TCS/17/08 – What is the best brain imaging strategy for patients with suspected minor stroke or transient ischaemic attack (TIA)

People frequently present to hospital, GPs or stroke clinics with symptoms of minor stroke or transient ischaemic attack (TIA). About half of these people are eventually diagnosed with stroke or TIA, and they are at high risk of a subsequent major stroke. However, those people with symptoms who are not diagnosed with stroke or TIA are also at risk of a major stroke in the future. More detailed brain imaging — with magnetic resonance (MR) scanning — could identify those at the highest risk, who merit treatment to prevent stroke. However, MR scans are expensive, in great demand for other conditions, and it is uncertain whether they increase the number of correctly diagnoses compared to current methods. In patients with suspected stroke or TIA, we will test whether MR brain scanning is better that CT for the diagnosis of TIA/stroke, and for the identification of those at highest risk of future stroke. This could lead to faster emergency department diagnosis and better targeting of treatment to prevent stroke.