

Cardiovascular multimorbidity, Alzheimer's disease blood biomarkers, and risk of dementia and death in old age

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Conclusions

An increasing number of cardiovascular diseases (CVDs) was associated with altered blood levels of **p-tau217** and **NfL**. The joint effect of higher CVD count and biomarker elevation amplified the rates of incident **dementia** and **mortality**.

Aim: To explore associations between CVD count, AD blood biomarkers, and their joint effect on dementia and mortality rates.

Data



▪ **Population:** dementia-free older adults from the Swedish National study on Aging and Care in Kungsholmen → N=2,290 (72 years, 62% F)



▪ **AD blood biomarkers (serum):** p-tau217, NfL, GFAP → z-scores



▪ **Cardiovascular diseases (ICD-10):** atrial fibrillation, bradycardia, cardiac valve dis., heart failure, ischemic heart dis., peripheral vascular dis., other CVDs

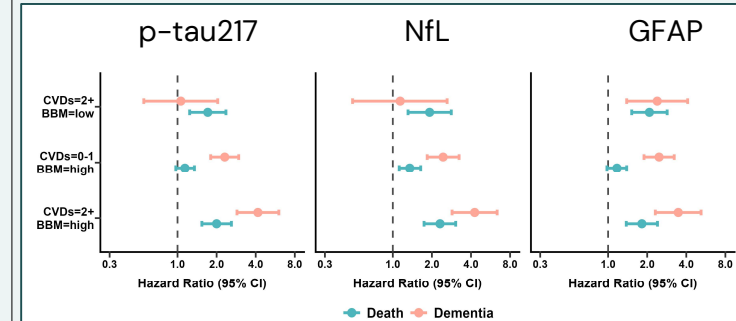


Figure 3. Joint effect of cardiovascular multimorbidity (2+ vs. 0-1 CVDs) and AD blood biomarkers (high vs. low levels) on incident dementia. Results are derived from flexible parametric multistate model for interval-censored data. Ref: CVDs=0-1, BBM=low.

Relevance

The combinations of higher CVD count and biomarker elevation (p-tau217, NfL, GFAP) identifies individuals at greatest risk of dementia and shorter survival, with **implications for risk stratification and preventive strategies**.

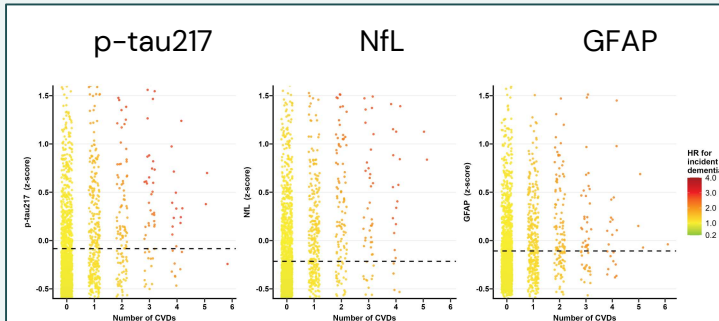


Figure 2. Joint effect of CVD count and AD blood biomarkers (z-scores) on incident dementia. Results are derived from flexible parametric multistate model for interval-censored data.



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