Reviewer's report

Title: Gene Profiling Suggests a Common Evolution of Bladder Cancer Subtypes

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Reviewer: Benjamin Kipp

Reviewer's report:

Hansel et al. present an original article that compares urothelial and squamous cell bladder cancers using Affymetrix GeneChip arrays. Overall, this article was well written and informative. However, there are a few things, if added, that would strengthen the manuscript:

Minor Essential Revisions:

1. The authors should add clinical/pathological information for each tumor. A table listing patient characteristics (age, gender, etc.) and more importantly, tumor stage and grade is important. Previous published data suggest that different tumor stages result in different genetic profiles (Genet Mol Res. 2013 May 6;12(2):1479-89). In addition, since the authors suggest that some markers may be associated with BCG treatment (e.g. HLA-DQ1), its important to have treatment history for all patients (i.e. did UC cases have BCG treatment for lower stage tumors that then progressed to invasive tumors prior to testing? Is it possible the differences observed are just a result of different treatments rather than histology?). Similarly, there is discussion of nicotine-responsive genes in the manuscript. What was the smoking status of these individuals? I would suggest correlatiing results from expression arrays with clinical information to strengthen manuscript.

2. Both supervised and unsupervised clustering suggests that UCA23 and UCA24 are more normal appearing than the other UCA’s? The authors should comment on this in the manuscript. For instance, did these tumors look different histologically? Anything different about these patients clinically/pathologically?

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests