≥5% PD-L1 expression in the tumor might be an indicator of adjuvant CIK therapy for postoperative BC patients

We confirmed that adjuvant CIK immunotherapy could improve the prognosis of breast cancer patients in the mass, and for the first time revealed that over 5% PD-L1 expression in the tumor was as an indicator of adjuvant CIK therapy. Importantly, our findings on the relationship between PD-L1 expression and CIK therapy would provide new insights into tumor immunotherapy.

Background

Cytokine-induced killer cell (CIK) infusion has been shown to be an effective therapy for post-mastectomy breast cancer based on statistical analysis of the patient population. However, whether a certain individual could obtain an improved prognosis from CIK cell-based treatment remains unknown. We aimed to search for the screening biomarkers of CIK treatment.

Overexpression of PD-L1 on tumor cells is the product of adaptive immune resistance, which reflects the ongoing anti-tumor immunity in vivo.

Exciting Findings

1. PD-L1 expression was an independent prognostic factor for BC patients who accepted CIK treatment.
2. In CIK treated population, patients with ≥5% PD-L1 tumor expression exhibited longer overall survival (OS) and recurrence-free survival (RFS).
3. Among all patients who participated in this study, only the patients with ≥5% tumor PD-L1 expression experienced survival benefits from CIK treatment.

Tip: CIK cell treatment protocol of State Key Laboratory of Oncology in South China; Department of Biotherapy, Sun Yat-sen University Cancer Center.

Our findings would provide new insights into the theory of tumor immunotherapy. Additional multicenter and large-sample validation studies are still required to verify our results.