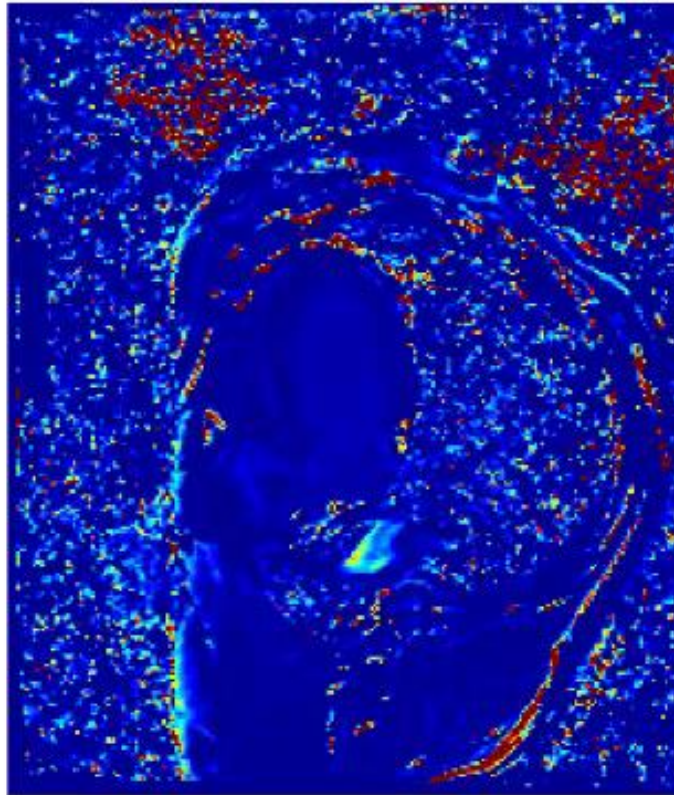
Bolus Injection

Constant Infusion



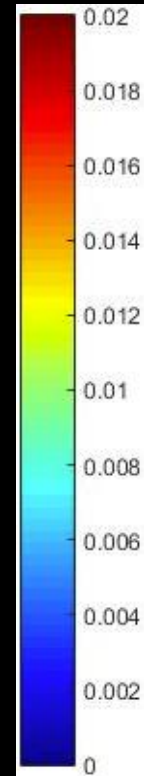
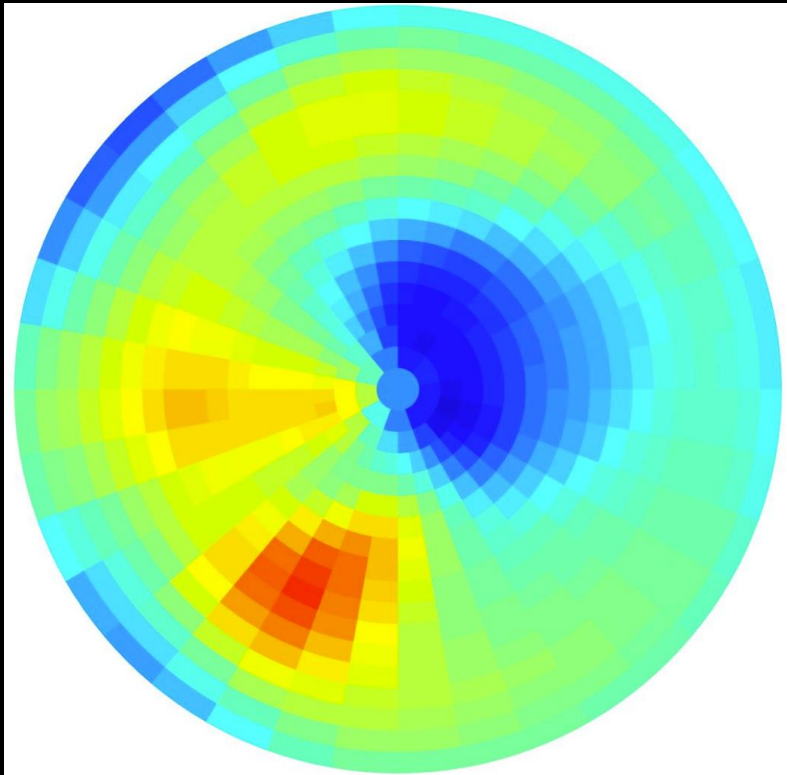
mmol/g

Gadolinium during the constant infusion



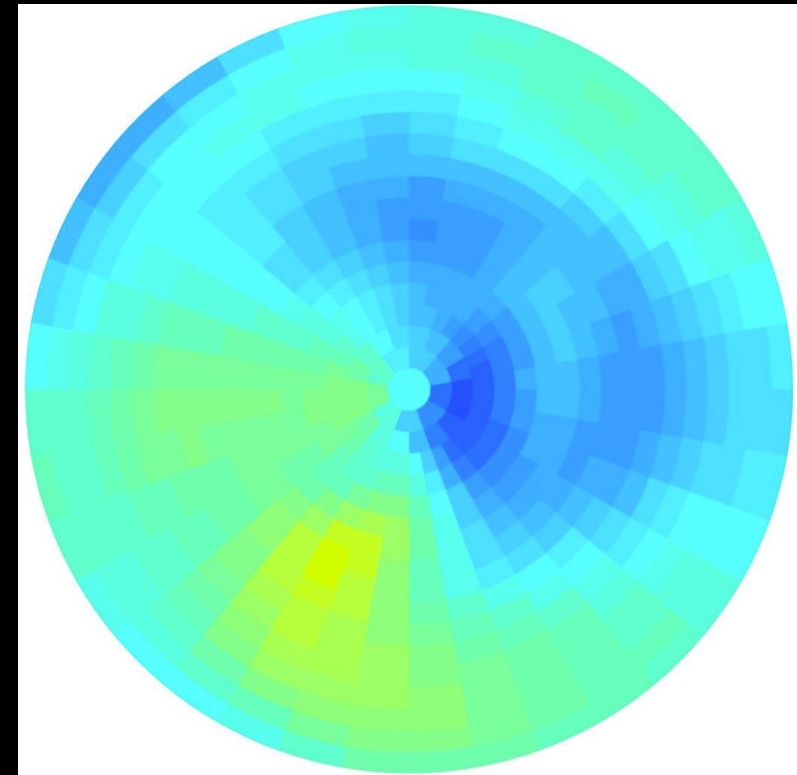
Bolus Injection vs Constant Infusion: Same Animal

Day 40 Bolus



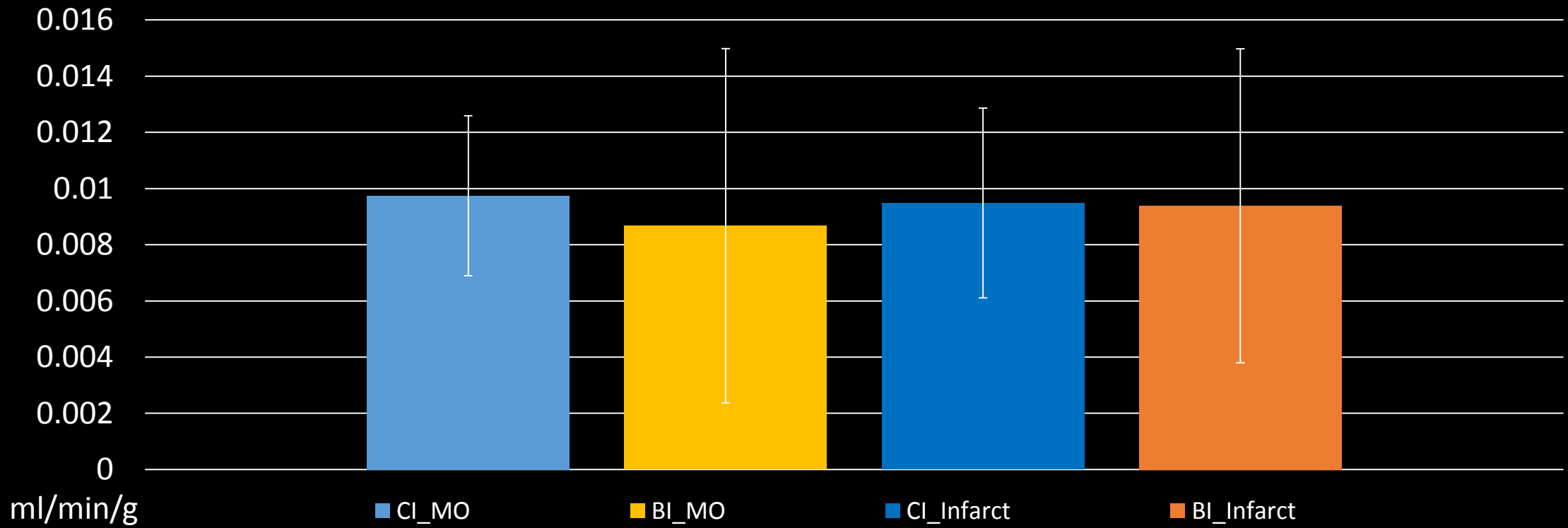
ml/min/g

Day 46 Constant Infusion



Getting an Indication of Glucose Metabolism

Ki in Constant Infusion vs Bolus Injection



Limitations and Future Plans

- Evaluate suppression of FDG in MO, infarcted and remote tissues.
- Statistical Analysis of the entire dataset.

- Only one frame of LGE MRI during Bolus at 20 minutes after injection.
- MRI data only every 10 minutes in Constant Infusion.

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