and SMC. However, in SMC, SSNC scores correlated with smaller hippocampi ($r_{Sp} = -0.36$, $p < 0.001$), while in aMCI – perhaps anosognostic to spatial difficulties - did not. SMC ε4 carriers scored worse on SSNC than SMC ε4 noncarriers ($p = .04$). SMC ε4 carriers had cortical thinning in precuneus ($p = .013$) and parahippocampus ($p = .034$) compared to SMC ε4 noncarriers.
Results: Particularly SMC ε4 carriers are characterized by subjective spatial navigation difficulties associated with atrophy in regions implicated in both spatial navigation and AD. Asking a specific question may be a useful screening tool for subjects at risk of AD and may guide further referral of such patients.

doi:10.1016/j.jns.2015.08.114

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WFN15-1539
Dementia 2
Cognitive and functional impairment: Correlative and predictive analyses across a sample made up of patients with dementia, MCI and controls

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Background: Cognitive impairment (CI) is commonly associated to functional impairment (FI) over the activities of daily living (ADL). Exploring the extent to which functional impairment is related to cognitive functioning might be interesting, particularly analyzing the relationships that might be established between decline of the performance on instrumental and basic ADL and different cognitive domains.
Objective: Explore the correlations and predictive relationships of CI and FI measured respectively by the Chilean Addenbrooke's Cognitive Examination Revised (ACE-R-Ch), the Frontal Assessment Battery (FAB) and the Technology – Activities of Daily Living Questionnaire (T-ADLQ).
Patients and methods: 48 patients with dementia, 15 with MCI 8 and 38 HC were assessed with the ACE-R and the FAB. The T-ADLQ was answered by the principal collateral source. Statistical analyses were performed using the SPSS Inc. v.19.
Results: Table 1 shows the clinical characteristics of the sample and the neuropsychological test comparison between the groups. Table 2 and 3 shows the correlation and regression analyses between the different cognitive domains measured by the ACE-R, the FAB and the 7 subscales of the T-ADLQ.

Table 1: Comparison of demographic data, FAB and ACE-R scores. Percentage of functional impairment in the 7 subscales of the T-ADLQ and the total T-ADLQ. HC, MCI and dementia groups (n=100, standard deviation in parenthesis)

Demographics and Neuropsichological test	Control (n= 37)	MCI (n=15)	Dementia (n=48)	Dementia vs. Control *p* values	Dementia vs. MCI *p* values	MCI vs. Control *p* values
Sex (M/F)	13/24	6/9	18/29	n.s.	n.s.	n.s.
Education, years (SD)	13.0 (4.0)	12 (4.4)	11.44 (4.5)	n.s.	n.s.	n.s.
Age (SD)	71.9 (5.7)	75.4 (6.5)	73.0 (6.6)	n.s.	n.s.	n.s.
FAB	15.4(3.3)	11.7(5.2)	10.5(4.8)	**	n.s.	n.s.
ACE-R						
Total Score	90.9(15.9)	77.8(11.0)	60.3(16.4)	**	**	*
Attention & Orientation	17.1(2.9)	15.7(3.1)	11.9(3.9)	**	**	n.s.
Fluency	11.9(2.7)	10.1(4.3)	6.5(3.4)	**	**	n.s.
Language	24.6(4.3)	23.3(3.7)	10.6(4.6)	**	n.s.	n.s.
Memory	22.7(4.4)	15.6(5.6)	10.4(4.8)	**	**	**
Visuospatial	14.6(2.8)	13.1(2.7)	10.9(3.5)	**	*	n.s.
T-ADLQ						
Global functional impairment (%)	7.9(8.3)	18.1(11.8)	38.9(17.1)	**	**	n.s.
Self-care activities (%)	1.6(4.1)	8.9(7.6)	16.2(11.5)	**	*	**
Household care (%)	9.4(15.7)	22.0(29.2)	40.0(28.2)	**	n.s.	n.s.
Employment and recreation (%)	17.2(18.5)	32.7(24.8)	51.4(22.1)	**	*	n.s.
Shopping and money (%)	4.9(15.4)	16.9(19.1)	50.2(31.9)	**	**	n.s.
Travel (%)	7.9(11.1)	26.6(24.8)	52.4(26.1)	**	**	*
Communication (%)	6.3(11.1)	14.6(11.3)	35.7(21.3)	**	**	n.s.
Technology (%)	12.8(16.1)	15.7(20.3)	38.9(35.7)	**	**	n.s.

Levene's test for equality of variance; HSD Tukey and Games-Howell corrected.
n.s=non-significant.
*p<0.005.
**p<0.001.

Conclusion: CI and FI are highly correlated. The cognitive domains that better predict the FI (global and by areas) are Memory and Fluency. It should be noted that CI affects ADL globally and not separately. Moreover, CI has important implications for the capacity of the patients to perform ADL.
Funding: Fondecyt 1140423 & Basal Funds for Centers of Excellence, Project FB0003 - Associative Research Program – CONICYT -CHILE.

Table 2: Pearson correlation coefficients (r) and determination coefficients (R^2) between ACE-R total score and subscales and T-ADLQ total score and subscales.

T-ADLQ \ ACE-R	Total Score		Attention & Orientation		Memory		Fluency		Language		Visuospatial	
	r	R^2	r	R^2	r	R^2	r	R^2	r	R^2	r	R^2
Global functional impairment	-.727**	.524	-.678**	.455	-.708**	.496	-.626**	.385	-.555**	.301	-.556**	.302
Self-care activities	-.628**	.388	-.619**	.383	-.600**	.354	-.491**	.241	-.504**	.247	-.485**	.228
Household care	-.516**	.258	-.472**	.215	-.487**	.229	-.374**	.131	-.417**	.166	-.484**	.226
Employment and recreation	-.589**	.340	-.577**	.326	-.546**	.291	-.568**	.315	-.400**	.151	-.464**	.207
Shopping and money	-.629**	.389	-.587**	.338	-.645**	.410	-.468**	.210	-.495**	.237	-.473**	.216
Travel	-.678**	.454	-.614**	.371	-.686**	.466	-.521**	.264	-.601**	.355	-.442**	.187
Communication	-.633**	.394	-.597**	.349	-.626**	.386	-.578**	.327	-.482**	.224	-.413**	.162
Technology	-.337**	.105	-.310**	.086	-.378**	.134	-.272**	.070	-.184	.024	-.265**	.061

*p<0.005
**p<0.001

Table 3: Multiple regression analyses between ACE-R and FAB and T-ADLQ total score and subscales.

T-ADLQ	FAB		Attention & Orientation		Memory		Fluency		Language		Visuospatial	
	B	*p* values	B	*p* values	B	*p* values	B	*p* values	B	*p* values	B	*p* values
Global functional impairment	0.25	n.s.	-1.3	n.s.	**-1.1**	**	**-1.9**	*	.9	n.s.	.01	n.s.
Self-care activities	-.58	n.s.	-.43	n.s.	-.44	n.s.	-.37	n.s.	.27	n.s.	.29	n.s.
Household care	.57	n.s.	-.1	n.s.	-.95	n.s.	-2.8	n.s.	1.5	n.s.	-1.3	n.s.
Employment and recreation	-.08	n.s.	-1.9	n.s.	-.13	n.s.	**-4.1**	**	1.9	**	.07	n.s.
Shopping and money	.35	n.s.	-1.1	n.s.	**-2.8**	**	-.33	n.s.	1.03	n.s.	.24	n.s.
Travel	1.31	n.s.	-1.05	n.s.	**-2.2**	**	**-1.9**	*	-.26	n.s.	1.5	n.s.
Communication	.89	n.s.	-1.7	n.s.	-1.1	*	**-2.8**	**	1.08	n.s.	1.2	n.s.
Technology	.97	n.s.	-1.7	n.s.	-1.8	n.s.	-.36	n.s.	2.0	n.s.	-7.3	n.s.

n.s.=non-significant.
*p<0.005
**p<0.001

doi:10.1016/j.jns.2015.08.115

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WFN15-1568
Dementia 2
Clinical, neuropsychological and neural correlates underlying the first symptoms in Behavioral Variant of Fronto Temporal Dementia (bvFTD)

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Introduction: The behavioural variant of frontotemporal dementia (bvFTD) is a clinical syndrome characterized by an early and progressive deterioration of personality, social comportment and cognition (Rascovsky et al, 2011). An early detection of behavioural impairments in FTD is crucial to an accurate Early behavioural changes such as disinhibition, apathy, loss of empathy among others are some symptoms used to diagnose probable bvFTD. However, it is unknown how those first behavioural symptoms influence and modify progression and course of the disease.
Methods: We evaluated the neuropsychological, clinical and neuro-anatomical correlates of a sample of forty-three FTD patients organized according to its first symptoms. We also collected neuropsychological and imaging data on thirty-four healthy seniors to control the analyses observed in patients.

Discussion: 47% of patients debuted with apathy, 42% with disinhibition and 10% with deficits in executive functions. Patients that debuted with apathy showed worst scores in neuropsychological profile (as measured by FrSBE and Hayling test among others) compared with patients that debuted with disinhibition. Severity of apathy in apathetic-debut patients correlated with atrophy in the right dorsolateral prefrontal cortex and right insula. In contrast patients that debuted with disinhibition showed atrophy in the right mediotemporal limbic structures.

Conclusion: First symptom in bvFTD patients is crucial to describe the course and neuropsychological impairments. Our results show that impairments in complex social behaviors represented in the prefrontal and mesolimbic structures are also involved in course and prognosis of the bvFTD.

doi:10.1016/j.jns.2015.08.116