

FOCUS ON KIDNEY CANCER

Renal preservation improves cardiac and overall survival

Performing partial rather than radical nephrectomy might be associated with significant increases in overall and cardiovascular survival in patients with a clinically localized small renal mass. So say researchers from the Cleveland Clinic, who investigated the effects of preservation of renal function in 1,004 patients with a stage cT1b (4–7 cm in size, limited to the kidney) renal mass who underwent either partial ($n = 524$) or radical ($n = 480$) nephrectomy at their center during 1999–2006.

Radical nephrectomy was associated with a greater decrease in estimated glomerular filtration rate (eGFR; 23.5 versus 16.6 ml/min/1.73 m²) than was partial nephrectomy, and these tumors were more likely to be malignant and to be upstaged on final pathologic review. As treatment was not randomly allocated, the investigators used a propensity score model to control for this selection bias.

Partial nephrectomy was associated with cancer-specific survival at least

equivalent to that following radical nephrectomy at each pathologic tumor grade or stage. The partial approach was also associated with an increase in overall survival; this effect could be attributed to the higher postoperative eGFR associated with partial versus radical nephrectomy. Importantly, greater postoperative eGFR was an independent predictor of improved cardiovascular survival. The mean difference in loss of renal function between the partial and radical nephrectomy groups translated into a 25% and 17% improvement in the risk of cardiovascular and overall death, respectively.

The authors conclude that partial nephrectomy is a safe and feasible option in patients with these small renal tumors. If using this approach, efforts to ensure maximal renal preservation might translate into tangible benefits to the patient in terms of cardiovascular and overall survival.

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Original article Weight, C. J. *et al.* Nephrectomy induced chronic renal insufficiency is associated with increased risk of cardiovascular death and death from any cause in patients with localized cT1b renal masses. *J. Urol.* **183**, 1317–1323 (2010)