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Japan to develop first blood biomarker-based diagnostic workflow for dementia

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For building an ecosystem that improves the early detection of Alzheimer's disease



Shimadzu Corporation, Eisai Co., Oita University, and Usuki City Medical Association have announced the commencement of a cohort study using Usuki City as a demonstration site.

This joint study will attempt to develop Japan's first diagnostic workflow for mild cognitive impairment (MCI) and Alzheimer's disease (AD) that uses blood biomarkers. In accordance with "Guidelines for Proper Use of Cerebrospinal Fluid and Blood Biomarkers in Dementia", this study aims to demonstrate the utility of blood biomarkers and improve the early diagnosis of Alzheimer's disease within a coordinated system of medical care that encompasses primary care physicians and specialists who are members of dementia-related medical societies.

In cases of Alzheimer's disease, which is said to account for more than 60% of dementia cases, amyloid beta (Abeta, a protein thought to cause AD) starts aggregating in the brain around 20 years before AD onset. Positron emission tomography (amyloid PET) and cerebrospinal fluid (CSF) testing are used to estimate the degree of A? accumulation in the brain, but only a limited number of facilities are capable of performing these investigations and the high cost of testing and physical stress involved due to the invasiveness of these investigations also pose a challenge. The increased use of blood biomarkers is expected to reduce the burden on patients.

Usuki City Medical Association will recruit applicants (50 years and older) who wish to participate in the study. Shimadzu will be responsible for analysing and evaluating blood biomarker data obtained using Shimadzu's Amyloid MS CL system for measuring amyloid peptides in blood (Amyloid MS CL). At the Department of Neurology, Faculty of Medicine, Oita University, detailed cognitive function tests will be performed, a self-assessed measurement of brain health will be performed using the "NouKNOW" tool developed by Eisai, A? accumulation will be checked by amyloid PET, and the utility of blood biomarkers will be verified.