

POSTER PRESENTATIONS

ADULT NEUROLOGY (CNS/CSC)

DEMENTIA AND COGNITIVE DISORDERS

P.001

Predictors of long-term care admission in patients presenting to the rural and remote memory clinic in Saskatchewan

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Background: Transitioning from home to long-term care (LTC) is challenging for people with dementia and their caregivers. We aimed to elucidate factors predicting long-term care admission within two years of presentation to the Rural and Remote Memory Clinic (RRMC) in Western Canada. **Methods:** A total of 679 community-dwelling patients were seen at the RRMC in Saskatchewan between its establishment in March 2004 through June 2019. Data analysis included 635 patients (admitted to LTC within two years = 222, not admitted to LTC = 413). Each patient was assessed neuropsychologically and completed self-report questionnaires measuring several domains. Both groups were compared using logistic regression analyses. **Results:** Univariate logistic regressions showed that age ($OR = 1.052$, $CI = 1.035$ - 1.069), male sex ($OR = 1.794$, $CI = 1.279$ - 2.517), Functional Activities Questionnaire ($OR = 1.085$, $CI = 1.057$ - 1.114), MMSE ($OR = 0.861$, $CI = 0.827$ - 0.897), and Clinical Dementia Rating score ($OR = 1.132$, $CI = 1.062$ - 1.206) remained significant ($p < .001$). Preserved cognition, as measured by the MMSE, was protective. **Conclusions:** We found that being older, male, more dependent in activities of daily living, and having increased severity of dementia predicted LTC admission. This information may help in planning care for individuals with dementia.

P.002

Comprehensive validation of two commercial immunoassays for the biological diagnosis of Alzheimer's Disease a laboratory diagnostic test

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Background: Plasma pTau217 is a robust biomarker for the diagnosis of Alzheimer's disease (AD). However, most pTau217 assays are not widely available for clinical testing. We assessed the performance of two commercially available plasma pTau217 immunoassays in a clinical diagnostic laboratory for AD

diagnosis. Methods: 219 plasma samples from healthy controls with negative amyloid PET, 115 plasma samples from pathology-confirmed and 263 samples with confirmed amyloid PET were selected. Plasma pTau217 levels were measured using the ALZ-path pTau217 assay on the Quanterix HD-X Simoa platform and the Lumipulse pTau217 assay on the Lumipulse G1200 platform at and BC Neuroimmunology Lab and Neurocode USA. **Results:** For the ALZpath assay, the coefficients were 10.4%, 10.4%, and 9.9%, and for the Fujirebio assay, were 12.1%, 12.2%, and 5.3%, respectively. Sample stability and interference were similar between the two assays, although moderate heterophilic antibody interference and reduced frozen sample stability at -20°C were observed for the Fujirebio assay. Both assays demonstrated similar clinical performance and differentiated individuals with AD (ALZpath AUC = 0.94; Fujirebio AUC = 0.90). **Conclusions:** The performance of the two pTau 217 assays was comparable. The clinical separation between the healthy controls and those with Amyloid pathology was nearly complete for both assays.

P.003

Assessing the impact of attitudes toward aging on cognition and Alzheimer's Disease biomarkers in older adults

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Background: Attitudes toward aging influence many health outcomes, yet their relationship with cognition and Alzheimer's disease (AD) remains unknown. To better understand their impact on cognition and AD risk, we examined whether positive attitudes predict better cognition and diminished risk on AD biomarkers. **Methods:** A subsample of older adults with a family history of AD ($n=54$; women= 39) from the McGill PREVENT-AD cohort participated in this study. Participants completed the Attitudes to Ageing Questionnaire (AAQ-24), providing three scores: psychosocial loss, psychological growth and physical change. Participants underwent cognitive testing (Rey Auditory Verbal Learning Test, RAVLT; Delis-Kaplan Executive Function System-Color Word Interference Test, D-KEFS-CWIT), and AD blood-based biomarker assessments (p-tau217, A β 42/40). Regression models tested associations, adjusting for covariates (age, sex, education, depression, APOE4), and were Bonferroni corrected. **Results:** Positive attitudes were associated with better recall and recognition (RAVLT) and improved word reading, colour naming, switching, and inhibition (D-KEFS-CWIT) ($p<0.00077$), while negative attitudes showed the opposite