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Hong-Ming Yin* (hyin@wsu.edu), Department of Mathematics and Statistics, Washington State University, Pullman, WA 99164. *On a Reaction-Diffusion System Modeling the Tumor Treatment.*

In this talk I will study a reaction-diffusion system which describes the interaction of a medical drug with normal, immune and tumor cells. We will design an optimal drug method which will be best to eliminate tumor cells. The major challenge for the optimal control problem is that the optimal solution must satisfy the certain constraints for normal cells. Existence and stability are established. (Received January 14, 2018)