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KIDNEY CANCER

KARAKIEWICZ MODELS ARE ROBUST

Although the preoperative and postoperative Karakiewicz models for renal cell carcinoma (RCC) are commonly used tools for predicting disease-specific survival (DSS), their predictive accuracy had not been robustly validated until recently. Urologists from Italy, Germany, Austria, the USA, and Spain have now established the validity and generalizability of these nomograms in surgical series from large-volume, mid-volume, and small-volume centres across Europe and the USA.

Cindolo *et al*. retrospectively examined 3,231 patients who were treated with radical or partial nephrectomy for RCC between 1992 and 2010 at European and American centres of various size. Despite differences between the centres, about 75% and 80% of patients had a good or very good prognosis (5-year predicted probability values of 80–100%) according to the preoperative and postoperative nomograms, respectively.

Kaplan–Meier estimates of DSS were 0.95 (0.94–0.96; 95% CI), 0.92 (0.91–0.93; 95% CI), 0.86 (0.84–0.87; 95% CI), and 0.77 (0.75–0.80; 95% CI) at 1 year, 3 years, 5 years, and 10 years, respectively. As expected, the postoperative nomogram performed significantly better than the preoperative one. Stratified c-indices for DSS were 0.784 (0.753–0.814; 95% CI) for the preoperative nomogram and 0.842 (0.816–0.867; 95% CI) for the postoperative nomogram. Overall, the authors were impressed by how well both nomograms performed in US-based centres, despite being developed for European patients.

"We have demonstrated that both preoperative and postoperative models are ready to be introduced into clinical practice," says Luca Cindolo, an Italian urologist who led the study. "We think that the future of prognostic systems in renal cancer is to include them in surgical and medical clinical trials—this is the only way to demonstrate to the urological population that they are viable, useful, helpful, and easy-to-use."

These data suggest that the nomograms can be relied upon to guide preoperative and postoperative decision-making in patients with RCC at various stages. "In response to those who still question the practical use of prognostic models," says Cindolo, "we would suggest they try them!"

Melanie Clyne

Original article Cindolo, L. *et al.* Assessing the accuracy and generalizability of the preoperative and postoperative Karakiewicz nomograms for renal cell carcinoma: results from a multicentre European and US study. *BJU Int.* doi:10.1111/j.1464-410X.2012.11670.x

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