

## PRESS RELEASE

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### **Standards for reporting vascular changes on neuroimaging 2 (STRIVE-2)<sup>1</sup>**

***Neuroimaging standards for research into small vessel disease – Advances since 2013.***

Cerebral small vessel disease (SVD) accounts for approximately 25% of all acute strokes, more than doubles the risk of future stroke, and contributes to up to 45% of dementia cases. Its associations with mobility, neurobehavioural and mood disorders are increasingly recognised. However, the underlying disease mechanisms remain unclear, and no disease-specific treatments are available.

To promote more consistent and higher quality research in the field of SVD, the STAndards for Reportilng Vascular changes on nEuroimaging (STRIVE-1) clarified definitions of SVD features on neuroimaging, including recent small subcortical infarcts, lacunes of presumed vascular origin, white matter hyperintensities of presumed vascular origin, perivascular spaces, cerebral microbleeds, and brain atrophy.<sup>2</sup>

Since 2013, the findings and recommendations from STRIVE-1 have been widely used in clinical and research settings to standardise image acquisition, reporting and interpretation. There have also been significant advances in the field on the established SVD markers and novel imaging features. Led by Professor Joanna Wardlaw (University of Edinburgh), Professor Marco Duering (University Hospital Munich and Medical Image Analysis Center Basel), Professor Eric Smith (University of Calgary) and Professor Martin Dichgans (University Hospital Munich), 54 international experts convened to update the 2013 guideline and develop STRIVE-2.

STRIVE-2 has a unique focus on neuroimaging features and research use. It not only includes updates on imaging features defined in STRIVE-1, but also covers emerging imaging features such as cortical cerebral microinfarcts and incidental diffusion-weighted imaging positive lesions. The STRIVE-2 group also provided detailed guidance and recommendations on key quantitative imaging markers of brain structure and function, as well as standards for imaging and analysing SVD.

“We hope that the use of these standards in studies of SVD will help to capture the impact of SVD on the brain, enable the use of imaging in clinical trials and ultimately translate into future routine clinical practice” said Professor Marco Duering.

**ENDS**

View a summary presentation by the Principal Investigator [here](#)



View the full text in The Lancet Neurology [here](#)

**References:**

1. Dering M, *et al.* Presented at the European Stroke Organisation Conference; 25 May 2023; Munich, Germany.
2. Wardlaw JM, *et al.* STandards for ReportIng Vascular changes on nEuroimaging (STRIVE v1). Neuroimaging standards for research into small vessel disease and its contribution to ageing and neurodegeneration. *Lancet Neurol.* 2013 Aug;12(8):822-38.