Reviewer Report

Title: A molecular phenotypic map of Malignant Pleural Mesothelioma

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Reviewer Comments to Author:

Authors did a fantastic job by integrating MPM multi-omics datasets and created an integrative and interactive map for users to explore these datasets. MPM is a rare cancer type and understudied so such resources are very useful to move the field forward at a molecular level. The comprehensive data is well presented and the manuscript is well written to explain the complex genomics dataset for MPM.All the figures are well explained and very clear to understandMinor point:- Author mentioned an evaluation of tumor purity was done using pathological review, did author used molecular data such as genomic data to find tumor purity ? and if yes, how was the consensus ? This is very important factor to interpret the genomic results as the data was sequenced at 30X- In the same line, RNAseq can also be used to identify tumor purity and it will be really helpful for users to clear picture on tumor purity.- Is it not very clear from method section that the same MPM samples were used to sequence at DNA , RNA and DNA methylation level ? A brief explanation or table will be very easy for users to understand.- Recent WHO classify MPM into three different histopathological types. Did author do any unsupervised analysis from these comprehensive data to understand MPM heterogeneity or replicate WHO classification? or did author find WHO subtypes of MPM using molecular dataset ? A brief analysis/comment on usage of histological classification Vs Molecular classification will certainly move the MPM research field forward as researcher have found vast differences between histological vs molecular classification and the field is moving towards more molecular based classification in clinic.

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