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### Co-morbidity and Mortality in Alzheimer's Disease

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**Introduction.** The interface of physical and mental health and its relevance for diagnosis and therapy in Alzheimer's disease (AD) is clinically relevant for efforts that aim on the reduction of avoidable mortality. **Objectives and aims.** Based on a representative hospital-based study with an 8-year observation period in hospital admissions the possible diagnostic and therapeutic implications of physical comorbidity in AD are represented.

**Methods.** All comorbidities with a prevalence  $\geq 1\%$  at initial hospitalization were compared between 634 individuals with late-onset AD and 72,244 controls aged above 70 years. Comorbidities that were risk factors for later hospital-based mortality were identified using multivariate forward logistic regression analysis.

**Results.** At initial hospitalization individuals with AD compared to controls suffered more eating disorders, infectious diseases, neurological diseases, and neck of femur fractures. In contrast, some cardiovascular diseases (CVDs) and risk factors of CVD were less prevalent in individuals with AD compared to controls. In univariate comparisons four out of six disease contributors to in-hospital deaths in the AD sample were CVDs. Risk factors for later hospital-based mortality in multivariate comparisons were pneumonia, ischemic heart disease, and gastroenteritis. All mortality risk factors had an equal impact on hospital-based mortality in individuals with AD compared to controls.

**Conclusions.** Pulmonary infections and neurodegeneration related diseases need special attention in individuals with AD. In addition, CVDs and risk factors of CVD may be initially under recognized in individuals with AD. Our data will be discussed in relation to general physical health and mortality in AD.