化學治療之生物標記

Biomarkers of chemotherapy

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With the advance of diagnostic tools, pharmacotheuticals, interventional devices and deeper genetic sequencing, the overall survival of patients with cancer has increased. However, the heterogeneity of cancer makes the disease-specific treatment for patients with malignancies inappropriate. Physicians need more information of patients and their tumor to precisely make the treatment plan.

A biomarker, defined by the US National Institutes of Health's (NIH) Working Group and the Biomarkers Consortium, is a characteristic than is measured objectively as an indicator of normal biological processes, pathogenic processes, or a pharmacological response to a therapeutic intervention. The World Health Organization (WHO) defines a biomarker as a substance, structure or process which can be measured in the body or its products and influences or predicts the incidence of outcome or disease. Biomarkers can be classified using different approaches. Based on disease status, biomarkers are subgrouped as detention biomarkers, diagnostic biomarkers, prognostic biomarkers and predictive biomarkers. Biomarkers can also be subclassified as DNA biomarkers, RNA biomarkers, protein biomarkers and carbohydrate biomarkers according to the nature of biomolecules.

Currently, cancer patients are treated with chemotherapy in a disease-specific manner. Unfortunately, only a part of cancer patients will get benefit or control their tumor by the chemotherapy. The application of biomarkers of chemotherapy is still an unmet medical need. In this meeting, we will discuss the evidence, recent progress and future perspectives of biomarker of chemotherapy for patients with malignancies.