

TCS/24/05 - Proving the Utility of Field Cycling Imaging in Small Vessel Disease - a focus on Brain Health (PUFFINS-BH)

Magnetic Resonance Imaging (MRI) is the gold standard to diagnose poor brain health due to small vessel disease, however current MRI systems are expensive and complex to operate and so access is limited. Low-field MRI technology, operating at magnetic field strengths many times lower than conventional MRI, can make brain imaging much more cost-effective and accessible. The benefits of low-field MRI are now being realised, where small portable scanners can now image patients at their bedside. However, because low-field MRI is a new technology further work is needed to extract its full potential. At the University of Aberdeen, we have the unique ability to test multiple magnetic field strengths using field-cycling MRI, a special type of low field MRI scanner pioneered here in Aberdeen. The aim of this study is to determine what magnetic field is best for measuring the markers of brain health linked to small vessel disease.