Author’s response to reviews

**Title:** The Role of RENAL, PADUA, C-index, CSA Nephrometry Systems in Predicting Ipsilateral Renal Function After Partial Nephrectomy

**Authors:**

Yu-De Wang (d27065@mail.cmuoh.org.tw)
Chi-Ping Huang (D17561@mail.cmuoh.org.tw)
Chao-Hsiang Chang (D8395@mail.cmuoh.org.tw)
Hsi-Chin Wu (D4746@mail.cmuoh.org.tw)
Che-Rei Yang (D8657@mail.cmuoh.org.tw)
Yu-Ping Wang (drahcirxp@gmail.com)
Po-Fan Hsieh (D17341@mail.cmuoh.org.tw)

**Version:** 2 Date: 18 Jul 2019

**Author’s response to reviews:**

R. Autorino (Reviewer 3): The authors improved the manuscript after first round of reviews. I do not have any major remark.

We deeply appreciate the valuable and practical advices, and we have revised the manuscript and responded to the questions in the following.


Ans:
We appreciate your valuable comment. Since the preserved renal volume is important in post-PN ipsilateral renal function preservation, the study you suggested is really essential to our work.
In Discussion, line 16, page 12, we added sentence “Lee et al found that CSA and C-index independently affected the percent reduction in renal cortical volume.[29]”
Riccardo Bertolo (Reviewer 4): Dear Authors,
Congratulations for the effort. Even after your extensive revision, I am afraid the article is of limited interest for the urological community.

We deeply appreciate the valuable and practical advices, and we have revised the manuscript and responded to the questions in the following.

Beyond being underpowered (low sample size), the conclusions are not up to date.
Ans:
Thank you for the comments. Honestly speaking, the sample size in the current study is one major limitation which was mentioned in the manuscript. We believe our study is still innovative since it is the first cohort study to compare ipsilateral functional outcomes measured by radio-isotope scans among four nephrometries. Different from previous studies we provided a more precise correlation between nephrometries and ipsilateral renal function in conclusion.

Based on the results of your study and the different characteristics of each nephrometry systems, you suggest using PADUA score for evaluating the surgical complexity and predicting ischemia time. Nevertheless, the inventor of the PADUA score himself recently suggested the use of a novel (revised) version of the PADUA score that outperformed the PADUA score (please see BJU 2019, the simplified PADUA REnal (SPARE) nephrometry system by Ficarra et al.) that you did not mention. Respectfully, without including the recently published one I feel your paper "old" even before it is accepted.
Ans:
We appreciate your very valuable comment. Nephrometry systems are evolving rapidly in last decades. Like original CSA progressed to mathematical CSA, PADUA evolved into SPARE nephrometry. We embrace challenge because it is the core value of science. And every scientific law resulted from repeated challenge of “old” theory. Despite the publication of SPARE nephrometry, the main conclusion in our study is not being overturned. Conversely, Ficarra et al further confirmed the important role of CSA instead of SPARE nephrometry in post-operative global renal function[1]. In discussion, line 1, page11, we added and revised sentences” Recently Ficarra et al proposed an updated version of PADUA, the Simplified PADUA REnal (SPARE) nephrometry which exerts similar predictive ability of complication. Compared with CSA, SPARE nephrometry is not an independent predictor of renal function impairment [21]. It is possible that multiple factors with equal weights in the PADUA system may weaken the power in predicting IPRF”

Reference