Molecular signatures associated with tumor-specific immune response in melanoma patients treated with dendritic cell-based immunotherapy

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© García-Salum et al. Purpose: We previously showed that autologous dendritic cells (DCs) loaded with an allogeneic heat shock (HS)-conditioned melanoma cell-derived lysate, called TRIMEL, induce T-cell-mediated immune responses in stage IV melanoma patients. Importantly, a positive delayed-type hypersensitivity (DTH) reaction against TRIMEL after vaccination, correlated with patients prolonged survival. Furthermore, we observed that DTH reaction was associated with a differential response pattern reflected in the presence of distinct cell subpopulations in peripheral blood. Detected variations in patient responses encouraged molecular studies aimed to identify gene expression profiles induced after vaccination in treated patients, allowing the identification of new molecular predictive markers. Methods: Gene expression patterns were analyzed by microarrays during vaccination, and some of them confirmed by quantitative real-time reverse transcriptase PCR (qRT-PCR) in the total leukocyt