Reviewer’s report

**Title:** The Diagnostic Value of Circulating Tumor Cell Detection in Bladder and Urothelial Cancer: a Systematic Review and Meta-analysis

**Version:** 4  **Date:** 20 June 2011

**Reviewer:** Sergei Kusmartsev

**Reviewer’s report:**

In this manuscript titled “The Diagnostic Value of Circulating Tumor Cell Detection in Bladder and Urothelial Cancer: a Systematic Review and Meta-Analysis”, authors have investigated the potential clinical role of Circulating Tumor Cell (CTC) detection as an indicator of advanced bladder cancer. Despite the fact, that a variety of methods for detecting of CTCs has been developed, clinical significance of CTCs in bladder cancer is still questionable mostly because of low sensitivity and considerable variability of results obtained in various laboratories that use different methods for CTC detection. In order to evaluate diagnostic accuracy of CTC detection in patients with bladder cancer authors utilized a computerized search in order to pool together and quantitatively summarize the available evidence for diagnostic accuracy of CTC detection using meta-analytic approach. Authors conclude that CTC detection in blood of cancer patients could confirm diagnosis and even identify patients with advanced bladder cancer. However, because of low sensitivity of existing CTC detection assays, authors do not recommend this approach for initial cancer screening.

Overall, information presented in manuscript in this analytical review is potentially important and helpful for clinical investigators and physicians who want to implement CTC detection assay as a research tool or diagnostic instrument in clinical practice. The methods appropriate and well described; presented data are sound. However, there are several minor concerns that should be clarified by authors.

Minor Essential Revisions:

1. Page 4: Author should correct the sentence in which they claim that bladder is leading cause of morbidity and mortality worldwide. Bladder cancer is not leading cause of mortality worldwide. Lung cancer, stomach cancer, and liver cancer are among leading causes of cancer-related mortalities.

2. Page 5: Immune surveillance (not immunosurveillance) happens everywhere in body, not specifically in lymph nodes. Lymph nodes represent highly specialized lymphoid organs for antigen-presentation and initiation of adaptive immune response.

3. Page 5: EpCAM is correct abbreviation of this adhesion molecule.

4. Page 7: Meeting abstracts should be excluded from search criteria.
5. Page 13: DU-145 is prostate cancer cell line. Authors should exclude data which are not related to bladder cancer.

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests