

# Conflicting evidence and methodologic concerns in recent meta-analyses of tranexamic acid in radical cystectomy

## Re: The efficacy and safety of tranexamic acid use during radical cystectomy

Dhruv Satya Sahni<sup>1</sup>, Johannes See Yi Xian<sup>2</sup>

<sup>1</sup>University of Glasgow, United Kingdom; <sup>2</sup>Department of Urology, University Hospitals Nottingham NHS Trust, United Kingdom

Cite as: Sahni DS, Xian JSY. Conflicting evidence and methodologic concerns in recent meta-analyses of tranexamic acid in radical cystectomy. *Can Urol Assoc J* 2026;20(7):E301. <https://dx.doi.org/10.5489/cuaj.9771>

We read with interest the recent systematic review and meta-analysis evaluating tranexamic acid (TXA) in radical cystectomy.<sup>1</sup> While this study contributes to a limited evidence base, several methodologic aspects warrant clarification, given the small number of included studies and the influence of individual datasets on pooled estimates.

First, there appears to be inconsistency in outcome definitions and followup windows across included studies. Thromboembolic outcomes were pooled despite differing followup durations, including up to 90 days in some studies. As thromboembolic risk accumulates over time, combining outcomes measured at different time points may introduce bias and limit interpretability in such a small dataset.

Second, we identified a discrepancy in the extraction of perioperative blood transfusion data from Ahmed et al. The original study reports 235 events among 468 patients in the control arm; however, the meta-analysis reports this as 235/438. This discrepancy inflates the control event rate and may bias the effect estimate in favour of TXA. Given that this study contributes substantial weight to pooled analyses, such inaccuracies may meaningfully influence results.<sup>2</sup>

More broadly, recent meta-analyses addressing TXA use in radical cystectomy have reported differing conclusions despite largely overlapping datasets. This likely reflects the fragility of the current evidence base, where analytical choices — including outcome definitions and data handling — can materially alter findings.

Notably, even with incorporation of additional unpublished randomized data obtained through direct correspondence with study investigators (Shakeri et al), effect estimates remain imprecise and compatible with both benefit and no effect.<sup>3</sup> Emerging randomized evidence from the POISE-3 trial similarly demonstrates no statistically significant reduction in composite bleeding outcomes in urologic surgery.<sup>4</sup>

Taken together, the available evidence remains limited and unstable and is best interpreted as hypothesis-generating rather than definitive.

### REFERENCES

1. Suartz CV, Lepine HL, Matalani CFA, et al. The efficacy and safety of tranexamic acid use during radical cystectomy. *Can Urol Asso J* 2026;20:E56-62. <https://doi.org/10.5489/cuaj.9266>
2. Ahmed ME, Andrews JR, Mahmoud AM, et al. Intraoperative tranexamic acid in radical cystectomy: Impact on bleeding, thromboembolism, and survival outcomes. *J Urol* 2025;213:447-54. <https://doi.org/10.1097/JU.0000000000004358>
3. Shakeri A, Fathi M, Sezari P, et al. A randomized double-blind study evaluating fibrinogen-tranexamic acid preventive therapy vs. a combined low-dose regimen on surgical bleeding management and critical care outcomes in patients undergoing radical cystectomy. *Arch Anesthes Criti Care* 2025;11: 55-61. <https://doi.org/10.18502/aacc.v11i4.19355>
4. Tikkinen KA, Marcucci M, Halme ALE. Safety and efficacy of tranexamic acid in urologic surgery: Results from the international, randomized, placebo-controlled POISE-3 trial. *Eur Urol* 2026;29:115192. <https://doi.org/10.1016/j.eururo.2026.03.019>

CORRESPONDENCE: Dr. Dhruv Satya Sahni, University of Glasgow, U.K.; [dhruvsatya2949@gmail.com](mailto:dhruvsatya2949@gmail.com)