Objective: Elevated blood pressure variability is a marker of dysfunction of the autonomic nervous system. It is correlated with a high risk for hypertensive target organ damage. It is unclear, what is the exact correlation between blood pressure variability and mild cognitive impairment (MCI).

Methods: we studied 108 hypertensive patients on combination therapy and high cardio-vascular risk: 27(25%) were males and 81(75%) females. Mean age 67.82±8.78 years. All patients completed full medical history assessment, physical examination, cognitive impairment and depression screening, ambulatory blood pressure monitoring, office and home-measurement of blood pressure. The applied neuropsychological tests were: Montreal Cognitive Assessment (MoCA) and Mini Mental State Examination (MMSE). There were at least 6 months between the inclusion and the follow

Results: We found a significant (p<0.05), moderate, inverse correlation between blood pressure variability and the results from MoCA and MMSE. The same was the correlation between the results from the specific neuropsychological sub-tests included in MoCA and blood pressure variability. The higher the blood pressure variability (for both the systolic and the diastolic 24-hour variability), the lower the results from the tests.

Conclusion: The higher the blood pressure variability – the higher the risk for mild cognitive impairment. Blood pressure variability should be assessed (with ambulatory blood pressure monitoring) as part of the screening process in patients at a risk for mild cognitive impairment.