

available at [www.sciencedirect.com](http://www.sciencedirect.com)journal homepage: [www.eu-openscience.europeanurology.com](http://www.eu-openscience.europeanurology.com)

European Association of Urology



## Letter to the Editor

**Re: Dinesh K. Agarwal, Clancy Mulholland, Digsu N. Koye, et al. RPN (Radius, Position of Tumour, Invasion of Renal Sinus) Classification and Nephrometry Scoring System: An Internationally Developed Clinical Classification To Describe the Surgical Difficulty for Renal Masses for Which Robotic Partial Nephrectomy Is Planned. *Eur Urol Open Sci* 2023;54:33–42**

Agarwal and colleagues [1] introduced a novel classification system (radius, position of tumour, invasion of renal sinus; RPN) that offers a unique approach to predicting the preoperative surgical difficulty of renal masses scheduled for robot-assisted partial nephrectomy (RAPN). None of the previously described nephrometry systems used such an approach. While RENAL and PADUA have been the most popular and widely used scores for predicting perioperative outcomes of partial nephrectomy, the authors argue that correlations using these first-generation scoring systems have become clinically irrelevant in modern RAPN practice. Experienced surgeons now successfully perform partial nephrectomy for highly complex tumours and achieve perioperative outcomes comparable to those for low-complexity tumours.

The authors convincingly argue that RENAL and PADUA scores are highly inconsistent in predicting meaningful perioperative outcomes for RAPN. Two recent large series also support their views [2,3]. These observations raise serious concerns about the utility of first-generation nephrometry scoring systems in reporting data from RAPN series. Although perioperative outcomes may not be worse for high-complexity tumours, these tumours present greater surgical challenges for resection. Therefore, a surgical difficulty score such as the RPN system offers a more precise and sensible means for accurately assessing the complexity of these tumours.

The authors emphasise that perioperative outcomes of partial nephrectomy can vary depending on whether the surgical approach chosen was open, laparoscopic, or robotic. Several studies indicate that RAPN has a superior morbidity profile in comparison to laparoscopic and open approaches [4,5]. Since none of the first-generation scoring systems were developed specifically for the robotic approach, use

of these scores for reporting may not accurately represent perioperative outcomes, and thus their utility in such data reporting is not scientifically justified.

The RPN scoring system stands out for its simplicity, with the use of only three parameters to classify tumour complexity. This simplicity does not compromise accuracy; instead, it enhances practicality and applicability in real-world settings. The RPN system emerges as a highly suitable and practical tool and should replace the popular RENAL and PADUA systems in future reporting of RAPN series.

**Conflicts of interest:** The author has nothing to disclose.

## References

- [1] Agarwal DK, Mulholland C, Koye DN, et al. RPN (radius, position of tumour, invasion of renal sinus) classification and nephrometry scoring system: an internationally developed clinical classification to describe the surgical difficulty for renal masses for which robotic partial nephrectomy is planned. *Eur Urol Open Sci* 2023;54:33–42. <https://doi.org/10.1016/j.euros.2023.05.007>.
- [2] Razdan S, Okhawere KE, Ucpinar B, et al. The state of robotic partial nephrectomy: operative, functional, and oncological outcomes from a robust multi-institution collaborative. *Urology* 2023;173:92–7.
- [3] Sopotro NA, Ramos-Carpinteyro R, Pedraza AM, Chavali JS, Mikesell C, Kaouk J. MP67-01 Critical evaluation towards the utility of RENAL, PADUA, and the simplified PADUA renal (SPARE) scoring systems in the contemporary cohort of 1816 robotic partial nephrectomy patients. *J Urol* 2024;211(5 Suppl):e1095.
- [4] Tsai SH, Tseng PT, Sherer BA, Lai YC, Lin PY, Wu CK, Stoller ML. Open versus robotic partial nephrectomy: Systematic review and meta-analysis of contemporary studies. *Int J Med Robot* 2019 Feb;15(1):e1963. <https://doi.org/10.1002/rcs.1963>.
- [5] Choi JE, You JH, Kim DK, Rha KH, Lee SH. Comparison of perioperative outcomes between robotic and laparoscopic partial nephrectomy: a systematic review and meta-analysis. *Eur Urol* 2015;67:891–901.

Brendan Dias <sup>a,b,\*</sup>

<sup>a</sup> Department of Urology, Western Health, Footscray, Australia

<sup>b</sup> University of Melbourne, Melbourne, Australia

\*Corresponding author at: Department of Urology, Western Health, 160 Gordon Street, Footscray, Victoria 3011, Australia.  
E-mail address: [diasbrendan@gmail.com](mailto:diasbrendan@gmail.com) (B. Dias).

July 10, 2024

