



## Letter to the Editor

### Reply to Takeshi Takahashi's Letter to the Editor re: Bimal Bhindi, Christine M. Lohse, Phillip J. Schulte, et al. Predicting functional outcomes after partial and radical nephrectomy. *Eur Urol* 2019;75:766–72. Partial Nephrectomy: “Geocentrism” of the 21st century in the Church of Urology?

We thank Dr. Takahashi for the comments on and interest in our paper [1]. We recognize that randomized trial data did not demonstrate a survival advantage of partial nephrectomy (PN) over radical nephrectomy (RN) and agree that complex PNs carry a higher risk of perioperative complications and morbidity. In this light, we believe that the pendulum should swing away from performing heroic PNs, particularly in binephric patients with normal renal function, no proteinuria, and no medical comorbidities predisposing to future chronic kidney disease (CKD).

At the same time, we would caution against taking a step 30 yr into the past and performing RN for most patients without an absolute indication for PN simply because it is an easier operation. Indeed, no oncologic advantage has been demonstrated for RN over PN for T1a tumors.

Although it has been shown that surgically induced CKD has a lower risk of CKD progression and mortality compared to medical CKD [2], we would respectfully submit that there remain a number of reasons to preserve renal function when managing renal tumors. One cannot predict who might experience further renal function insults, which is especially important to consider in patients with longer life expectancy. Patients with a postoperative estimated glomerular filtration rate (eGFR) of  $<45$  ml/min/1.73 m<sup>2</sup> are at greater risk of CKD progression, largely due to hyperfiltration injury [3]. Furthermore, our models demonstrate that older age, diabetes, diminished preoperative eGFR, and proteinuria may be associated with progressive renal function decline over time [1]. Even though the number of patients who will develop end-stage renal disease (ESRD) is small, the implications of this unfortunate event cannot be overstated, as noted in our study [1].

While CKD is largely asymptomatic until it approaches ESRD, we cannot disregard the ensuing secondary impacts

of CKD. A greater renal function insult at upfront surgery may accelerate the process of renal function decline and commit patients to lifelong dietary modifications and renoprotective medical therapy to help them avoid ESRD. Moreover, one study suggests a higher risk of new-onset hypertension after RN compared to PN [4]. In addition, diminished renal function may preclude patients from medical therapies needed for other comorbidities.

Finally, particularly for younger patients and patients with genetic tumor syndromes, there may be a risk of contralateral renal tumor recurrence. This potential future risk cannot simply be disregarded at the time of the original surgery.

Thus, in summary, we would advocate for an approach that carefully balances oncologic risks [5], technical factors, estimated risks of complications, and projected renal function outcomes to help guide recommendations for management, whether active surveillance, PN, RN, or percutaneous ablation. We believe that our model can help in this regard by formally quantifying expected renal function outcomes with PN and RN. In 2019, we believe that this will help us drive towards personalized decision-making for each patient.

**Conflicts of interest:** The authors have nothing to disclose.

## References

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