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New Zealand designs metric for blood circulation in brain to better understand dementia

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The new metric is based on 4D flow MRI technology



Researchers from the Auckland Bioengineering Institute, New Zelanad have developed a new metric from measured blood circulation in our brain. The new metric opens up new research avenues for brain conditions, including Alzheimer's disease and other forms of dementia.

The study highlights the potential to enhance clinical assessments and research on brain health. By integrating this new metric into routine diagnostic procedures, healthcare providers can offer more precise and personalised care plans for individuals at risk of or suffering from cognitive impairments.

To make the most of the new metric's implications for patient care, the researchers have made their tools publicly available, integrating them into pre-existing open-source software. This enables scientists and clinicians worldwide to adopt the advanced methodology, fostering further research and collaboration in the field of neurology.

The research team is planning further studies to explore the applications of this technique in larger and more diverse populations, beginning with the 'Digital Twin Dementia Study' starting later this month.

Results from the initial study of the metric also identified important sex differences in vascular dynamics which has initiated a new study focusing on sex-related dynamics, anticipated to begin in November this year.