

My main research topic is imaging and treatment of neurovascular disease. The first research programme focusses on imaging of atherosclerotic disease. Topics are 1) validation of US, CT and MRI by comparison with histologic sections, 2) quantification of imaging parameters with semi-automated image analysis tools, 3) serial studies evaluating the progression of atherosclerotic disease and the effect of intervention (pathophysiology), and 4) assessment of the predictive value of plaque imaging parameters for (re)current stroke (ParisK study, Rotterdam study). The second research programme focusses on treatment of acute ischemic stroke. We have proven, in the MR CLEAN Study, that intra-arterial treatment of large intracranial vessel occlusion has a beneficial effect on functional outcome as compared to best medical treatment. Current topics are: 1) evaluation of improvements of EVT by peri-procedural medication, 2) understanding pathophysiology of disease by thrombus evaluation and serial imaging and monitoring during and after EVT, 3) automated extraction of imaging biomarkers relevant for diagnosis and prediction of outcome.