

## Predicting Survival in Cancer: How Cox Regression Model Compares to Artificial Neural Networks?

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**Abstract :** Predication of Survival time of patients with cancer, is a core factor that influences oncologist decisions in different aspects; such as offered treatment plans, patients' quality of life and medications development. For a long time proportional hazards Cox regression (ph. Cox) was and still the most well-known statistical method to predict survival outcome. But due to the revolution of data sciences; new predication models were employed and proved to be more flexible and provided higher accuracy in that type of studies. Artificial neural network is one of those models that is suitable to handle time to event predication. In this study we aim to compare ph Cox regression with artificial neural network method according to data handling and Accuracy of each model.

**Keywords :** Cox regression, neural networks, survival, cancer.

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