Objectives: The objective of this study was to investigate sensitivity and specificity of Clinical Dementia Rating (CDR) scale, Global Deterioration Scale (GDS), Seoul Instrumental Activities of Daily living (S-ADL), Korean Dementia Screening Questionnaire (KDSQ), and Korean Mini-Mental State Examination (K-MMSE) to differentiate dementia from MCI.

Methods: 2597 patients with MCI, 3084 with Alzheimer's disease (AD), 511 with subcortical vascular MCI (svMCI), and 534 with subcortical vascular dementia (SVD) were recruited from a hospital registry of Clinical Research Center for Dementia of South Korea (CREDOS) study. All patients were administered with K-MMSE, KDSQ, S-ADL, CDR, and GDS.

Results: The area under the curve (AUC) of the receiver operating characteristic (ROC) curve to diagnoses AD from MCI was 0.94 for Sum of Boxes of CDR (CDR-SB), 0.89 for GDS and S-IADL, 0.85 for K-MMSE, 0.84 for KDSQ, and 0.80 for CDR. The AUC of the ROC to diagnoses SVD from svMCI was 0.95 for CDR-SB, 0.90 for GDS and S-IADL, 0.85 for K-MMSE, 0.84 for KDSQ, and 0.85 for CDR. Sensitivity and specificity to make a diagnosis of AD from MCI was 91.7% and 76.5% at the cutoff point of 2.5 of CDR-SB. Sensitivity and specificity to make a diagnosis of SVD from svMCI was 94.2% and 75.1% at the cutoff point of 2.5 of CDR-SB.

Conclusions: CDR-SB was the most valid test to differentiate AD from MCI and SVD from svMCI.