

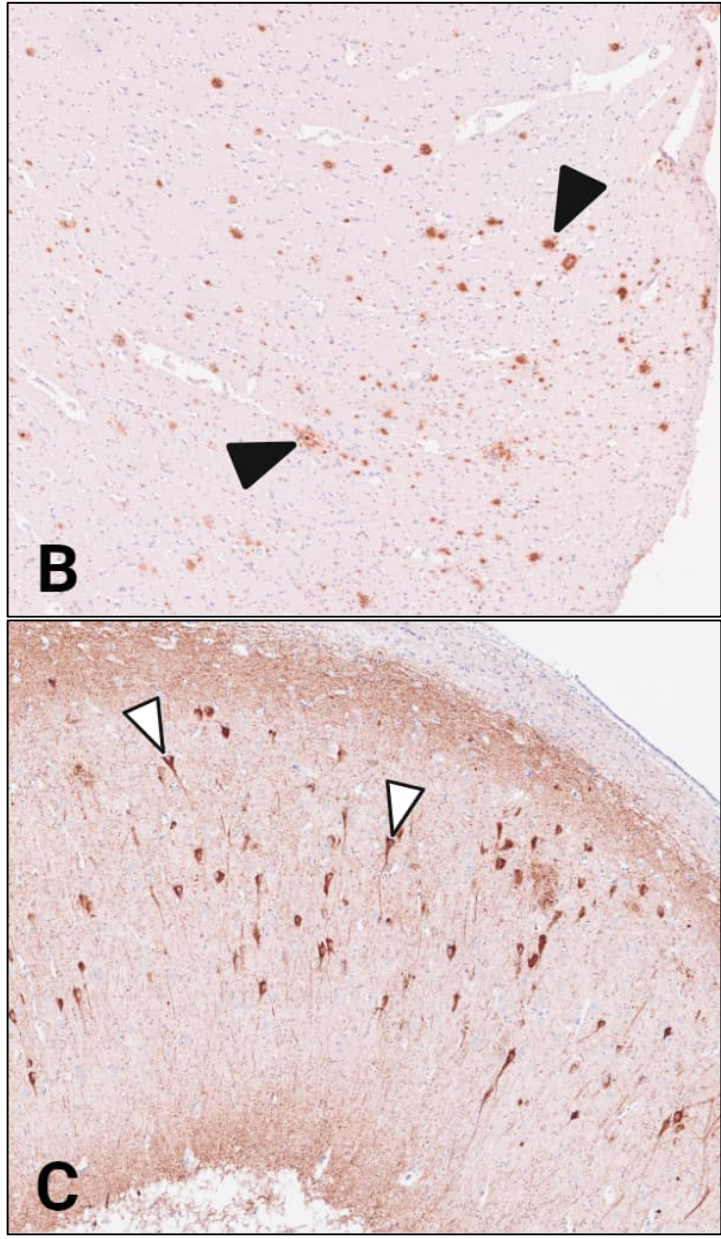
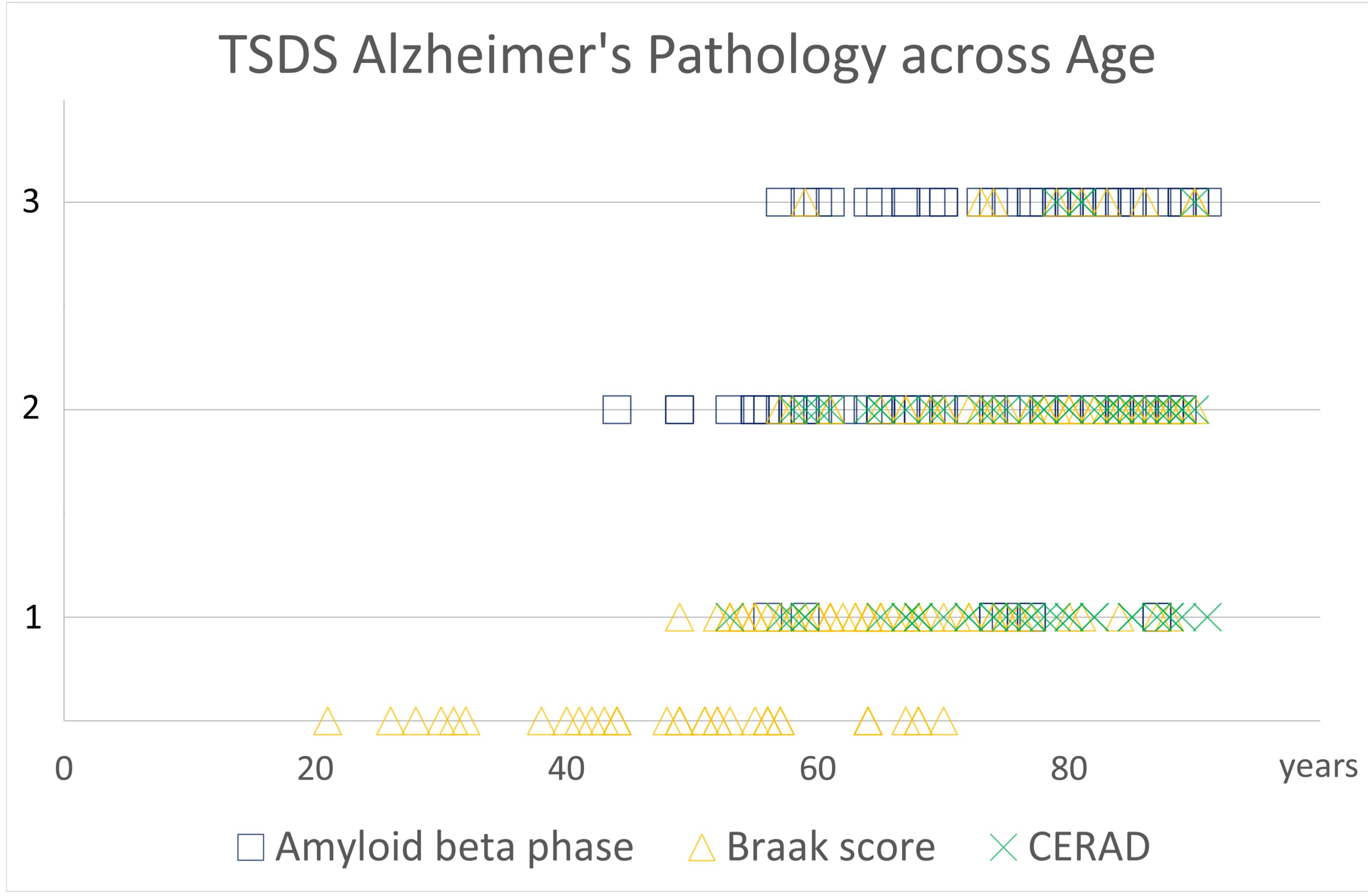
Tampere Sudden Death Study

Alzheimer's disease pathology findings

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Amyloid beta and phosphorylated tau immunohistochemical reactivity is present in human brain tissue decades before dementia symptoms might appear

• INTRODUCTION		• RESULTS	• CONCLUSIONS	• REFERENCES
Understanding the pathology associated with dementia outside of dementia populations will assist in elucidating the impact of these brain changes on disease progression. It will also allow us to understand the prevalence of these markers in the general population.		Of those already analysed, amyloid beta pathology appeared in cases aged 40 years, with minor tau pathology present in some individuals in their 20s. Neuritic plaques appeared at age 50 years, and both amyloid beta and tau pathologies were associated with age.	These results further solidify the fact that Alzheimer's disease neuropathological changes show up decades before symptoms. Further understanding of these brain markers will allow us to unravel the complex nature of neuropathology with disease progression, and drive forward research into early mechanisms that lead to both brain changes and disease outcomes.	• Kok E, Haikonen S, Luoto T, Huhtala H, Goebeler S, Haapasalo H, Karhunen PJ. Apolipoprotein E-dependent accumulation of Alzheimer disease-related lesions begins in middle age. <i>Ann Neurol.</i> 2009 Jun;65(6):650-7. doi: 10.1002/ana.21696. PMID: 19557866. • Kok EH, Paetau A, Martiskainen M, Lyytikäinen LP, Lehtimäki T, Karhunen P, Myllykangas L. Accumulation of Lewy-Related Pathology Starts in Middle Age: The Tampere Sudden Death Study. <i>Ann Neurol.</i> 2024 May;95(5):843-848. doi: 10.1002/ana.26912. Epub 2024 Mar 19. PMID: 38501694.
• METHODS		• CONTACT		
The Tampere Sudden Death Study is a forensic autopsy cohort of individuals that died outside of hospital suddenly from 2009 – 2015 in the Tampere region of south western Finland, encompassing a total of 700 individuals ranging in age from 16 to 97 years old. Immunohistochemical staining of brain regions assessing amyloid beta and phosphorylated tau protein pathology were performed, scored according to a modified ABC scoring system, and analysed for association with age and gender.		eloise.mikkonen@tuni.fi		
				
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