Review of What Information Should Be Required to Support Clinical "Omics" Publications? Grace Yi Chen

This paper discusses what supplementary materials should be submitted with clinical omics publications. Poor documentation makes it hard to reproduce the published results. It also hides many simple errors which requires a lot more efforts to discover them. From the Duke's case, NCI and FDA found that problems of poor documentation and simple mistakes are widespread in other published work. There are 5 things the authors called for supplementary: raw data, code, evidence of the provenance of the raw data, written description of any non-scriptable analysis and prespecified analysis plan. We need the transparent supplying of data and code to support omics studies.

The authors here mainly used testimony from NCI and FDA officials to demonstrates the problem of widespread simple errors in high-throughput biological data studies due to insufficient analysis documentation. Duke's case is not unique and these mistakes are happening in many other universities and labs as well. Journals and the government should take the lead to make it mandatory asking for supplementary of study data and code. In this way, the researchers will be more careful about what they are doing for publication and make their results more reproducible and robust.

Question:

- 1. In these highly impactful journals, how will the editors and reviewers check the reproducibility of the analysis scripts to ensure that the conclusion is valid?
- 2. I am wondering why we should consider omics signatures as medical devices?