

# Analysis of the Theory of Machine Learning in Cancer Prediction and Diagnosis of Disease

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**Abstract:** Machine learning is a branch of artificial intelligence that uses a variety of statistics, probability, and optimization techniques to enable computers to "learn" from past examples and detect complex patterns from large, noisy, or complex data sets allowed. This feature is particularly suitable for clinical applications that rely on complex proteomic and genomic measurements. For this reason, machine learning is often used in cancer diagnosis and detection. Recently, machine learning has been used for cancer diagnosis and prediction. The second approach is particularly interesting because it is part of the development of personalized, predictive medicine. In writing this review, we comprehensively evaluated the different types of machine learning in use, the types of data combined, and the performance of these models in prediction and cancer diagnosis. Various assumptions have been made, including increased reliance on protein biomarkers and microarray data, bias towards prostate and breast cancer, and overreliance on "old" technology such as recently developed neural networks or simply explain machine learning. It appears that many published studies lack the necessary validation or testing. From well-designed and validated studies it is clear that machine learning techniques can be used to improve the accuracy of predicting cancer incidence, recurrence, and mortality. At a more basic level, machine learning has also been shown to improve our understanding of the onset and progression of cancer

**Keywords:** AI, ML, Cancer, Onset and Progression etc

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