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### THE MEMORY AND ATTENTION TEST (MAT), AN ADAPTIVE, COMPUTER-BASED PERFORMANCE TEST: EVALUATION IN DEMENTIA, MILD COGNITIVE IMPAIRMENT AND CONTROL SUBJECTS

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The Memory and Attention Test (MAT), a newly developed, adaptive, computer-based performance test was evaluated in a mixed group of patients with Alzheimer's dementia, subjects with mild cognitive impairment and control subjects at ages from 60 to 89 years.

By means of the MAT, working memory and short-term memory are assessed in the verbal, figural and episodic domains by means of six independent tests individually adjusted to the subjects level of performance on the basis of intermediate results. Sustained attention is also assessed.

For evaluation purposes, well established tests for the respective memory domains were applied. They were the Auditory Verbal and Learning Test (AVLT), the Benton Test, the delayed reproduction of the Taylor Figure, the subtests working memory and logical memory of the Wechsler Memory Scale (WMS) and the Alterskonzentrationstest (AKT), a test analogous to the d2 test, especially suited and standardized for older subjects. Acceptance of the MAT was assessed by means of a questionnaire developed for this purpose.

Computerized testing was commonly well accepted by the subjects. There were highly significant positive correlations between performance in the MAT domains and performance in the respective reference assessments. Thus, the MAT may be a useful diagnostic tool for the assessment of dementia patients. It may be applied for early diagnosis, assessment of progression of disease and demonstration of treatment effects, particularly for disease-modifying treatments in Alzheimer's disease. Standardization relating to age and education as well as the provision of versions in various languages are under way.