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European Association of Urology



Letter to the Editor

Reply to Fabio Zattoni, Fabrizio Dal Moro, Iliana Bednarova, and Giacomo Novara's Letter to the Editor re: Kristina F. Galtung, Peter M. Lauritzen, Gunnar Sandbæk, et al. Is a Single Nephrographic Phase Computed Tomography Sufficient for Detecting Urothelial Carcinoma in Patients with Visible Haematuria? A Prospective Paired Noninferiority Comparison. Eur Urol Open Sci 2023;55:1–10

We thank Dr. Zattoni and colleagues for their correspondence regarding our paper [1]. Although they commend our work, they express concerns about our conclusions owing to the low number of upper tract urothelial carcinoma (UTUC) cases, the per-patient rather than per-lesion analysis, unreported data, the conflict between the conclusions and guideline recommendations, and the weak methodology in studies supporting our findings.

First, it is essential to recognize that the study conclusion applies to all UC cases and not to UTUC alone. The UTUC rate is low in all studies reporting on visible hematuria (VH) [2]. We therefore find it peculiar to highlight this as a general limitation of our study. Per-lesion analysis, as suggested by Zattoni et al, is misleading, as multiple tumors in one patient are not independent events. Per-lesion analyses violate the fundamental statistical assumption of independence. Consequently, our position remains that per-patient analyses are most appropriate for reporting diagnostic accuracy. The allegedly unreported data seem to have been overlooked, as we did indeed report that no patients had synchronous bladder UC and UTUC, and we explicitly disclosed that eight patients underwent ureterorenoscopy in addition to cystoscopy. Furthermore, we reported that one case of isolated carcinoma in situ (CIS) was detected in the bladder, with no isolated CIS detected in the upper tract.

Zattoni et al back their skepticism regarding single nephrographic-phase computed tomography (SNPCT) by elaborating on the utility of multiphase CT. To support their position, they refer to European Association of Urology guidelines, expert opinions, and a review by Janisch et al reporting superior accuracy of CT urography (CTU) in diagnosing UTUC [3–6]. The evidence summarized in this review forms most of the basis for the guidelines and the expert opinions. The majority of studies in the review are either single-arm CTU studies or studies reporting CTU superiority over other imaging modalities such as intravenous or retrograde ureteropyelography or magnetic resonance imaging.

Although these studies repeatedly cited, they are irrelevant when discussing the most appropriate CT protocol. Only two studies in the review compared different CT protocols [7,8]. These two and a study we previously published show that SNPCT suffices [7–9]. While we acknowledge that these studies are retrospective or were performed in selected cohorts, we have not been able to discover any scientific evidence on the superiority of CTU over SNPCT. Our present study is the first prospective comparison of two CT protocols in patients with painless VH. It shows that SNPCT is noninferior to CTU in detecting UC. It is surprising that Zattoni et al dismiss all the relevant studies comparing two CT protocols and maintaining their position on CTU without referring to any relevant studies.

We concur that CTU may be justified in specific cases, either independently or as a supplement to previous examinations. However, considering that previous studies and our own research show that SNPCT is sufficient in detecting UC, coupled with the fact that most patients do not exhibit clinically significant disease, we contend that advocating for routine CTU in patients experiencing painless VH is not warranted. Thus, we maintain our conclusion: the diagnostic accuracy of SNPCT is not inferior to that of four-phase CT in detecting UC in patients with painless VH.

Conflicts of interest: The authors have nothing to disclose.

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Kristina F. Galtung^{a,*}
Peter M. Lauritzen^{a,b}
Erik Rud^a

^aDepartment of Radiology, Oslo University Hospital, Oslo, Norway

^bDepartment of Life Sciences and Health, Faculty of Health Science, Oslo Metropolitan University, Oslo, Norway

*Corresponding author. Department of Radiology, Oslo University Hospital, Trondheimsveien 235, Oslo 0586, Norway.
E-mail address: kriflor@hotmail.com (K.F. Galtung).

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