British Journal of Cancer www.nature.com/bjc

EDITORIAL

Clinical Studies

Multicentric validation of nomograms based on BC-116 and BC-106 urine peptide biomarker panels for bladder cancer diagnostics and monitoring in two prospective cohorts of patients

British Journal of Cancer (2023) 128:929; https://doi.org/10.1038/s41416-023-02142-z

Multicentric validation of nomograms based on BC-116 and BC-106 urine peptide biomarker panels for bladder cancer diagnostics and monitoring in two prospective cohorts of patients.

There is a significant expansion ongoing with the race to develop Urinary biomarkers to aid in the diagnosis, follow up and now prognosticate the care of patients with bladder cancer (BC) [1]. Urinary biomarkers have featured in the diagnosis and surveillance of bladder cancers for many years; expansion of their role in the context of the pandemic should be explored. Biomarkers could be a useful tool in patients with low-grade and intermediate-grade tumours in whom a surveillance cystoscopy has been deferred; in this context, abnormal results would then be then flagged, and the patient scheduled for a biomarker-stratified diagnostic cystoscopy [1, 2]. A sensible use of biomarkers for the surveillance of patients with a low possibility of recurrence is beneficial on several fronts. First, it helps detect a recurrence that would otherwise be missed from a deferred cystoscopy; second, it provides reassurance to the patient; and third, it minimizes exposure of a potentially vulnerable patient to the hospital setting by collecting the urine samples at home or at primary health-care centres, reducing the need to come into the hospital [2, 3]. Cystoscopy and imaging have limited sensitivity in the detection of small lesions of the urinary tract. In these cases, there is a reliance on urine cytology, the most widely used non-invasive test for the detection and surveillance of BC. Despite its high specificity (approximately 86%), the utility of cytopathology is hindered by low sensitivity (48%) as well as interobserver variation [4], limiting its use especially in low-grade tumour [5, 6].

In the current publication of Mengua et al., present a multicentre study to evaluate the application of BC detection (BC-116) and monitoring of recurrence (BC-106) in combination with cytology of non-invasive urine-based biomarkers to evaluate the current diagnostic and monitoring protocols for bladder cancer (BC). The publication is crucial in the understanding and application of newer urinary biomarkers using advanced technology with capillary electrophoresis coupled to mass spectrometry. The patient selection was both for newly diagnosed bladder cancer patients and for the monitoring of recurrent bladder cancer. The data from this very important study highlights the benefit of biomarker panels to facilitate BC diagnosis (BC-116) and the application to using the test prior to cystoscopy in combination with cytology (BC-106) to reduce the number of follow-up cystoscopies as well as patient discomfort and financial burden. The authors have discussed a few limitations of the test, which are not unique to Mengua et al. data, but the limitations currently described are present in a large majority of different urinary biomarkers.

There is now increasing expansion in the urinary peptide biomarker application in clinical practice [1, 2], as the previous markers have shown till have a relatively low sensitivity for detecting low-grade disease. Mengua et al., have shown the potential application of BC-116 and BC-106 in clinical practice with very promising results.

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AUTHOR CONTRIBUTIONS

All contributions were from the sole author.

COMPETING INTERESTS

The author declares no competing interests.

Received: 8 October 2022 Revised: 18 December 2022 Accepted: 4 January 2023
Published online: 1 March 2023