

عنوان مقاله:

Analysis of Laser Therapy Effects on Squamous Cell Carcinoma Patients: A System Biology Study

محل انتشار:

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خلاصه مقاله:

Abstract Introduction: Mechanism of Laser therapy and also its safety are two important features of application of different types of laser in medicine. Aim of this study is investigating the critical affected genes after treatment of squamous cell carcinoma patients. Methods: Gene expression profiles of 4 squamous cell carcinoma patients that are treated via chemoradiotherapy plus laser relative to the 3 similar patients without laser exposure from Gene Expression Omnibus (GEO) are downloaded and are screen to find critical genes via network analysis. STRING database, Cytoscape software, and Clue GO plug in of Cytoscape software are used. Results: The genes; HSXV0 and NCC27 as neighbors and HSPA1B, CLIC1, RAB13, PPIF, and LCE3D were determined as hub genes. Over-expression of LCE3D was interpreted as side effect of laser therapy. Apoptosis and cell cycle were the dominant biological processes that regulated by the HSP molecules in laser treated patients. Conclusion: Laser was effected the main biological processes and simultaneously issued side effects. Keywords: Keywords Laser therapy Squamous cell carcinoma HSPA1B LCE3D

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