**Machine Learning Prediction For Cancer Patients' Medication Treatment**

SE-1-6

By: Tal Ohana ; taloh13@gmail.com

Advisors: Prof. Hadas Hasidim1

Sami Shamoon College of Engineering, Beer-Sheva

Prof. Moshe Elkabats2, Prof. Angel Porgador3, Dr. Ofir Cohen4  
Immunology Department, Ben Gurion University, Beer Sheva

Many efforts have been made over the last decade to enhance cancer treatment by utilizing novel biological tools in immunotherapy. The goal of this research is to develop a machine learning system that can predict the efficacy of medication therapy for cancer patients. Preliminary data from the BGU lab (IcAR) was used, including cancer cell information, genetic sequencing, and other parameters. Computational examination of different models revealed correlation in 87% of a single number of cancer cells, determining the best tool for predicting successful and targeted cancer therapy. This approach will bridge the medical-software divide and pave the way for future research.

**Keywords:** cancer treatment, immunotherapy, machine learning, drug therapy, computational analysis, successful therapy, targeted therapy, future research.