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## RISK SCORE TO ESTIMATE SURVIVAL AMONG ADVANCED DEMENTIA IN TAIWAN: A LONGITUDINAL BASED STUDY

Wen-Hsun Hsu<sup>a</sup>, Kwo-Chen Lee<sup>a</sup> and Jia-Jean Yin<sup>b,c</sup><sup>a</sup>China Medical University hospital, Taiwan<sup>b</sup>Veteran General Hospital, Taiwan<sup>c</sup>National Defense Medical Center, Taiwan

**Background:** As the population ages, dementia patients are increasing. Dementia is irreversible chronic degenerative diseases, death is the inevitable result. But the disease course is slow, and the symptom complex in the terminal stage, it cannot effectively predict the time of death. An accurate forecasting tool can help dementia patients to do the advance directives at the end of life, provide the comfort and good quality of life palliative care. Therefore, it will help dementia patients in palliative care, if identify possible predictors of death within six months as the intervention timing reference index.

**Methods:** This study adopted a retrospective cohort study from Taiwan National Health Insurance Database(NHID). Capture diagnosed dementia patient, based on their individual basic characteristics (age, gender), diagnostic classifications (Alzheimer's disease, vascular dementia, other dementia), chronic comorbidities (including stroke, hypertension, diabetes, coronary artery disease, heart failure, renal failure, cancer, high cholesterol, chronic obstructive pulmonary disease and cirrhosis); and six months before the death of acute illness (pneumonia, urinary tract infections, fractures, bedsores, delirium), hospital situation (hospitalization, emergency) and medical treatments (nasogastric tube insertion, oxygen therapy, cardiopulmonary resuscitation, and endotracheal intubation) as index. Statistical methods using statistical software version SAS 9.3. COX proportional hazards model was used to identify risk factors of death in the derivation set. Then, we use the steps proposed by the Framingham Heart Study to build a mortality prediction model with the scoring system in Taiwan within a six-month and one-year survival rate of elderly people with dementia. The performance of the risk models was evaluated by the area under the receiver operating characteristic curve (AUROC).

**Results:** The mortality rate was 55.1% (n = 20542) in 2000-2010. A total of 19 variables as mortality risks, including diagnosis, age, sex, cancer, renal failure, pressure ulcers, sepsis, hospital, nasogastric tube insertion, oxygen therapy, the sum risk score ranged from 0-17 points. AUROC verify this model of risk of death, which is 0.6964 in six months, 0.6968 in one year.

**Conclusions:** This model from Taiwan National Health Insurance database which has a moderate prediction accuracy within six-months and one-year of death in elderly dementia.

### Biography

Kwo-Chen Lee has completed her Ph.D. from the school of nursing of National Yang-Ming University in Taiwan in 2011. Lee had been working in the clinical oncology ward for 12 years before getting to her Ph.D. degree. She also interested in nursing research while in university, and has published more than 10 papers in reputed journals. She is an associate professor of nursing at China Medical University, Taiwan since 2011. Her major studies are palliative care and end of life care among patient and family caregiver. She recently worked on family caregiver support with terminally ill patient studies, and she received the NIH funding from Taiwan's government in 2015-2017. Lee also has been serving as an editorial board member of reputed journal in Taiwan.

rubylee@mail.cmu.edu.tw

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