



Percutaneous kidney ablation: a good option in selected cases

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Partial nephrectomy (PN) has been recognized as the gold standard for definitive treatment of cT1 renal tumors. However, percutaneous ablation (PA) is widely regarded as an acceptable alternative in select patients. Current the American Urological Association (AUA) guidelines view both PN and PA as first-line options in T1a (<3 cm) patients, especially in those deemed poor surgical candidates (1). Despite this shift, an overwhelming number of patients remain treated with PN, which has supplanted radical nephrectomy over the past decade as the predominant surgical treatment, whereas older cohorts are more likely to undergo ablation or active surveillance (2).

Prior studies have compared outcomes of PA to those of PN in T1a renal cell carcinoma (RCC). A systematic review and meta-analysis of 3,974 patients compared thermal ablation to PN revealing no significant differences in local recurrence or metastases over PN. In fact, thermal ablation was associated with a lower morbidity rate and a lesser reduction in estimated glomerular filtration rate (eGFR) compared with PN, but with higher all-cause mortality and cancer-specific mortality (3). However, when considering larger renal masses (T1b: 4–7 cm), PN is preferred as data supporting the oncological safety of PA are controversial. A recent study on 31 patients with cT1b renal tumors treated with PA showed a significantly higher rate of local cancer recurrence at 1 year compared to those treated with PN (4). Andrews *et al.* offer the most robust analysis of this intriguing question to date by evaluating a large cohort of >1,400 patients with long term follow up ranging from 6–9 years depending on treatment modality.

In this study, oncological outcomes of PN and PA (either radiofrequency ablation or cryoablation) are compared. Local recurrence, metastases, death from RCC, and all-cause mortality in cT1 renal masses treated with PA were found to be similar to PN. However, a higher rate of death was seen in those T1b patients receiving PA. The authors recognize that while this was not statistically significant, large difference cannot be ruled out without further evaluation (5).

While the debate about management of small renal masses remain open, consideration of biopsy coupled with genomics as well as the use of radiographic features may further aid with the discussion to pursue treatment vs. surveillance. Better determination of which masses are likely to behave in an aggressive or more indolent fashion is still being evaluated (6–8).

Overall, current evidence suggests PA is a safe and durable solution for T1a renal masses when compared to PN, and it may in fact be a superior option for select patients (9). When considering the slow rate of growth for small renal tumors (10), it is challenging to compare PA to PN without a significant patient population and adequate long-term follow-up. While commending these authors for their contribution to this ongoing query, and while their study significantly increases the patient population evaluated, offering greater confidence for PA for T1a renal masses, we still recognize that future investigation with long-term follow-up of patients with T1b renal masses is needed and perhaps newer genomic techniques with renal biopsy may better direct therapy.

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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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