of AD with increasing age, it seems prudent to assess the cognitive and emotional state of the informants to ensure that they are sufficiently intact to provide reliable information across the duration of a clinical trial. For example, the relationship between caregiver depression and perception of burden has been established. Whether degree of caregiver depression and/or burden may influence expectation of outcome in the context of a clinical trial is the focus of the current investigation. **Methods:** Data collected at screening or baseline prior to the onset of randomized treatment will be presented from up to 1600 probands with moderate to severe AD, MMSE 0-20, and their respective informant/caregivers. The subjects are currently enrolling into a 24-week, double-blind, parallel group study of donepezil vs. placebo. The study is global, with over 200 sites in North America, South America, Europe, Asia, Oceania and South Africa. Each caregiver completes the Center for Epidemiologic Studies Depression Scale (CES-D). The Screen for Caregiver Burden (SCB), a quality of life scale and the Treatment Expectation Scale (5 item Likert scale from 1 = very likely to benefit to 5 = no likelihood of benefit). In order for the probands to be randomized, their caregivers' CES-D scores have to be < 15, indicating lack of major depression. Caregivers are also administered the MMSE, with scores required to be > 26 for the subject to be enrolled. Probands undergo assessment with multiple scales; MMSE scores of these probands will be utilized in these analyses. **Results:** The analyses from this very large, unique, global dataset will explore the relationships among caregiver depression (no depression through sub-syndromal depression), caregiver burden and proband quality of life, treatment expectation, and severity of proband illness. **Conclusions:** The results may have the potential for understanding the interactions among these factors, in general and by region, which may in turn impact trial design for future studies of patients with dementia.

P3-456   GENETICS AND GENETIC TESTING

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Background: A sequential circuit test generation package to generate test patterns for sequential circuits, without assuming the use of scan techniques or a reset state. Several new techniques are introduced to improve the performance of test generation. **Methods:** A sequential circuit test generation package to generate test patterns for sequential circuits, without assuming the use of scan techniques or a reset state. Several new techniques are introduced to improve the performance of test generation. **Results:** A sequential circuit test generation package to generate test patterns for sequential circuits, without assuming the use of scan techniques or a reset state. Several new techniques are introduced to improve the performance of test generation. **Conclusions:** A sequential circuit test generation package to generate test patterns for sequential circuits, without assuming the use of scan techniques or a reset state. Several new techniques are introduced to improve the performance of test generation.

P3-457   RACIAL DIFFERENCES IN THE FINANCIAL ABILITIES OF PATIENTS WITH MILD COGNITIVE IMPAIRMENT

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Background: An underrepresented area in dementia research is the study of racial differences in the functional abilities of patients with MCI. We investigated functional differences by race using a performance-based, psychometric measure of financial capacity, the Financial Capacity Instrument (FCI). The FCI assesses financial abilities across 9 domains (1-Basic Monetary Skills, 2-Financial Concepts, 3-Cash Transactions, 4-Checkbook Management, 5-Bank Statement Management, 6-Financial Judgment, 7-Bill Payment, 8-Knowledge of Personal Assets, & 9-Investment Decision-Making) and a Global Score. **Methods:** Participants were 71 healthy controls (60 Caucasians, 11 African-Americans) and 94 individuals with amnestic MCI (74 Caucasians, 11 African-Americans). For each FCI Domain and the Global Score, we tested the main effects of race and diagnostic group, and their interaction in 1) a base

model: race, diagnostic group, and race × diagnostic group, and 2) an adjusted model: base model plus covariates of age, education, WRAT-3 Arithmetic, SES, Hachinski Ischemia Index, acetylcholinesterase inhibitor use, and history of diabetes and hypertension. Alpha was set at <.01. **Results:** For the base models, significant race effects were demonstrated on Domains 1, 2, 3, 4, 8, and 9, with African-Americans performing below Caucasians. Significant diagnostic group effects were found on Domains 1, 2, 3, 4, and 9, with MCI patients performing below controls. Interaction effects were present on Domains 5 and 7, with African-American MCIs performing below other the groups. In the adjusted model, significant main effects for race (Domain 2, African-Americans<Caucasians) and diagnostic group (Domain 3, MCI<Control) were demonstrated. The interaction effect was still significant on Domains 5 and 7. For the FCI Global Score, the interaction between race and diagnostic group was significant in both the base and adjusted models, with both control groups performing comparably whereas African-American MCIs performed worse than Caucasian MCIs. Covariates reaching significance included WRAT-3 Arithmetic score, age, and hypertension. **Conclusions:** MCI patients of African-American heritage have more impairment on financial tasks compared to Caucasian MCI patients. Much of this difference is related to disparities in academic math ability. This finding is consistent with prior evidence showing that disparities in academic reading ability mediate racial differences on cognitive and functional tasks.

Table. Comparisons of Group Performance on the Financial Capacity Instrument (FCI)

FCI Domains and Tasks	Range	African-Americans		Caucasians	
		Controls, n = 11 Mean (SD)	MCI, n = 20 Mean (SD)	Controls, n = 60 Mean (SD)	MCI, n = 74 Mean (SD)
D1. Basic monetary skills	0-34	30.9 (3.8)	27.7 (5.0)	32.3 (2.6)	31.2 (3.2)
D2. Financial concepts	0-32	26.7 (3.7)	22.9 (6.2)	29.6 (2.1)	28.4 (3.0)
D3. Cash transactions	0-24	21.1 (2.3)	17.4 (3.1)	21.8 (2.2)	20.3 (3.4)
D4. Checkbook management	0-50	48.2 (3.2)	43.5 (5.2)	48.4 (2.2)	46.9 (3.9)
D5. Bank statement management	0-39	34.7 (3.4)	24.2 (5.6)	35.7 (3.0)	32.3 (5.1)
D6. Financial judgment	0-16	12.7 (3.5)	12.7 (3.0)	13.9 (2.2)	13.1 (3.4)
D7. Bill payment	0-46	44.6 (2.4)	34.3 (8.4)	44.2 (2.7)	41.1 (5.6)
D8. Assets and estate arrangements	0-26	24.0 (2.1)	22.5 (2.8)	23.0 (2.8)	23.4 (2.4)
D9. Investment decision making	0-17	13.6 (3.2)	10.9 (3.1)	14.7 (2.1)	13.3 (2.9)
FCI Total (Global) Score – Domains 1-7	0-241	218.9 (13.9)	182.1 (25.3)	226.3 (8.9)	213.5 (18.4)

P3-458   NEUROPSYCHOLOGICAL PREDICTORS OF ACTIVITIES OF DAILY LIVING, INSTRUMENTAL ACTIVITIES OF DAILY LIVING, AND MOTOR FUNCTIONING IN ALZHEIMER'S DISEASE AND ISOLATED MEMORY IMPAIRMENT

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Background: The ability to safely manage basic and instrumental activities of daily living (ADLs and IADLs) is a critical concern in the care of patients with cognitive impairment. The present study seeks to explore the predictive capability of neuropsychological tests in predicting basic ADLs, IADLs, and motor functioning as reported by the patient's caregiver. **Methods:** Participants included 330 geriatric patients with memory impairment; 45.8% male ($n = 151$) and 54.2% female ($n = 179$). The sample consisted of 215 patients with probable Alzheimer's disease (Education $X = 13.97$, $SD = 3.25$, *range* 6-21; MMSE $X = 22.69$, $SD = 3.06$, *range* 17-29). The remainder of the sample ($n = 115$) were patients with isolated memory impairment (Education $X = 14.97$, $SD = 3.08$, *range* 8-21; MMSE $X = 26.30$, $SD = 2.28$, *range* 19-30). Outcome measures included the ability to complete ADLs and IADLs as well as current motor functioning ability. Predictor variables included general mental status (MMSE), speeded processing (Trail Making Test, Part A), phonemic fluency, and list learning percent retention. **Results:** In a large sample of memory impaired patients, multiple regressions indicated that the MMSE made a significant unique contribution to the prediction of ADLs.

Trails A contributed unique variance to the prediction of motor functioning and both the MMSE and Trails A contributed significantly to the prediction of IADLs. When the sample was limited to patients diagnosed with probable Alzheimer's disease, predictor variables significantly predicted ADLs and IADLs, but not motor functioning. Again, the MMSE accurately predicted ADL ability, while IADLs were primarily predicted by Trails A scores. Finally, when the sample was limited to patients with isolated memory impairment, the four predictors accurately predicted only IADL performance (with significant unique variance attributable to phonemic fluency). **Conclusions:** In older adults, mental status significantly contributes to the measurement of a patient's ability to complete ADLs. However, when prediction of more complex IADLs or motor functioning is required, measurement of higher-order processing abilities is also important. While memory functioning is not predictive of IADL abilities, speeded processing is.

P3-459   **NEUROPSYCHIATRIC FEATURES IN ALZHEIMER'S DISEASE AND MILD COGNITIVE IMPAIRMENT IN MEMORY CLINIC**

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Background: Community-based studies have reported depression and anxiety are more prevalent among individuals with mild cognitive impairment (MCI). However, the neuropsychiatric features of MCI in memory clinic have not been fully defined. This study aims to investigate the neuropsychiatric features of Alzheimer's disease (AD) and MCI in memory clinic setting. **Methods:** From Feburary, 2006-August, 2007, fifty-seven AD patients, 28 MCI subjects and 46 normal elderly controls were recruited in the memory clinic. Neuropsychiatric features were assessed with Neuropsychiatric Inventory (NPI), and general cognitive status was evaluated with MMSE. **Results:** After controlling the effect of age and education and adjusting multiple comparison effect, the total score of NPI was significantly increased in AD group (28.60 ± 20.70) than MCI (10.96 ± 13.73) and normal control (2.83 ± 3.52) groups (P<0.05), while there was no significant difference between MCI and normal controls. Specifically, the item scores of hallucination, agitation/aggression, apathy, irritability, and abnormal motor behaviors were significantly higher in AD group than MCI and normal controls groups (P<0.05). The item scores of delusion and anxiety were significantly different only between AD and control group (P<0.05). Other items scores were not significantly different among three groups. There was no significant relationship between total scores of NPI and MMSE (P>0.05). In AD group, the total score of caregiving distress was significantly associated with that of NPI (r=0.92, P<0.05). **Conclusions:** The results suggested that in memory clinic, the problem associated with hallucination, agitation, apathy, irritability, and abnormal motor behaviors were more pronounced in AD than MCI individuals. However, the findings that individuals with MCI did not present significant neuropsychiatric features in memory clinic were not consistent with the results of community-based studies. The study indicate that neuropsychiatric symptoms should be attended to more closely in memory clinic services.
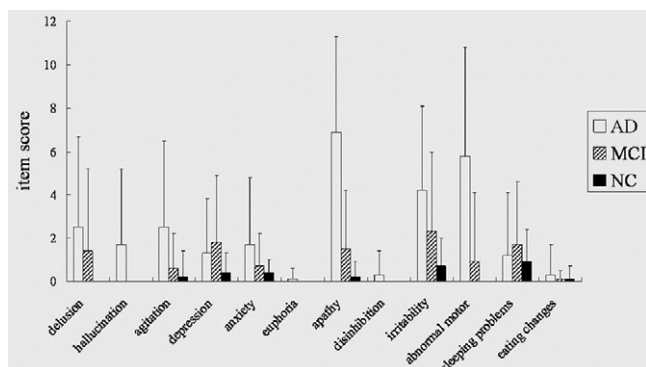
P3-460   **SEVERE COGNITIVE IMPAIRMENT: RELATIONSHIP BETWEEN COGNITIVE FUNCTIONS**

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Background: Severe cognitive impairment is an entity not well studied. The majority of patients suffering from dementia are found in this late stage of the disease. The objective of this study was to analyse the relationship between different cognitive functions in this stage of Alzheimer's disease. **Methods:** 133 patients diagnosed with moderate to severe Alzheimer's disease, scoring 5 or more in the Global Deterioration Scale-GDS. The participants age ranged from 57 to 96 years old (median age=81.61 SD=7.4). The sample was evaluated with the SCIP scale (Peavy, 1995). This scale evaluates the following cognitive functions: behavior, attention, language, memory, motor functioning, conceptualization, arithmetic and visuospatial capacity. Its assessment rank is wider than other instruments, so it allows avoiding both "floor effect" and "ceiling effect". This test has been adapted and validated into Spanish population with good psychometric properties. **Results:** The results were analysed with SPSS program version 15.0. A stepwise regression was carried out. The dependent variable was memory and the independent variables were: behavior, attention, language, motor functioning, conceptualization, arithmetic and visuospatial capacity. The following variables entered in the model: language (p<.000; R=.726; R^2=.527), attention (p<.000; R=.765; R^2=.586), behavior (p<.000; R=.783; R^2=.613) and conceptualization (p<.000; R=.792; R^2=.627). **Conclusions:** In this abstract an attempt to understand better the severe cognitive decline has been presented. These results imply that three are the variables linked with memory capacity in late stage of Alzheimer's disease. The decrease in memory can be explained for the decline in language, attention, behaviour and conceptualization capacities. Whereas, motor functioning, arithmetic and visuospatial capacity, can't explain the decline. For this reason, in order to design better rehabilitation programs and to assess the late dementia stage is important to take into account the relationship between these variables. However, more research in this field is needed; otherwise the severe cognitive decline will remain unclear.

P3-461   **GOAL ATTAINMENT IN DEMENTIA OF THE ALZHEIMER'S TYPE IN A STUDY OF MODERATE TO SEVERE COGNITIVE IMPAIRMENT**

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Background: In the pharmacological treatment of dementia of the Alzheimer's type (DAT), patient and caregiver preferences are essential to the assessment of clinical meaningfulness. Goal Attainment Scaling (GAtS) formally evaluates these expectations. The technique measures outcomes by an approach that is standardized in its analysis but individualized for each subject. GAtS has been employed in studies of geriatric subjects in various settings including the community, nursing homes, after discharge from a day hospital, and in pharmacological intervention studies. To date, there have been no large-scale evaluations of goal attainment in moderate-to-severe DAT in any region. Thus, there is sparse information on types of goals able to be set by patients, whether factors such as gender of caregiver impact goal setting and whether there are regional differences in goals. These and other factors may be important not only in establishing the clinical meaningfulness of the results of a trial, but may play an important role in study design of