

Study using structural MRI may help accurately diagnose dementia patients

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A new Mayo Clinic study may help physicians differentially diagnose three common neurodegenerative disorders in the future. The study will be presented at the Alzheimer's Association International Conference on Alzheimer's Disease on July 11 in Vienna.

In this study, Mayo Clinic researchers developed a framework for MRI-based differential diagnosis of three common neurodegenerative disorders: Alzheimer's disease, frontotemporal lobar degeneration, and Lewy body disease using Structural MRI. Currently, examination of the brain at [autopsy](#) is the only way to confirm with certainty that a patient had a specific form of dementia.

The framework, which is called "STructural Abnormality iNDex" or STAND-Map, shows promise in accurately diagnosing dementia patients while they are alive. The rationale is that if each [neurodegenerative disorder](#) can be associated with a unique pattern of [atrophy](#) specific on MRI, then it may be possible to differentially diagnose new patients. The study looked at 90 patients from the Mayo Clinic database who were confirmed to have only a single dementia pathology and also underwent an MRI at the time of clinical diagnosis of dementia. Using the STAND-Map framework, researchers predicted an accurate pathological diagnosis 75 to 80 percent of the time.

"The STAND-Map framework might have great potential in early diagnosis of dementia patients," says Prashanthi Vemuri, Ph.D., a senior research fellow at the Mayo Clinic aging and dementia imaging research

lab and lead author of the study. "The next step would be to test the framework on a larger population to see if we can replicate these results and improve the accuracy level we achieved in this proof of concept study. In turn, this may lead to better treatment options for [dementia patients](#)."

Source: Mayo Clinic ([news](#) : [web](#))

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