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Uiss and ssign scores in asian patients with renal cell carcinoma

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Background: The UISS prognostic score for renal cell carcinoma was developed in 661 post-nephrectomy patients regardless of histology to predict overall survival in patients with kidney cancer. The SSIGN score was developed separately to predict cancer-specific survival in patients with clear cell renal cell carcinoma only. The objective of this study was to compare the utility of the UISS and the SSIGN scores, and to extend the validation of these scores to a large Asian (Chinese and Malay race) series in a single institution.

Methods: This was a retrospective study of 406 patients with histologically verified clear cell renal cell carcinoma who had undergone nephrectomy between 1990 and 2006 at the Singapore General Hospital. Cox regression analysis was performed with the common endpoints of cancer specific survival for each model. The performances of the two models was directly compared using a likelihood ratio (LR) model, where measures of adequacy were determined in comparing individual models against an overall model.

Results: Of the 406 available subjects, 81 had died of cancer over follow-up, 62 occurring in the first 5 years. 5 year predicted survival was 86% (95% C.I. 81.2% - 89.3%). The UISS score (ranging between 1 - 5) was associated with a Nagelkerke's R² of 0.212, a hazard ratio of 2.64 (95% C.I. 2.18 - 3.20, p < 0.001). The corresponding results for the SSIGN score (ranging between 0 - 15), was R² of 0.302, a hazard ratio of 1.45 (95% C.I. 1.36 - 1.54, p < 0.001). The adequacy index of UISS and SSIGN was 65% and 98% respectively (single factor 2 = <0.001).

Conclusion: Both the UISS and the SSIGN scores are excellent predictors of survival in Asian patients. The SSIGN score is superior to the UISS score in predicting cancer-specific survival in Asian patients.