self-reported, defined as inability or difficulty in recognizing a familiar face at four meters. Through a standardized neuropsychological evaluation, four cognitive domains (global cognition (MMSE and MMSE-blind), verbal fluency (IST), executive function (TMT) and visuospatial abilities (BVRT)) were assessed up to six times over 12 years of follow-up. To analyze the baseline cognitive performance and cognitive decline over time according to visual loss, we used joint models, which accounted for differential attrition in participants with or without visual loss. These models jointly analyze the longitudinal marker (repeated measures of cognitive scores) and the time to dropout. Results: At baseline, 8.4% had mild near VI, 4.1% had moderate to severe near VI and 5.1% had distance VF loss. Participants with near VI and distance VF loss had lower baseline performances in verbal fluency, global cognition, executive function and visuospatial abilities. Regarding changes over time, no significant differences were observed by visual loss status, except for MMSE where participants with mild near VI exhibited a faster cognitive decline ($\beta = -0.02, p = 0.04$); nevertheless, this faster cognitive decline was no longer significant with the blind version of the MMSE (without vision-related items) ($\beta = -0.01, p = 0.11$). Conclusions: In this large elderly population-based cohort, we found that participants with visual loss had lower baseline performances in several cognitive tests. However, evidences of faster cognitive decline over time are limited.

P3-597 MEDIAL TEMPORAL LOBE NEURODEGENERATION OBSERVED IN WOMEN WHO UNDERWENT BILATERAL OOPHORECTOMY BEFORE THE ONSET OF MENOPAUSE

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Background: Ovarian hormone loss due to bilateral salpingo-oophorectomy (BSO) before the onset of menopause in premenopausal women may lead to medial temporal lobe structural abnormalities later in life. Because alterations in structural imaging biomarkers of neurodegeneration in the medial temporal lobe precede clinical symptoms of Alzheimer’s disease, longitudinal follow-up of this cohort with cognitive testing is warranted.

Results: The median age at oophorectomy in the BSO group was 46 (interquartile range=45-48). Amygdala volume was smaller ($p<0.001$), parahippocampal and entorhinal cortex was thinner ($p=0.046$), and the entorhinal white matter FA was lower ($p=0.03$) in the BSO group compared to the referent group. Although not significant in this sample, lower HVa ($p=0.13$) and higher PiB SUVr ($p=0.17$) were observed in the BSO group compared to the referent group.

Conclusions: Abrupt hormonal changes due to BSO in premenopausal women may lead to medial temporal lobe structural abnormalities later in life. Because alterations in structural imaging biomarkers of neurodegeneration in the medial temporal lobe precede clinical symptoms of Alzheimer’s disease, longitudinal follow-up of this cohort with cognitive testing is warranted.

P3-598 AN ASSESSMENT OF DIRECT AND INDIRECT COSTS OF DEMENTIA IN BRAZIL

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Background: To analyze costs associated with dementia based on a cross-sectional study in the Brazilian health system. Methods: Direct and indirect costs were estimated by conducting comprehensive interviews on the use of resources in a sample of 156 patients with dementia treated at an outpatient memory clinic of a tertiary hospital. A regression model was used to determine the main determinants of costs associated with dementia. Results: Global costs of dementia were US$1,012.35; US$1,683.18 and US$1,372.30 per patient/month for mild, moderate and severe stages, respectively. Indirect costs ranged from US$536.62 to US$545.17 according to severity. Dementia costs were influenced by medication, FAST score, and educational level of caregiver. Conclusions: The study represents an original contribution toward establishing direct and indirect costs of dementia in Brazil. Results indicate significant economic impacts, including projection of annual costs of US$16,548.24 per patient.

P3-599 COMPARISON OF REAL-WORLD HEALTHCARE COSTS BY TREATMENT AND DIAGNOSIS SEQUENCE AMONG NEWLY DIAGNOSED ALZHEIMER’S DISEASE PATIENTS WITH COMMERCIAL AND MEDICARE SUPPLEMENTAL INSURANCE

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**Background:** Although there is no cure for Alzheimer’s disease (AD), there are medications that ameliorate symptoms, some of which may occur prior to AD diagnosis. This retrospective cohort analysis aims to describe the potential healthcare cost implications of the timing of treatment initiation relative to AD diagnosis. **Methods:** Newly diagnosed AD patients were identified in the January 2010 – December 2016 Truven Health MarketScan Commercial and Medicare Supplemental Databases and stratified by payer type: commercial (50-64 years) and Medicare (65-100 years). Study patients were required to have continuous medical and pharmacy benefits enrollment for 36 months prior to, and 12 months following, the first AD diagnosis and no evidence of vascular dementia or other severe neuropsychiatric conditions during the preceding 36 months. Patients were categorized into four sub-cohorts based on the sequence of initial diagnosis and treatment: diagnosed but no treatment; concurrent diagnosis and treatment (within +/- 60 days); treatment first (treatment >60 days prior to diagnosis); diagnosis first (treatment >60 days after diagnosis). Total per-patient per-year all-cause healthcare costs were measured during the 36 months preceding and the 12 months following the first AD diagnosis. **Results:** A total of 2,372 treated and 944 untreated commercial patients, and 55,598 treated and 20,504 untreated Medicare patients were included in the analysis. Treatment first was the most common treatment sequence (Commercial: 49%; Medicare: 62%). Mean annual total healthcare costs are presented in figure 1. In both cohorts, treated patients who received concurrent treatment incurred the lowest costs during the 36 months preceding and the 12 months following the initial diagnosis. in the Medicare cohort, untreated patients followed by those who were diagnosed first (i.e. received treatment at least 60 days later) incurred the highest costs in the 12 months following diagnosis. In the commercial cohort, untreated patients followed by those who received treatment first incurred the highest costs both before and after treatment. **Conclusions:** These results demonstrate that initiating treatment at the time of initial diagnosis is associated with lower costs. Understanding the optimal timing of treatment initiation for clinical and cost outcomes is important for informing disease management strategies.