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O2-05-07 THE NEUROPATHOLOGICAL FEATURES ASSOCIATED WITH ALZHEIMER'S DISEASE DIAGNOSIS IN THE OLDEST OLD VERSUS THE YOUNG OLD

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Background: Most studies that have investigated the neuropathological features of Alzheimer's disease (AD) have examined the young-old (65-85 years of age). However, the oldest old are the fastest growing demographic and have especially high risk for developing AD. The few studies of the neuropathological features of dementia in the oldest old have been small and have focused on few neuropathological features. The objective of this study was to examine whether the association between neuropathological features and clinical AD diagnosis varies by age (young-old: 70-79 years, oldest old: $\geq$90 years). **Methods:** We examined 5021 people (age $\geq$ 70 at death) from the National Alzheimer's Coordinating Center database who had a clinical diagnosis of normal cognition (within 1 year prior to death) or AD and a neuropathological examination post mortem. We analyzed the association between neurofibrillary tangles (NFT), neuritic plaques (NP), diffuse plaques, amyloid angiopathy, Lewy Bodies (LB), large infarcts, atherosclerosis, and lacunes and diagnosis of AD using logistic regressions. We used an interaction to examine the effect of age and receiver operating characteristic (ROC) analysis to evaluate the predictive value of the model. **Results:** Of the participants, 56% were female, 18% were $\geq$90 years, and 82% had a diagnosis of AD. All neuropathological features except large infarcts and lacunes were positively associated with AD. The relationship between most neuropathological features and AD was attenuated in the oldest old compared to the young-old. Correspondingly, the predictive value of the model with all neuropathic features included was worse in the oldest old (ROC area under the curve, 95% confidence interval: 0.83, 0.79-0.87) compared to young old (0.92, 0.89-0.96). **Conclusions:** Neuropathological features appear to be less predictive of AD in the oldest old compared to the young old. The explanations for this difference are not clear but may be attributed to survival bias, different biology, or genetic factors.