

## **Favorable Functional Outcome and Prevention of New Onset of Chronic Kidney Disease by Partial Nephrectomy for Renal Cell Carcinoma of Clinical T1b in Comparison to Radical Nephrectomy**

**Introduction and Objectives:** We retrospectively assessed the medium-term functional outcome after partial nephrectomy for the patients with clinical T1b renal cell carcinoma influence of cold ischemia on postoperative renal function and the new onset of late-stage chronic kidney disease during medium-term follow-up.

**Materials and Methods:** Two hundred and seventy-three Japanese patients who underwent partial or radical nephrectomy for clinical T1b renal cell carcinoma and were followed for 6 months or more in our department were the subjects of the present study. Renal function was analyzed with an estimated glomerular filtration rate. The e-GFR was estimated with the modified isotope dilution mass spectrometry-Modification of Diet in Renal Disease Study equation proposed by Japanese Society of Nephrology.

**Results:** Two hundred and six patients were treated with radical nephrectomy and 67 patients with partial nephrectomy. Cancer-specific and overall survival did not differ between two groups. Partial nephrectomy maintained higher estimated glomerular filtration rate levels during 5 years after surgery compared to those after radical nephrectomy. Partial nephrectomy for T1b renal cell carcinoma also prevented the new onset of chronic kidney disease at the higher degree than radical nephrectomy. The functional outcome of partial nephrectomy for T1b renal cell carcinoma was very similar to that for T1a RCC.

**Conclusions:** Partial nephrectomy for T1b renal cell carcinoma was as effective as that for T1a renal cell carcinoma with to maintain superior postoperative functional outcome compared to radical nephrectomy during the medium-term follow-up. Whether these effects result in the higher overall survival remains to be determined.