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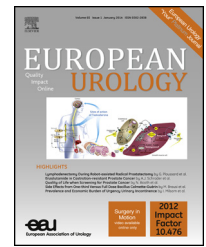
Letter to the Editor

Reply to Patrick H. Tuliao and Koon Ho Rha's Letter to the Editor re: James E. Thompson, Sam Egger, Maret Böhm, et al. Superior Quality of Life and Improved Surgical Margins Are Achievable with Robotic Radical Prostatectomy After a Long Learning Curve: A Prospective Single-surgeon Study of 1552 Consecutive Cases. Eur Urol 2014;65:521–31

We thank Tuliao and Rha for their comments and data. We note they report that the robotic assisted radical prostatectomy (RARP) learning curves they observed and those observed by other studies (referenced in their letter and our study) were similar to ours [1]. What we found particularly interesting in our study was that even experienced, high-volume open surgeons could eclipse their open oncologic and functional outcomes, which had not previously been shown.

The conclusion reached by Tuliao and Rha, that "prior exposure to laparoscopic prostatectomy does not significantly affect the learning curve," based on a similar learning curve and <3000 previous open radical prostatectomies (ORPs) and laparoscopic radical prostatectomies (LRPs), requires further study through high-quality RARP learning curve studies of surgeons who have completed dedicated LRP fellowships or have extensive prior LRP experience.

We must clarify that we did not, as Tuliao and Rha state, "compare the learning curves of RARP and ORP." We compared outcomes throughout the RARP learning curve against ORP outcomes beyond the ORP learning curve (3000 prior ORPs). We reported two aspects of the RARP learning curve: number of cases to surpass ORP outcomes and number of cases to reach a plateau. It is unclear to which aspect of the RARP learning curve Tuliao and Rha refer when stating, "in terms of operative time, complication rates, overall PSMs, and early urinary continence outcomes, the learning curve was overcome after approximately 80, 60, 140, and 100 cases." We assume this refers to number of cases before RARP outcomes surpassed ORP, as the number to reach a plateau was much larger in our study.

As discussed by Vickers in the accompanying editorial [2], we caution readers when interpreting studies that categorize the learning curve into crude "blocks" of cases (eg, 1–300 vs 301–1000 in the study by Vora and colleagues [3], referred to by Tuliao and Rha) and/or that fail to adjust for differences between the ORP and RARP groups by methods such as multivariate regression analysis, matched-pair analysis, or propensity score adjustment. We encourage researchers interested in reporting their own learning curves to design high-quality studies that model case experience as a continuous variable, to adjust for confounders, and to use validated quality-of-life questionnaires.

We agree Tuliao and Rha that robotic technology offers potential for developing innovative techniques that may shorten the learning curve and improve outcomes. In their hands, this appears to have shortened the learning curve for the Retzius-sparing approach; at our center, robotic technology has allowed us to be more aggressive in preserving all identifiable accessory pudendal arteries, and that has recently improved our sexual function outcomes (unpubl. data). Selective intrafascial dissection to improve nerve sparing, as pioneered by surgeons such as Mani Menon (Florida) and Ash Tewari (California), is facilitated by the magnification and downscaled fine movements of robotics. We therefore agree that the learning curve may become shorter, and new techniques (previously difficult with the open platform) may evolve.

References

[1] Thompson JE, Egger S, Böhm M, et al. Superior quality of life and improved surgical margins are achievable with robotic radical prostatectomy after a long learning curve: a prospective single-surgeon study of 1552 consecutive cases. Eur Urol 2014;65:521–31.

[2] Vickers AJ. What are the implications of the surgical learning curve? Eur Urol 2014;65:532–3.

[3] Vora A, Marchalik D, Kowalczyk K, et al. Robotic-assisted prostatectomy and open radical prostatectomy for locally-advanced prostate cancer: multi-institution comparison of oncological outcomes. Prostate Int 2013;1:31–6.

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