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# A novel liver cirrhosis risk prediction using Fuzzy based frequency distribution analysis

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**Abstract.** In the present scenario, healthcare industry is trying to reach everyone who is in need of services at highest speed and with maximum accuracy of diagnosis of disease. Since severity of disease cannot be told using only yes or no values, the fuzzy logic based solutions are playing very vital rule in medical field for diagnosis of diseases. In diagnosis of liver also, the maximum accuracy can be achieved using fuzzy based solutions.

The present paper methodology follows fuzzy way of prediction where one end of distribution indicates lowest possibility of disease, other end indicates highest possibility of disease and severity of disease increases from one end to other end. To predict the severity of disease, the proposed method uses most relevant attributes from the Indian patient liver data set like Age, Gender, Total Bilirubin(TB), Direct Bilirubin(DB), Alkaline Phosphotase(AP), Alamine Aminotransferase(AIA), Aspartate Aminotransferase(ASA), Total Protiens (TP), Albumin, and Albumin Globulin Ratio(AGR).

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