

CAF/19/01 – 21st Century Imaging for large vessel vasculitis

Large vessel vasculitis (LVV) causes blood vessel inflammation leading to pain, fatigue and catastrophic complications such as stroke. Treatments used, such as steroids, can have significant side-effects. Current methods of determining disease activity, such as blood tests, are limited. As a consequence, doctors find it difficult to determine when to start and stop treatment, often leading to over- or under-treatment. A new test to inform the dose and duration of treatment for individual patients is urgently needed. I will recruit patients with a new diagnosis or a flare-up of LVV from all over Scotland in order to assess the ability of two new types of scan – PET/MR and OCT – to determine disease activity. In addition, I will investigate the link between LVV and heart disease. Participants will undergo scanning at time of diagnosis/flare-up and again after 6 months. I predict that PET/MR and OCT are not only safe and reproducible but will effectively monitor disease activity in patients with LVV. This study has the potential to improve the quality of life of people living with LVV by reducing burdensome steroid treatment whilst ensuring that disease flares are dealt with quickly.