

Deep Learning Prognosis Model for Hepato Cellular Calcinoma

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Deep Learning Analytics uses predictive models that provide actionable information for HCC patient's better prognosis. It is a multidisciplinary approach based on HCC data processing, AI technology-learning enhancement, HCC neural network, and visualization. Three key components need further clarification to help them effectively apply deep learning in HCC prognosis to explain the methods for conducting deep learning, the benefits of using deep-learning, and the challenges of using learning analytics in HCC. Discover significant clinical factors and SNP markers to detect the prognosis of HCC. Compare the efficiency with other prognosis models using Support Vector Machine, linear discriminant, random forest, logistic regression by ROC curves. Using ICD-9 codes for HCC, 965 patients with HCC, and all available data variables required to develop and test models identified from a clinical and SNP records database. Data on 645 patients used for the development of the model, and 320 patients used to perform a comparative analysis of the models. Clinical data such as presenting signs & symptoms, socio-demographic data, presence of metastasis, laboratory data, and corresponding diagnosis and outcomes were collected. Clinical data and SNP gathered for each patient were utilized by ascertaining optimal management for each patient.

Keywords: deep learning, HCC prognosis, SNP, machine learning