Methods
• The baseline period was defined from month 4 to month 9 of dialysis for incident patients, and from January to June for prevalent patients.
• The follow-up period was from the 1st day after the baseline period to death, transplant, loss to follow-up, change of primary payer, or the end of 2005.
• Comorbidities were defined using the ESRD Medical Evidence Form and medical claims in the baseline period.
• A Cox proportional hazard model was used for model development and validation.
• Age, race, gender, and primary ESRD cause were included in the model.
• The index score for each comorbidity was defined based on the coefficient estimates, and the index score of each patient was the sum of the coefficients of the comorbidities of each patient.
• Model fit statistics: Akaike’s Information Criteria (AIC), Schwartz Bayesian Criteria (SBC), and -2 log Likelihood: model predictive statistics: Kent-O’Quigley R-square and c-statistic; parameter estimates and standard errors of the estimates were compared between the model with the individual comorbidities and the one with the new index.

Results
• 102,134 incident and 142,517 prevalent patients were included (Table 1).
• Mean follow-up time was 2.3 years for the incident cohort and 2.5 years for the prevalent cohort.
• Patient comorbidity increased over years (Table 2).
• Prevalent patients were younger, had a smaller proportion of whites, and less comorbidities (Tables 1,2).

Conclusions
• The new comorbidity score system works well for mortality analysis among dialysis patients.
• This score system is designed for analyses using administrative data.
• Diabetes has a lower score than expected because diabetes as a primary cause of ESRD was also included in the model when the score system was developed; they are highly correlated, it is necessary to include diabetes as ESRD primary cause in the model when using this score.
• For similar reasons, age should also be included in the analysis when this score system is used.
• The score depends on how the comorbidities are defined in the claims data.
• CHF had the highest score, 3 and liver disease had the lowest score, 0 (Table 2).
• The comorbidity score worked almost the same as the individual comorbidities in terms of model fit, prediction, and effect on inference (Table 3).
• Standard errors for the estimates from the two models were almost the same.
• The new score was also compared with the Charlson comorbidity Index (CCI); it outperforms the CCI.