



SURVEY ARTICLE

CANCER RESEARCH THROUGH THE HELP OF SOFT COMPUTING TECHNIQUES: A SURVEY

Mr. Tanupriya Choudhury¹, Dr. Vivek Kumar², Dr. Darshika Nigam³

¹Research Scholar (CSE), Jagannath University, Jaipur, India

²Principal, Delhi College of Technology and Management, Palwal, India

³Department of BioChemistry, SLS, Dr. B.R. Ambedker University, Agra, India

¹ tanupriya86@gmail.com; ² profvivekkumar@gmail.com; ³ drdarshikanigam@rediffmail.com

Abstract— Soft Computing is a branch of artificial computational intelligence that employs a variety of statistical, probabilistic and optimization techniques that allows computers to “learn” from past examples and to detect hard-to-discern patterns from large, noisy or complex data sets. This capability is particularly well-suited to medical applications, especially those that depend on complex proteomic and genomic measurements. As a result, computational intelligence is frequently used in cancer diagnosis and detection. More recently soft computing has been applied to cancer prophecy and prediction. A number of trends are there, including an increasing dependence on protein biomarkers and microarray data, a strong bias towards applications in prostate and breast cancer, and a heavy reliance on “older” technologies such artificial neural networks (ANNs) instead of more recently developed or more easily interpretable soft computing techniques. Among the better designed and validated studies it is clear that soft computing techniques can be used to substantially to improve the accuracy of predicting cancer susceptibility, recurrence and mortality. In addition to it provides a general idea for further improvement in this field.

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