

中文題目：心率變異度在血液透析病患可預測重大心血管不良事件與住院
英文題目：Heart Rate Variability Predicts Major Adverse Cardiovascular Events and
Hospitalization in Maintenance Hemodialysis Patients

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Background: Heart rate variability (HRV) has been linked to mortality in maintenance hemodialysis (HD) patients, but it is less clear whether HRV is associated with major adverse cardiovascular events (MACEs) and hospitalization.

Materials and Methods: This study enrolled 179 maintenance HD patients. HRV was measured to assess its prognostic significance in relation to MACEs and hospitalization.

Results: During the follow-up period of 33.3 ± 6.7 months, 36 (20.1%) patients had a MACE, and 98 (54.7%) experienced hospitalization. In multivariate adjusted Cox regression analysis, low very low frequency (VLF) power (hazard ratio [HR], 0.738; 95% confidence interval [CI], 0.628–0.867; $p < 0.001$), low serum albumin levels, high fasting glucose and total serum calcium levels, current smoking habits, and the use of angiotensin-converting enzyme inhibitors or angiotensin II receptor blockers were all significantly associated with MACEs. Low VLF power (HR, 0.858; 95% CI, 0.772–0.953; $p = 0.004$), low serum albumin levels, high serum triglycerides, and high serum calcium-phosphorus product levels significantly predicted hospitalization in maintenance HD patients.

Conclusions: Reduced VLF power is linked to an increased risk of MACEs and hospitalization in maintenance HD patients. Assessing cardiac autonomic function through HRV is of pivotal prognostic significance for this patient population.