Table 2
MoCA Normative Data - Female

		Educational Attainment														
		High School/GED				Some College				College Completion				Higher Education		
		N	Mean	SD	Median	N	Mean	SD	Median	N	Mean	SD	Median	N	Mean	SD
Age	55-65	1	29.00		29	2	29.00	1.41	29	8	27.63	1.85	27	14	28.50	1.56
	60-70	18	25.67	2.70	26	20	25.95	2.35	26	30	27.23	1.81	27	64	27.36	2.21
	65-75	20	25.70	2.56	26	34	26.12	2.17	26	43	26.65	2.05	27	91	26.99	2.33
	70-80	9	25.56	2.07	25	28	25.46	2.52	26	35	25.97	2.15	27	55	25.98	2.47
	75-85	8	24.25	2.71	25	17	25.06	2.77	26	21	25.90	2.05	26	32	24.97	2.31
	80-90	3	22.67	3.51	23	4	27.00	1.41	26.5	4	25.25	1.26	25	12	25.08	2.64

Table 3
MoCA Normative Data - Male

		Educational Attainment														
		High School/GED				Some College				College Completion				Higher Education		
Male		N	Mean	SD	Median	N	Mean	SD	Median	N	Mean	SD	Median	N	Mean	SD
Age	55-65	0				0				3	26.00	4.00	26	5	26.60	2.07
	60-70	2	28.00	0.00	28	11	25.55	2.94	26	21	25.67	2.54	26	41	26.44	2.37
	65-75	7	26.71	2.75	28	21	24.95	2.82	25	29	25.90	2.47	26	67	26.06	2.22
	70.1-80	6	26.33	2.88	27	16	24.38	2.42	25	18	24.39	3.01	25	52	25.85	2.26
	75-85	2	26.50	0.71	26.5	8	24.13	2.03	24	13	22.77	2.31	23	43	25.58	2.34
	80-90	1	26.00		26	2	23.00	1.41	23	7	22.86	2.54	23	24	24.96	1.78

27.4 average scores in the initial sample. The mean score for males in ADNI fell below the suggested cutoffs. Also, ADNI participants had higher educational attainment compared to the US population as over half of the ADNI sample completed ≥16 years of education compared to the reported 27% of Americans aged ≥65. We conclude that these differences may influence MoCA scores in addition to the effects of psychological, behavioral, and cultural variables on cognition. Future studies should consider a US population-based data to derive cutoff scores.

P3-454 SUBSYNDROMAL DEPRESSIVE SYMPTOMS IN NON-DEMENTED OLDER ADULTS ARE ASSOCIATED WITH POORER MEMORY PERFORMANCE

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Background: To examine whether baseline subsyndromal depressive (SSD) symptoms in non-demented older adults are associated with poorer global cognition, memory, and executive functioning (EF) 1 and 5 years later. **Methods:** We analyzed baseline and longitudinal data in 626 non-demented subjects who participated in ADNI. SSD symptoms were defined as Geriatric Depression Scale-15 (GDS-15) score of 1-5. Generalized linear modeling was used to analyze the association between baseline depression measures and cognitive outcomes (Montreal Cognitive Assessment (MOCA) for global cognition, memory composite score, and EF composite score) at 1 and 5 years of follow-up. All models were adjusted for age, *APOE4* status, gender, education, race, amyloid positivity, antidepressant use, and baseline MOCA score, and further adjusted for medical and psychiatric conditions with baseline differences of $P < 0.1$. **Results:** Having a memory complaint on GDS-15 was associated with poorer global cognition, memory, and EF 1 year later (all $P < 0.01$) and poorer memory 5 years later ($P < 0.05$). SSD symptoms in amyloid negative subjects was associated with poorer global cognition, memory, and EF 1 year later (all $P < 0.01$) but not 5 years later (all $P > 0.05$). SSD symptoms in amyloid positive subjects was associated with poorer global cognition and memory at 1 year (both $P < 0.001$) and was associated with memory at 5 years ($P = 0.03$). SSD symptoms were associated with poorer memory 1 and 5 years later and poorer EF 1 year later in subjects with normal cognition (all $P < 0.05$), and with poorer memory and EF 1 year later (all $P < 0.05$) in subjects with mild cognitive impairment. **Conclusions:** SSD symptoms, notably in amyloid positive subjects, were associated with poorer memory. Future studies will need to examine more deeply how amyloid positivity in the context of SSD symptoms lead to memory decline.

P3-455 EEG TOPOLOGY COMBINED WITH COMPUTER BASED COGNITIVE ASSESSMENT AS SCREENING TOOL FOR COGNITIVE DECLINE

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Background: Identifying those who are at risk for accelerated cognitive decline and understanding the mechanisms leading to this decline are vital for guiding interventions and improving early prediction of dementia. Previously, we showed that a combination of EEG graph theory and cognitive learning measures (Toolbox Picture Sequence Memory, CogState One Card Learning) was highly effective in differentiating individuals with mild cognitive impairment from otherwise healthy controls. Now we evaluate the relationship between both working memory and learning/memory measures with baseline EEG topological metrics. **Methods:** We studied a sample of 28 consensus diagnosed healthy controls community dwelling African American older participants (>60 years) recruited from the Michigan Alzheimer's Disease Core Center and the Wayne State University Institute of Gerontology. All participants received EEG and computerized NIH Toolbox-Cognition battery. Using resting state EEG, we constructed functional brain graphs, together with their corresponding minimum spanning trees, to characterize brain graph topology. Then, we evaluated the relationship between topological parameters and performance on working memory and learning/memory Toolbox subtests. **Results:** Higher scores on working memory (List Sorting) were significantly associated with higher vertex degree, degree divergence, leaf fraction, and lower eccentricity and diameter in the delta band (1-4 HZ) and low alpha band (10-12 HZ). In contrast, higher scores on the learning/memory test (Picture Sequence Memory) were significantly associated with higher eccentricity and diameter in the high alpha band (10-12 HZ). Based on these correlation patterns our results revealed that at lower frequencies better working memory performance is associated with a more star-like topology, reflecting a more integrated random topology, while at higher frequency better learning/memory performance is associated with a more linear topology, indicating a less integrated regular topology. In other words, we found the dissociation between the topological changes with respect to different mnemonic processes. **Conclusions:** Our preliminary results demonstrate that EEG and computerized testing is promising in better understanding the electrophysiological underpinnings of mnemonic processes in healthy controls. Community based, fast, and efficient screening methods, such as portable EEG or computer based cognitive testing, are potential screening options for cognitive decline.

P3-456 LANGUAGE LOSS IN BILINGUAL PATIENTS WITH ALZHEIMER'S DISEASE: A PILOT STUDY

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Background: Language loss is one of the most debilitating aspects of Alzheimer's disease (AD). It is particularly a factor among the growing numbers of Spanish (L1)-English (L2) bilingual patients in the United States, yet the interaction of bilingualism and AD is incompletely understood. Among dementia patients, some, but not all, studies have suggested greater problems communicating in L2 with a reversion to L1, possibly from a decreased ability to inhibit L1, the original conceptually-learned language. **Methods:** Eight coordinate or sequential bilingual patients (5 normals; 3 dementia) who were highly proficient in both languages were evaluated with a series of computerized experiments that investigated: 1.) Noun access in each language while in the predicate context of the other; 2.) Ability to inhibit one language while accessing the other; and 3.) Ease of translation between the two language. Outcome measures were error rates and speed of processing (corrected for baseline motor reaction time). Additional language-related measures of L2 proficiency, age of L2 acquisition, and acculturation were obtained. **Results:** The dementia patients (2 women, 1 man) and controls (3 women, 1 man) had a similar age range and educational backgrounds. Error rates did not vary between groups; however, there were differences in speed of processing. Among the dementia patients, Experiment 1 revealed a slowed access to nouns in L2 compared to L1 vs. no L1-L2 difference among the controls; a slowed ability to inhibit L1 when in L2 but not vice versa; and faster L1 to L2 translation speed, particularly compared to controls. There were no differences in other language-related measures. **Conclusions:** Although this is a preliminary, proof-of-concept assessment of a small number of participants, it does indicate the ability to evaluate bilingualism and the possible effects of decreased use of L2 or English, suggesting a decreased ability to inhibit Spanish during conversations in English. We are continuing this investigation in a larger cohort of patients with AD. The results may have implications for effective caregiver communication and management of the growing number of Spanish-English bilingual patients suffering with this disease.

P3-457 THE FIRST ROMANIAN CLINICAL STUDY ABOUT NEUROCOGNITIVE RESERVE

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Background: The cognitive reserve hypothesis explains the ability to tolerate the age related changes and the disease related pathology in the brain without developing clear clinical symptoms or signs. Persons with a low educational level present earlier clinical symptoms of neuropathology disorders. The brain reserve moderates the relationship between changes at brain level and neuropathology disorders. Cognitive reserve could compensate the deterioration of the brain. This study investigates the relationship between cognitive impairment level, the severity of brain atrophy and the level of education on a sample of 235 individuals with cognitive complains, who required neurocognitive evaluation at Bucharest Memory Center between 2011 to 2016. **Methods:** A retrospective study was conducted over six years based on the medical records of those who addressed the Center for Memory for neurocognitive assessment in order to establish the diagnosis. The socio-demographic parameters were recorded along with educational level, the brain atrophy presence, the psychiatric diagnosis and cognitive decline. **Results:** The cognitive reserve hypothesis was verified, unless the Mini Mental Score Evaluation score was very low (for severe