

**Results:** During follow-up, 26.2% frail depressed patients died compared to 12.7% non-frail depressed patients ( $p < .001$ ). Adjusted for confounders, the number of frailty components was associated with an increased mortality rate ( $HR = 1.38$  [95%CI: 1.06–1.78],  $p = .015$ ). All biomarkers were prospectively associated with mortality, but only higher levels of hsCRP and lower levels of vitamin D were independent of frailty associated with mortality.

**Conclusions:** Frailty identifies older patients at increased risk of adverse negative health outcomes in late-life depression. Therefore, among frail-depressed patients, treatment models that include frailty-specific interventions might reduce mortality rates.

**Disclosure:** No significant relationships.

**Keywords:** Depression; Frailty; mortality

### EPP0138

#### Associations of neuroinflammatory parameters with clinical features in patients with mild cognitive impairment and dementia

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**Introduction:** Mild cognitive impairment (MCI) represent a state of cognitive function between normal aging and dementia and does not always progress to dementia. Neuroinflammation has a key role in the pathogenesis of neurodegeneration. Determining the associations of neuroinflammatory markers in the blood with clinical disease severity may be useful for early diagnosis of cognitive impairment and prediction of the development of severe dementia.

**Objectives:** The aim of our study was to compare the serum concentration of a panel of inflammatory markers in patients with MCI and dementia as well as their associations with clinical symptoms.

**Methods:** Patients were evaluated using Mini-Mental State Examination (MMSE), Clock Drawing Test (CDT), Montreal Cognitive Assessment scales (MoCA), Clinical Dementia rating (CDR) and Hospital Anxiety Depression Scale (HADS). We determined the serum concentration of a panel of inflammatory markers (25 units) cytokines, chemokines, growth factors and several others on Multiplex and prepared multivariate analysis to investigate associations between clinical features and serum concentration.

**Results:** Patients with dementia had lower scores on scales than the control and MCI groups. MCI patients were equal to the control group, except for the MMSE scale. EGF, eotaxin-1, GRO- $\alpha$ , IP-10, IL-8, MIP-1 $\beta$ , sCD40L, TNF- $\alpha$ , MDC and MCP-1, VEGF were differ between groups. Multivariate analysis identified some neuroinflammatory parameters associated with the severity of the disease.

**Conclusions:** We identified some neuroinflammatory parameters associated with dementia and MCI. Many of them have been poor described and data is contradictory. It is necessary to investigate these parameters as potential biomarkers of neurodegeneration in further studies.

**Disclosure:** No significant relationships.

**Keywords:** MoCA; MCI; MMSE; Dementia

### EPP0139

#### The impact of Mild Behavioral Impairment on the individual's level of psychological, social, and occupational functioning

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**Introduction:** Mild behavioral impairment (MBI) is a neurobehavioral syndrome characterized by later-life emergent neuropsychiatric symptoms, which represent an at-risk state for incident cognitive decline and dementia.

**Objectives:** Our objective was to prospectively evaluate the impact of MBI on global functioning in patients  $\geq 50$  years with a major depressive episode (MDE) at baseline.

**Methods:** We recruited 51 patients  $\geq 50$  years presenting with a MDE at the outpatient clinic of the 2<sup>nd</sup> Psychiatric Unit of the University of Pisa. Then we selected those patients who had a follow-up of at least two months and excluded subjects with a neurodegenerative disease. The included patients ( $N = 25$ ) were subdivided in a subgroup with MBI and a subgroup without MBI. The subgroups have been compared for the difference between baseline and follow-up score in global functioning according Global Assessment of Functioning (GAF) scale. Comparative analyses were conducted by means of mixed anova.

**Results:** There was a significant interaction effect between time and the MBI condition ( $F[1, 23] = 4.12$ ,  $p = 0.05$   $\eta^2 p = 0.15$ ). Descriptive statistics showed that while patients without MBI showed higher GAF score at follow-up (mean = 65.12) compared to GAF score at baseline (mean = 54.37), patients with MBI showed, on average, the same GAF score at follow-up (mean = 54.44) and at baseline (mean = 54.44).

**Conclusions:** In patients with MDE, the presence of MBI is related to a lack of improvement in psychological, social, and occupational functioning in the short-term

**Disclosure:** No significant relationships.

**Keywords:** Mild Behavioral Impairment (MBI); Neuropsychiatric symptoms; Preclinical dementia; global functioning

### EPP0140

#### Traumatic brain injury alters presentation of mild behavioral impairment domains across progression of all-cause dementia

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**Introduction:** Traumatic brain injury (TBI) may alter dementia progression, although co-occurring neuropsychiatric symptoms (NPS) have received less attention. The mild behavioral impairment (MBI) construct relates NPS to underlying neural circuit disruptions, representing an important area of inquiry regarding TBI and dementia.

**Objectives:** (1) to examine the influence of prior TBI history (preceding study enrollment) on MBI incidence in all-cause dementia (prior to dementia diagnosis, i.e. MBI's original definition) and (2) to utilize MBI domains as a construct for examining the influence of TBI on related NPS across the course of dementia onset and progression.

**Methods:** Using National Alzheimer's Coordinating Center data, individuals progressing from normal cognition to all-cause dementia over  $7.6 \pm 3.0$  years were studied to estimate MBI incidence and symptom domains in 124 participants with prior TBI history compared to 822 without.

**Results:** Moderate-severe TBI was associated with the social inappropriateness MBI domain ( $OR_{adj.} = 4.034$ ;  $p = 0.024$ ) prior to dementia onset, and the abnormal perception/thought content domain looking across dementia progression ( $HR_{adj.} = 3.703$ ,  $p = 0.005$ ). TBI (all severities) was associated with the decreased motivation domain looking throughout dementia progression ( $HR_{adj.} = 1.546$ ,  $p = 0.014$ ).

**Conclusions:** TBI history is associated with particular MBI domains prior to onset and throughout progression of dementia. Understanding TBI's impact on inter-related NPS may help elucidate underlying neuropathology.

**Disclosure:** No significant relationships.

**Keywords:** Dementia; neurodegeneration; traumatic brain injury; mild behavioral impairment

## EPP0141

### Diagnosing dementia in the Arctic: translating tools and developing and validating an algorithm for assessment of impaired cognitive function in Greenland Inuit

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**Introduction:** The ageing Arctic populations raise the need for work-up of cognitive function that reflects language and cultural understandings.

**Objectives:** To translate and evaluate tools for work-up of cognitive impairment in Greenland.

**Methods:** Step A: An expert panel was established to select tools suitable for the work-up of cognitive impairment at three different settings in Greenland. Step B: Tools were translated in a multiple-step process of independent translations with back-translation and adaptations by two independent translators and two Greenlandic physicians. Step C: a testing and validation process of the tools at three locations: the national hospital in the capital city; regional hospital in a town; health care centre in a small town.

**Results:** Tools selected were Mini-Cog and RUDAS. Participants for testing of tools were 43 of 61 invited, of which six had dementia. RUDAS and Mini-Cog scores were associated ( $p < 0.001$ ). The smoothed AUC was 0.87 (95%-CI, 0.65–0.95) for Mini-Cog and 0.90 (95%-CI, 0.76–0.97) for RUDAS. The sensitivity of Mini-Cog with a cut-off at  $\leq 3$  was 83.3%, and specificity was 62.2%. For RUDAS with a cut-off at  $\leq 23$ , these were 100% and 75.7%, respectively.

**Conclusions:** Requested tools have been translated for assessing cognitive function in the native Arctic setting. Small town residents with a Mini-Cog score of 3 or lower should be referred to a regional hospital for RUDAS, and a score of 23 or less should cause referral to the national hospital for a full work-up of cognitive function.

**Disclosure:** No significant relationships.

**Keywords:** mini-cog; Dementia; RUDAS; cognitive function

## EPP0142

### Which residual symptoms predict relapse after successful electroconvulsive therapy for late-life depression?

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**Introduction:** Residual depressive symptoms are common after a successful acute treatment of late-life depression (LLD), and their presence predicts increased risk of relapse. While electroconvulsive therapy (ECT) is the most effective treatment for LLD, little is known about which particular symptoms remain and impact long-term outcome after a successful acute ECT course.

**Objectives:** We aimed to assess the association between specific residual depressive symptoms after an effective acute ECT course for LLD and relapse at six-month follow-up.

**Methods:** In this prospective cohort study, including 110 patients aged 55 years and older with LLD, information about relapse was collected six months after the acute ECT course. Relapse was defined as a Montgomery-Åsberg Depression Rating Scale (MADRS) score  $> 15$ , hospital admission or restart of ECT. We used multivariable stepwise logistic regression models including the scores on the 10 individual MADRS items at the end of the acute ECT course to predict relapse.

**Results:** Of the 80 responders with available six-month follow-up data, 29 patients (36.25%) had suffered relapse. Higher scores on the MADRS items 'reduced sleep' (odds ratio (OR)=2.03,