Standards for Reporting Vascular changes on Neuroimaging (STRIVE)

In a united approach, specialists in imaging of brain vascular disease have established neuroimaging standards for research into cerebral small vessel disease and its effects on ageing, neurodegeneration and stroke. The results are published in the August issue of *The Lancet Neurology*. The USA Alzheimer’s Association issued the following statement:

“The Alzheimer’s Association endorses the value of standards such as these for scientific studies of vascular contributions to dementia. The Association recognizes this is an important area of research and encourages future research to validate and modify these standards.”

Cerebral small vessel disease (SVD) is a common accompaniment of ageing, it increases the risk of stroke three-fold and of dementia two-fold. SVD has multiple appearances on neuroimaging including recent small subcortical infarcts, lacunes, white matter hyperintensities, perivascular spaces, microbleeds and brain atrophy. SVD frequently co-exists with neurodegenerative disease and may exacerbate cognitive and physical deficits and other symptoms. SVD is easily seen on imaging but the terminology and definitions used to describe imaging features of SVD vary widely as do protocols for image acquisition and analysis. This lack of consistency hampers progress in determining the causes of SVD and the contribution that it makes to the pathophysiology and clinical expression of common neurodegenerative diseases.

Against this background, an international working group the Centres of Excellence in Neurodegeneration of 36 experts from 10 countries on 4 continents completed a structured process to develop definitions and imaging standards for SVD. The results apply to research and can be used to improve neuroimaging interpretation in the clinical setting. Full details including multiple examples are given in *The Lancet Neurology*.

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