

Reply to “comment on: Transrectal prostate biopsy complications: a prospective single center study in a mid-income country”

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DOI: 10.31744/einstein_journal/2026CE2377

Dear Editors,

We would like to thank Drs Hüsnü Tokgöz and Özlem Tokgöz for their thoughtful correspondence regarding our prospective cohort study on complications after transrectal ultrasound-guided prostate biopsy in a Brazilian public reference centre.⁽¹⁾ In their letter, they accurately summarise our main findings, including a marked association between recent quinolone use and post-biopsy infectious complications.

Currently, the ongoing global struggle against bacterial resistance is a growing challenge to patient safety. Consequently, stewardship-driven approaches – such as monitoring local bacterial resistance patterns, adopting targeted prophylaxis (with different prophylactic regimens recommended by national and international agencies), and minimising unnecessary antibiotic exposure – are increasingly central to peri-procedural decision-making.⁽²⁾ In the specific context of prostate biopsy, a transperineal approach is recommended to minimise infectious complications.

It has been argued that recently published randomized studies may be underpowered to detect a rare yet feared complication such as urosepsis. Nevertheless, meta-analyses indicate a lower rate of this outcome and support the safety of the transperineal approach. (Table 1) Our research group has an ongoing meta-analysis protocol on this subject registered in PROSPERO (CRD42024556787), and we anticipate that the forthcoming synthesis will favour the transperineal approach regarding urosepsis (Figure 1).

DATA AVAILABILITY

The content is already available.

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How to cite this article:

Schollemberg AJ, Heldwein FL, Santos S, Maschietto VM, Schnorrenberger E, Reinert K, et al. Reply to “comment on: Transrectal prostate biopsy complications: a prospective single center study in a mid-income country” [letter]. *einstein* (São Paulo). 2026;24:eCE2377.

Associate Editor:

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Received on:

Jan 14, 2026

Accepted on:

Jan 14, 2026

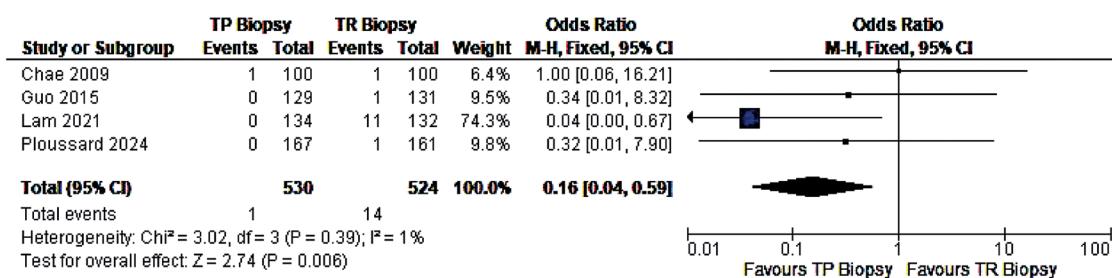
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Table 1. Meta-analysis of prospective and randomized clinical trials on urosepsis following prostate biopsy

Meta-analysis	Comparison	Transrectal	Urosepsis rate (%)			
			Transperineal		Periprocedural prophylactic antibiotics	
			With	Without		
Castellani et al, 2022 ⁽³⁾	TP with versus w/o ATB prophylaxis	-	0.13	0.09	RR: 1.09, (0.21-5.61), p=0.92	
Wolff et al, 2024 ⁽⁴⁾	TP with versus w/o ATB prophylaxis	-	0.13	0.16	OR=1.3 (0.46-3.4), p=0.62	
Madhavan et al, 2024 ⁽⁵⁾	TR versus TP	0.23	0.80		OR=0.49, (0.09-2.71), p=0.42	
Zattoni et al, 2024 ⁽⁶⁾	TR versus TP	0.13	0		OR=0.6, (0.1-4.5)	
Stangl et al, 2025 ⁽⁷⁾	TR versus TP	0.77	0.25		OR=0.49, (0.09-2.68) p=0.41	
Our group (unpublished)	TR versus TP	2.6	0.18		p<0.01 (excluding RCT with no urosepsis cases reported)	
PROSPERO CRD42024556787						



Source: Heldwein FL, Korczagin GG, Santos S, Maschietto VMM. Transrectal versus transperineal prostate biopsy: a systematic review and meta-analysis of randomized controlled trials on complications and efficacy. PROSPERO. 2024 [cited 2025 Dec 07]. Available from: <https://www.crd.york.ac.uk/PROSPERO/view/CRD42024556787>

Figure 1. Forest-plot of urosepsis in randomized clinical trials comparing transrectal versus transperineal prostate biopsy

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