Project Title:	The Application of Artificial Intelligent Techniques in Oral Cancer Prognosis Based on Clinical and Genomic Markers
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Abstract:

The mortality rate for oral cancer is high (at approximately 50%) due to the cancer is only been discovered late in its development. The well known risks which associated with this cancer included smoking, alcohol consumption, tobacco use, and betel quid chewing. Almost two-third of oral cancers occurred in developing countries, and this geographic variation probably reflects the prevalence of specific environment influences. Besides social demographic and habits factors, there are still other factors that associated with oral cancer such as viral infection, genetic factors, and poor oral hygiene.

Various artificial intelligent methods have been applied either in the diagnosis or prognosis of the oral cancer research such as artificial neural networks, fuzzy regression, genetic algorithm, and Bayesian networks. The dataset that commonly used are either clinical data or genomic data/microarray data together with social demographic data. Currently, there is very few research that utilized the combination of both clinical and genomic data. It has been proven by the current researches that the prognosis results are more accurate by using the both clinical and genomic data.

In this research, an oral cancer survival prediction model will be developed by using the AI techniques. The prediction model will be based on the both clinical and genomic markers that have been determined and investigate the relationship of each markers or combination of the markers to the more accurate prognosis of the oral cancer.