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重视肿瘤疫苗的临床免疫反应监测

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摘要：

免疫细胞的激活是肿瘤疫苗治疗后的第一个生物学事件，标志着肿瘤免疫应答的产生，因此在临床上监测能反映免疫细胞激活状态的免疫指标对肿瘤疫苗的临床应用非常有意义。目前已建立了多种针对临床免疫反应的监测方法，但它们的重复性和可比性还面临挑战，尚缺乏可作为金标准的质量控制措施，它们与临床反应的关系还尚待大样本的临床验证；另外，免疫相关不良反应和肿瘤抗原的扩展也增加了免疫指标判定的复杂性。最近几年，一些国际学术组织制定了免疫反应监测的评价标准，提出了关于T细胞监测最少信息的计划；美国FDA公布的肿瘤疫苗临床使用指南，对疫苗免疫反应监测也提出了一系列指导性意见。目前国内业界对肿瘤疫苗的临床免疫反应监测尚缺乏足够的重视，已开展的监测工作不够规范。本文对肿瘤疫苗的免疫反应监测所面临的问题和挑战进行了分析，就国内业界如何重视和加强肿瘤疫苗临床免疫反应监测的基础研究和临床试验提出了若干建议，以期在不久的将来，我国该领域的工作能迎头赶上国际先进水平。

关键词：肿瘤疫苗 免疫反应 监测

Importance of monitoring therapeutic cancer vaccine-mediated immune responses in clinical settings

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Abstract:

Activation of immune cells is the first biological event after administration of a therapeutic cancer vaccine, thus serving as an indicator of success in the induction of immune response. Therefore, monitoring the activation status of immune cells is of pivotal importance in the clinical application of therapeutic cancer vaccines. Currently, a “gold standard” for monitoring cancer vaccine-mediated immune cell activation is lacking. Although several methods have been developed to measure the clinical immune response, how to improve the reproducibility and comparability of these methods remains a significant challenge and the usefulness of these methods has yet to be further evaluated in clinical studies with a large sample size. Moreover, the complexity of the immune response including inconvenient immune response, immune- related adverse effect and antigen cascade, hampers meaningful comparisons among studies. In recent years, several international working groups have established immune response monitoring standards including the minimal information about T cell assays (MIATA) proposed by an international team of academic researchers and industry experts, and the clinical considerations for therapeutic cancer vaccines developed by FDA. At present in China, inadequate attention has been paid to the clinical immune response monitoring, and the monitoring methods have not been standardized. This review aims: 1) to analyze the problems and challenges that the cancer immunotherapy monitoring in China faces; and 2) to propose how to enforce and improve the monitoring of immune responses in cancer patients after treatment with cancer vaccines through basic research and clinical trials in China.

Keywords:cancer vaccine immune response monitoring

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