Empowering Biomarker Data to Accelerate Personalized Health Care
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ABSTRACT
Biomarker is playing a more and more critical role in accelerating drug development and driving personalized health care (PHC) forward. Therefore, there is a rapidly demanding need to obtain profound knowledge of gene expression data and biomarker technologies. This poster reflects how biomarker brings innovation to medicine evolvement, and presents the urgency that regional biomarker stand-alone studies shall be conducted, following the general statistical and exploratory analytics process over lab data including Immunohistochemistry (IHC), In Situ Hybridization (ISH) and other intensive sequencing data source, like Nanostring nCounter assays. It outlines remaining challenges and inspiring works on current work flow, information visualization, and visual analytics. The expected future work is also discussed in the end.

INTRODUCTION
- Analysis Population
- Prevalence of the biomarkers
- Correlation between the biomarker expression and gene signatures
- Prognostic association of biomarker expression and clinical outcome
- Nanostring Immune Profiling

RATIONALE
Biomarker data (protein, RNA and DNA)

WORK FLOW
Pathological data generation
OBD China
QC of provided data
PDB SPA
Data analysis plan
PDB&OBD China
Clinical data and sample manifest
PDB DM² & OBD China
Operation

FURTHER WORK
- Create a R shiny app for biomarker scientists to explore Nanostring data with clinical information
- Create rmarkdown template of standard outputs

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