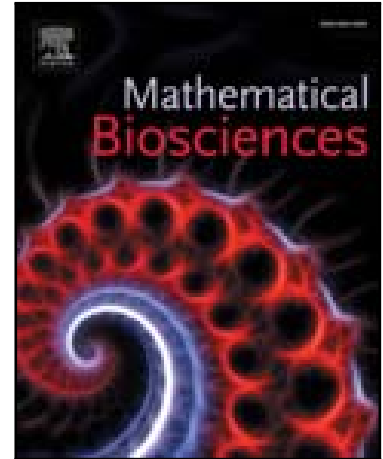


Accepted Manuscript

Reinforcement Learning-Based Control of Drug Dosing for Cancer
Chemotherapy Treatment

Regina Padmanabhan, Nader Meskin, Wassim M. Haddad

PII: S0025-5564(17)30432-7
DOI: [10.1016/j.mbs.2017.08.004](https://doi.org/10.1016/j.mbs.2017.08.004)
Reference: MBS 7966



To appear in: *Mathematical Biosciences*

Received date: 28 June 2016
Revised date: 8 August 2017
Accepted date: 9 August 2017

Please cite this article as: Regina Padmanabhan, Nader Meskin, Wassim M. Haddad, Reinforcement Learning-Based Control of Drug Dosing for Cancer Chemotherapy Treatment, *Mathematical Biosciences* (2017), doi: [10.1016/j.mbs.2017.08.004](https://doi.org/10.1016/j.mbs.2017.08.004)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

HIGHLIGHTS

- A reinforcement learning (RL) algorithm is developed as a model-free method for the optimal closed-loop control of cancer chemotherapy drug dosing.
- Simulation results are presented for three cases, namely, (1) an adult with cancer, (2) a pregnant women with cancer, and (3) an elderly patient who has cancer along with other critical illnesses.
- Statistical analysis using 15 simulated patients are conducted.

ACCEPTED MANUSCRIPT

Download English Version:

<https://daneshyari.com/en/article/5760374>

Download Persian Version:

<https://daneshyari.com/article/5760374>

[Daneshyari.com](https://daneshyari.com)