



## RESPONSE TO EDITORIAL COMMENT

### Do not throw out the baby with the bath water

We thank our colleagues Holmäng and Hedelin for their interest in our work and the first national publication reporting lead times and management of bladder cancer in Sweden since the introduction of standardized care pathways in 2015 [1,2]. We appreciate that they have no scientific concerns on the interpretation of the reported data including all bladder cancer patients in the Swedish National Register of Urinary Bladder Cancer (SNRUBC) 2010–2019 representing more than 97% of all patients with bladder cancer in the Swedish Cancer Register. To moderate their somewhat drastic conclusion to abandon standardized care pathways for macroscopic haematuria, some corrections of some of their statements are needed before discussing their proposal further.

1. The standardized care pathway for bladder cancer was not designed by the ‘Swedish Bladder Cancer Group’. The correct statement is that four of the authors in the current article (SJ, FL, AS and VS) participated in the Swedish National Guidelines on Urothelial Carcinoma Group in 2014 with representatives from all healthcare regions, patients, nurse navigators, primary care, and physicians in the fields of oncology, radiology, and pathology and cytology and that the entire group wrote the first version of the pathway for bladder cancer in 2015.
2. ‘The goals set for standardized care pathway for bladder cancer were unrealistic’. All 31 standardized care pathway currently enrolling patients in Sweden have similar goals to enable the same ambition irrespective of diagnosis, thus creating a common national standard. These goals were to reduce waiting times, reduce regional differences, deliver more equal care with increased quality, and improve patient experience by creating a more predictable care. The increased proportion of patients with invasive bladder cancer discussed at a multidisciplinary tumor board from 40% to 62% that we report is in line with these goals.
3. ‘the reduction from 37 to 27 days to bladder cancer resection is of marginal clinical significance’. Firstly, the effect size of this outcome measure includes both patients in the pathway and those not included, reflecting the effect of the pathway on all patients with bladder cancer in Sweden. Data on each group can be retrieved separately from the SNRUBC as the variable ‘included in standardized care pathway’ was introduced in 2015. However, this variable was found to be unreliable, especially in the early time period after the introduction of the pathway and was therefore not used in the analysis. Secondly, a diagnostic delay above two weeks has been reported to be associated with a slightly

worsened overall survival for bladder cancer patients (HR 1.19 (1.0–1.4)) [3], suggesting that a reduction in the range of the ten days decreased median time from referral to transurethral resection might be beneficial. The data in our study were not mature enough to properly assess overall survival, and there was no data on cancer specific survival. However, from a patient perspective timely information about an underlying benign cause of macroscopic haematuria might also be relevant.

4. ‘In a Swedish study, not a single patient out of 161 with haematuria had an upper tract malignancy’. A correct interpretation of that study is that three patients were diagnosed with upper tract urothelial carcinoma, two patients with hepatocellular carcinoma, two patients with renal cell carcinoma, and one with liposarcoma despite that one out of five patients were aged below the current age cut off for the standardized care pathway [4]. Additionally, that study adds complexity to interpretation of macroscopic haematuria in conjunction with bacteriuria, as the proportion of invasive bladder cancer among those with bacteriuria was 80%.

We subscribe to the recommendation as suggested by Holmäng and co-workers, and stated by the Swedish standardized care pathway, to not investigate asymptomatic patients with microscopic haematuria for urinary tract malignancy [5] in contrast to the recommendations in other Nordic countries. This enables us to focus on patients with macroscopic haematuria, who have the highest risk of cancer. Knowledge about risk stratification will increase in the future, for example, the proportion of Swedish patients treated with urinary tract antibiotics before being diagnosed with bladder cancer is currently investigated in the Bladder Cancer Data Base Sweden (BladderBaSe 2.0). Additionally, a recent systematic review will serve as a reference standard for future policy-making on haematuria investigations globally [6]. Apart from adjusting the Swedish from the recommendations in other Nordic countries according to such information, we will also have to consider adopting the health care system to new efficient initiatives, such as nurse-led haematuria investigations [7]. Furthermore, triaging patients with macroscopic haematuria with either computed tomography urography with contrast in a late arterial phase before cystoscopy [8], or with urine-based biomarkers before both radiology and cystoscopy, is currently being investigated (Trial: Non-invasive diagnosis of urinary bladder cancer. doi: 10.1186/ISRCTN17940603) could be viable paths towards simplifying and optimizing the standardized care pathway. We look forward to further discussions on this matter with Holmäng and Hedelin, and other stake holders including

patient representatives in 'Blåscancer Sverige'. We argue that there is great potential for improvement of cancer care by use of standardized care pathways that is still in its infancy. Admittedly, inclusion criteria and logistics need to be improved but let's not throw out the baby with the bath water.

### Disclosure statement

No potential conflict of interest was reported by the authors.

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