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Introduction & Objectives: Small renal masses are increasingly being discovered incidentally on routine abdominal imaging performed for other purposes. In recent decades, radical nephrectomy has been replaced by nephron-sparing surgery for the management of small renal masses. About 20% of such masses are benign, while a significant proportion of malignant small renal masses demonstrate slow growth kinetics and non-aggressive histologic features.

We aim to describe our outcomes with partial nephrectomy and identify the prevalence of recurrence in patients with positive surgical margins (PSMs).

Materials & Methods: A retrospective review of nephrectomy from a tertiary referral centre was performed to identify who underwent partial nephrectomy for localized (NX/N0/cM0) solid renal tumours 7 cm or less between January 2009 to July 2018.

Results: 52 patients underwent laparoscopic partial nephrectomy (LPN) and 36 underwent open partial nephrectomy (OPN) (N=98) for a 7 cm or less renal tumour. Median age was 63.4 years. Arterial hypertension was the most common observed risk factor and median tumour size was 3.12 cm. Renal cell carcinoma (RCC) was present in 70 patients. RCC clear cell subtype was found in 57% of patients mostly pT1a (72,5%). PSMs after partial nephrectomy was identified in 11 (15%). 2 (18%) with PSMs presented recurrence during the follow-up.

Conclusions: Partial nephrectomy is associated with durable cancer control in patients with renal tumours 7 cm or less, of which most represent renal cell carcinoma. The small association between a PSM and progression suggests that complete nephrectomy is not necessary in patients with a PSM but it is necessary to keep a close watch for recurrence. A better understanding of the various characteristics of these masses will allow better understanding and follow-up of patients with PSMs.