

عنوان مقاله:

Th1 and Th2 Cytokine Gene Expression in the Peripheral Blood of Breast Cancer Patients Compared to Controls

محل انتشار:

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خلاصه مقاله:

Background: Cytokines produced by different subsets of T cells are the key mediators to adjust the quality of immune responses. Despite evidence of induction of an immune reaction against tumors such as breast cancer, not all responses are protective. In this study we attempt to evaluate the expression profile of several cytokines from the T helper 1 and 2 subsets in blood cells from patients with breast cancer. **Methods:** We recruited 100 recently diagnosed patients with confirmed pathological reports. Peripheral blood samples were taken and the expression of the transcripts for IL-2, IL-12A, IL-12B, IFN- γ , IL-4, IL-10, IL-13 and IL-13R α 2 were measured by quantitative real time PCR. We correlated the results to clinical findings and compared the results to those from 64 healthy individuals. **Results:** Among the studied cytokines, we observed a significant increase in the expression of T helper 1 pro-inflammatory cytokines IL-12B, IL-2 and IFN- γ compared to healthy controls. Elevated expression of those cytokines was associated with high stage and/or high grade tumors but there was no association with other clinical determinants. Simultaneously, blood cells showed high expression of IL-10, but not the other studied T helper 2 cytokines. **Conclusion:** The mixed and complex cytokine profile of T helper 1 and 2 immunity in blood cells may show an immunological imbalance which makes the overall system favor cancer. This may be a potential target for immunotherapy approaches, however more comprehensive results are needed.

کلمات کلیدی:

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