

【Overview presentation】

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Age dependency of blood-based biomarkers for AD measured by fully automated and highly specific immunoassays in general Japanese men: SESSA

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Overview presentation	<p>Objectives</p> <p>Blood-based biomarkers for Alzheimer's disease (AD) are a promising tool to assist AD diagnosis in clinical setting. However, those biomarkers levels can be affected by various factors, with age being one of the most critical. Therefore, it is necessary to clarify the age-related changes of biomarker levels in the general population. We previously evaluated the age-related differences of plasma β-amyloid1-40 ($A\beta$40), $A\beta$42, and $A\beta$42/$A\beta$40 levels in a cohort of general Japanese men, and found plasma $A\beta$ levels were higher in higher age groups, while the $A\beta$42/$A\beta$40 ratio showed an inverse relationship. In this study, we evaluated the levels of plasma p-tau181, tau, and neurofilament light chain (NfL) levels in the same cohort to better understand the age dependency of the blood biomarkers.</p> <p>Methods</p> <p>We assessed plasma samples from 845 population-based Japanese men aged between 46-83 years from the Shiga Epidemiological Study of Subclinical Atherosclerosis II. The plasma p-tau181, tau, and NfL, were measured by</p>

	<p>Automated Immunoassay system HISCLTM-5000 using prototype assays. Participants were divided into five age groups, at 10-year intervals, and the relationship of each biomarker with age was evaluated using the Kruskal-Wallis test.</p> <p>Results</p> <p>The mean±SD values (in pg/mL) were 1.44±1.08, 22.87±10.03, and 52.39±80.00 for p-tau181, tau, and NfL, respectively. The mean values of p-tau181, tau, and NfL were significantly and positively related to age (p <0.001).</p> <p>Conclusion</p> <p>This study highlighted the age-related differences in plasma p-tau181, tau, and NfL in general Japanese men, which were similar to those in previously studied Aβ42 and Aβ40. Because AD-related blood biomarkers vary widely in their dependence on age, age-specific reference value may need to be considered for biomarkers whose levels greatly depend on age.</p>
Session	On-Demand Oral, VIRTUAL ORAL: THEME A (VO046 / #2860)