

15. Simmons MN, Ching CB, Samplaski MK, Park CH, Gill IS. Kidney tumor location measurement using the C index method. *J Urol*. 2010;183:1708–1713.
16. Simhan J, Smaldone MC, Tsai KJ, et al. Objective measures of renal mass anatomic complexity predict rates of major complications following partial nephrectomy. *Eur Urol*. 2011;60:724–730.
17. Borgmann H, Reiss AK, Kuroschi M, et al. R.E.N.A.L. score outperforms PADUA score, C-index and DAP score for outcome prediction of nephron sparing surgery in a selected cohort. *J Urol*. 2016;196:664–671.
18. Okhunov Z, Shapiro EY, Moreira DM, et al. R.E.N.A.L. nephrometry score accurately predicts complications following laparoscopic renal cryoablation. *J Urol*. 2012;188:1796–1800.
19. Schmit GD, Thompson RH, Kurup AN, et al. Usefulness of R.E.N.A.L. nephrometry scoring system for predicting outcomes and complications of percutaneous ablation of 751 renal tumors. *J Urol*. 2013;189:30–35.
20. Correa AF, Toussi A, Amin M, et al. Small renal masses in close proximity to the collecting system and renal sinus are enriched for malignancy and high fuhrman grade and should be considered for early intervention. *Clin Genitourin Cancer*. 2018;16:e729–e733.
21. Sorbellini M, Kattan MW, Snyder ME, et al. A postoperative prognostic nomogram predicting recurrence for patients with conventional clear cell renal cell carcinoma. *J Urol*. 2005;173:48–51.
22. Thompson RH, Leibovich BC, Lohse CM, et al. Dynamic outcome prediction in patients with clear cell renal cell carcinoma treated with radical nephrectomy: the D-SSIGN score. *J Urol*. 2007;177:477–480.
23. Park YH, Baik KD, Lee YJ, Ku JH, Kim HH, Kwak C. Late recurrence of renal cell carcinoma > 5 years after surgery: clinicopathological characteristics and prognosis. *BJU Int*. 2012;110:E553–E558.

should be congratulated for their high rate of utilization of PN (83.2%, overall and 73% for the hilar tumors) which is far above what is reported at the national level.⁴ Based on this study, surgeons capable of performing PN should feel free to plan and proceed in cases of renal hilar tumors and not worry that these tumors are any more dangerous than tumors arising elsewhere in the kidney.

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References

1. Chen F, Zhang Y, Şenbabaoğlu Y, et al. Multilevel genomics-based taxonomy of renal cell carcinoma. *Cell Rep*. 2016;14:2476–2489. <http://dx.doi.org/10.1016/j.celrep.2016.02.024>. Epub 2016 Mar 3.
2. Hakimi AA, Reznik E, Lee CH, et al. An integrated metabolic atlas of clear cell renal cell carcinoma. *Cancer Cell*. 2016;29:104–116. <http://dx.doi.org/10.1016/j.ccell.2015.12.004>.
3. Russo P. Oncological and renal medical importance of kidney-sparing surgery. *Nat Rev Urol*. 2013;10:292–299.
4. Huang WC, Lowrance WT, Bjurlin M, Swartz C, Russo P, Elkin E. Management of small kidney cancers in the new millennium: contemporary trends and outcomes in a population-based cohort. *JAMA Surg*. 2015;150:664–672.

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EDITORIAL COMMENT



Over the last 20 years, our understanding of renal cortical tumors (RCT) and their best management has evolved. Formerly, surgeons felt that tumors of all sizes and locations were best managed by radical nephrectomy (RN) if there was a functional contra lateral kidney. Partial nephrectomy (PN), initially used sparingly, was reserved for essential indications such as tumor in a solitary kidney, tumor in a patient with renal calculus disease or renal insufficiency, and for patients with bilateral renal tumors. Now we understand that RCT are a complex family of tumors with at least 31 separate subtypes described based on genomic and metabolomic studies.^{1,2} These tumors pose a spectrum of oncologic threats ranging from benign (20%), indolent with limited metastatic potential (25%), and malignant (55%). This variable threat from RCT coupled with the understanding that PN provides equivalent tumor control to RN while at the same time preserving renal function, preventing, or delaying chronic kidney disease and its associated cardiovascular disease lead to enhanced utilization of PN in the elective setting.³

Yet, RN is still overused on the national level for the management of T1 tumors for reasons that are likely multi factorial and may include a surgeon's technical comfort level with PN (by any approach) and concern for common postoperative complications such as bleeding and urinary fistula.⁴ Patients are often told that a tumor close to the major vessels of the renal hilum is not technically amenable to PN and likely to have especially aggressive biology. The authors debunk this latter notion in their 10-year review of 1324 T1 RCT patients of which 226 (17.1%) were classified as hilar in location. The authors note no difference in the risk of malignancy, high nuclear grade, upstaging, or recurrence when compared to nonhilar lesions. In this series of hilar tumors, 31% were benign (13%) or indolent in nature (18%). The authors

AUTHOR RESPONSE



The concept of kidney-sparing surgery or partial nephrectomy (PN) was first reported by Czerny¹ in the 1980's and then revisited by Vermooten¹ in 1950 for the management of encapsulated peripherally located renal tumors. Since, the use of nephron-sparing surgery for the management of renal cell carcinoma (RCC) has seen tremendous growth stimulated by our greater understanding of the deleterious effects of chronic kidney disease (CKD), experience with reno-vascular surgery, and the growing numbers of incidentally discovered small renal masses¹; becoming the standard of care for the management of cT1 renal masses. As we continue to develop and expand the indications of organ-sparing surgical techniques in order to minimize treatment-related side effects, we must also recognize that these techniques are not absolute and must be tailored to the patient's specific tumor biology, physical capacity and treatment expectations.

In the present manuscript, we demonstrate the technical feasibility and oncological safety of the use of partial nephrectomy in patients presenting with hilar lesion measuring 7 cm or less in diameter. The impetus for the publication was not to advocate for “partial nephrectomy for all,” but to provide a greater understanding of the biology of renal mass located near the hilar vessels. Hilar lesions, opposed to those located in the periphery, are less amenable for percutaneous sampling, the mainstay of renal mass risk stratification, and are managed as a homogenous entity of presumed high-grade potential. Here we note that hilar renal masses are no different to peripheral renal masses in regards to histology, nuclear grade, and oncological outcomes. Moving forward, nuclear medicine radiotracers such as ^{99m}Tc-Sestamibi (oncocytic masses) and G-250 Immuno-PET (clear cell RCC), hold promise for the histologic discrimination of renal masses not amenable to percutaneous biopsy but remain limited in the biological information provided. Advances in the detection of circulating tumor DNA (ctDNA),

liquid biopsy, may ultimately provide the best method for renal mass risk stratification,² which in combination with increase understanding in the genetic basis of chronic medical conditions would allow us to individualize treatment options to optimize cancer control while minimizing treated associated side effects.

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References

1. Herr HW. A history of partial nephrectomy for renal tumors. *J Urol.* 2005;173:705–708.
2. Laganosky D, Lorentz C, Al-Qassab U, et al. Use of liquid biopsy for detection of renal cell carcinoma. *J Clin Oncol.* 2017;35(6_suppl). 521-521.

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