



CONFERENCIA

Dynamic aspects of tumor-immune system interaction under a periodic immunotherapy

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Abstract: In this work a planar system of tumor-immune system interaction under periodic immunotherapy is considered, when the tumor is aggressive. We study the asymptotic behavior of tumor-free equilibrium, both in the stationary and non-stationary cases. Using techniques of topological degree we find under certain necessary conditions, the existence of a periodic state of coexistence between tumor cells and lymphocytes. We prove that this state is unique using aspects of comparison of solutions. We study the global dynamics presented by the solutions of the problem, using free homeomorphism theory. In addition, we estimate the life expectancy of a patient with aggressive cancer.