



Prognosis of Lung Cancer Using Data Mining Techniques

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Abstract: *The research work mainly focused on knowing the major motive for commencement and indulging the youth in drugs. Ongoing efforts are geared towards increasing the size of data set. The research work is of great help for analysing various factors for booming situation of drugs. In the existing model is to classify only by using the x-ray, CT scan for detect lung cancer, mining a diagnosis of lung cancer, survey of the lung cancer patients based on the countries, Predict the lung cancer disease and analysis the lung cancer disease by using the different data mining Techniques. The system is of great relevance to the user in detection of the various factors related to lung cancer which will help in providing the correct medication about him/her and will help in saving their precious human lives. Disease diagnosis is one of the applications where data mining tools are establishing the successful results.*

Keywords: *Data Mining Techniques, Data Mining Models, Healthcare, Medical Diseases, Drug Abuse.*

I. INTRODUCTION

Data mining intends to endow with a systematic survey of current techniques of knowledge discovery in databases using data mining techniques that are in use in today's medical research. Discussion is made to enable the disease diagnosis and the breakthrough of hidden healthcare patterns from related databases is offered. Also, the use of data mining to discover such relationships as those between health conditions and a disease is presented. It further discusses about the tools that can be used for the processing and classification of data. This paper summarizes various technical articles on medical diagnosis and prognosis. It has also been focused on current research being carried out using the data mining techniques to enhance the diseases forecasting process. This research paper provides future trends of current techniques of KDD, using data mining tools for healthcare. It also confers significant issues and challenges associated with data mining and healthcare in general. The research found a growing number of data mining applications, including analysis of health care centres for better health policy-making, detection of disease outbreaks and preventable hospital deaths. The root causes of all diseases get closer towards drugs i.e. the foremost risk factor of all hilarious diseases. So, to make an expert system that will awake the youth about precarious use of drugs and also alert the affected person.

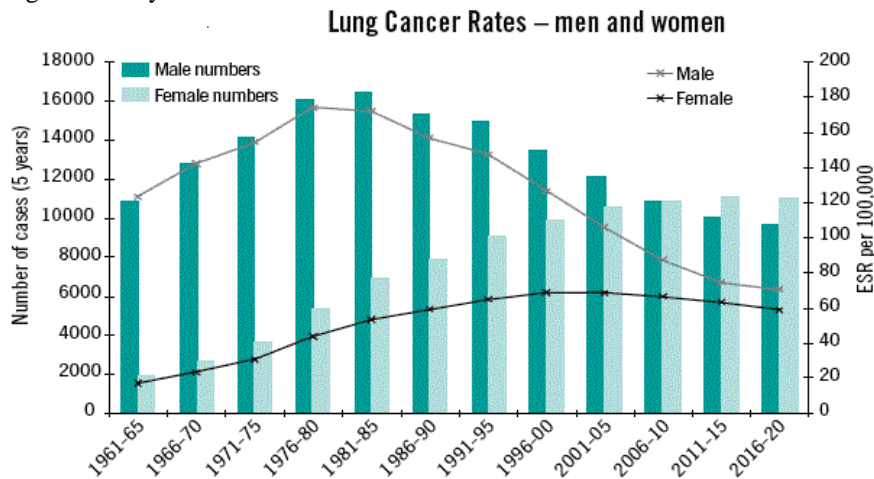
II. DATA MINING TECHNIQUES

Data mining is the extraction of hidden predictive information and unknown data, patterns, relationships and knowledge by exploring the large data sets which are difficult to find and detect with traditional statistical methods. Data mining it is powerful technology which will discover most important information from the data warehouse of the organizations. It is a very crucial step that collectively examine large amount of routinely data. To find latest patterns in healthcare industry, there exist various interactive and scalable data mining methods. Data mining is a quantitative approach which is user friendly in reading reports and reducing errors and controls the quality more uniformly. Important task of data mining is data pre-processing.

Data mining tools are used for decision making. Prediction and classification techniques are used in which classification technique predicts the unknown values with respect to generated model. An assortment of data mining techniques can be applied to find associations and regularities in data, extract knowledge in the forms of rules and predict the value of the dependent variables. Data mining holds significant presence in every field of medical for the diagnosis of several diseases such as diabetes, skin cancer, lung cancer, breast cancer, heart disease, kidney failure, kidney stone, liver disorder, hepatitis etc. Data mining applications include analysis of data for better policy making in health, prevention of various errors in hospitals, detection of fraudulent insurance claims early detection and prevention of various diseases, value for more money, saving costs and saving more lives by reducing death rates. Drug is any substance that when taken into a living organism may modify one or more of its functions. Drugs can provide temporary relief from unhealthy symptoms and/or permanently supply the body with necessary substances the body can no longer make. Some drugs lead to an unhealthy dependency that has both physiological and behavioral roots. Drug addiction can cause serious, long-term consequences, including problems with physical and mental health, relationships, employment, and the law. Adolescence is typically a period of experimentation, irrespective of parenting skills and influence. However, the more likely threat to any teenager's health is the use of drugs such as alcohol and tobacco.

Lung cancer is the uncontrolled growth of abnormal cells that start off in one or both lungs usually in the cells that line the air passages. Lung cancer is the leading cause of cancer deaths among both men and women. The two main types

are small cell lung cancer and non-small cell lung cancer. These types are diagnosed based on how the cells look under a microscope. People who smoke have the greatest risk of lung cancer. The risk of lung cancer increases with the length of time and number of cigarettes they have smoked.



III. USE OF DATA MINING IN MEDICAL

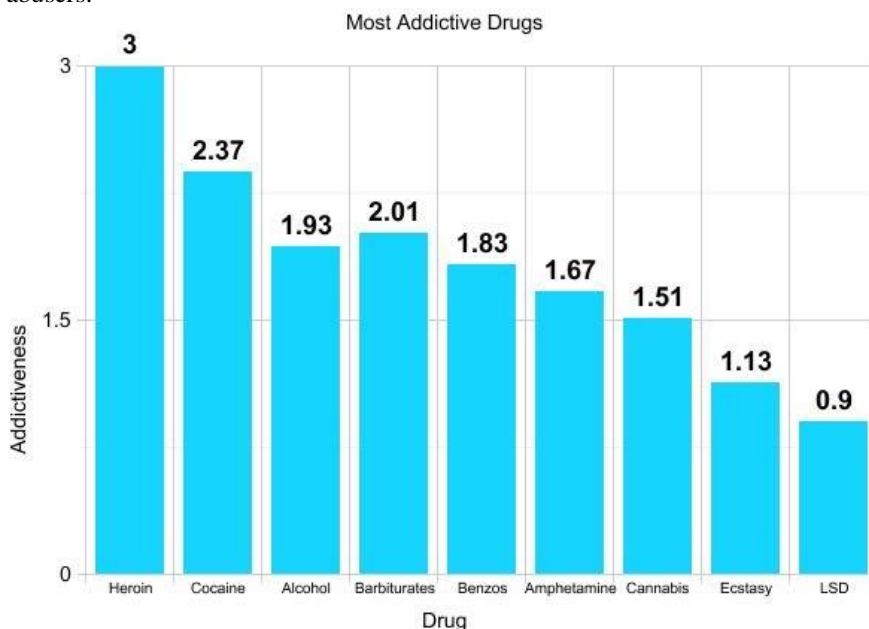
Today is the era of data mining where prediction of variety of disease is enduring into procedure. Data mining has proved with flourished results in medical. But such work is seen in direction to control over drugs usage. Data mining has plenty of techniques and tools available. Every year, about 15,000 to 25,000 peoples die of lung cancer, even though they have never smoked. The purposes of this work is finding the risk factor of lung cancer and classify the smokers and non-smokers who are all caused by lung cancer by using the data mining Technique.

IV. COMPARISON OF DISTINCT DATA MINING TECHNIQUES

Different types of mining algorithms in the healthcare field have been proposed by different researchers in recent years. A particular algorithm may not be applied to all the applications due to complexity for appropriate data types of the algorithm. Consequently the choice of an acceptable data mining algorithm depends on not only the purpose of an application, but also on the compatibility of the data set. The comparative analyses of different data mining techniques and algorithms have been used by most of the researchers in medical data mining.

V. COMPARATIVE ANALYSIS OF DATA MINING TOOLS

Due to the extensive use and intricacy involved in building data mining applications, a large number of data mining tools have been developed over the decades. Different tools use diverse algorithm base and techniques to carry out data mining tasks. Every tool has its own advantages and disadvantages. The maturity and relevance of data mining algorithms necessitates the utilization of influential software tools. As the number of accessible tools continues to develop, the preference of the most suitable tool becomes increasingly tricky. Consequently, a number of authors have suggested and/or used the multiplicity of data mining tools as presented. Effect on health of drug users a drug is a social problem these days and youth is in the falling in trap of drugs. There is need to aware the youth about the common problems with drug abusers.



The research work is of great help for analyzing various factors for booming situation of drugs which is mainly related to Lung Cancer. The system is of great relevance to the user in detection of the various factors related to drug addiction which will help in providing the correct medication about him/her and will help in saving his precious human live.

VI. CONCLUSION

Data mining can be used to make successful decisions that will improve success of healthcare organization and health of the patients. This review of data mining applications in medicine and public health has endowed us with an overview of current practices and challenges. Health care organizations and agencies could come across into these applications to find ideas on how to dig out knowledge from their own database systems.

The available raw medical data are widely distributed, different and voluminous by nature that must be collected and stored in data warehouses in organized form. Healthcare institutions that use data mining applications have the possibility to predict future requests, needs, desires and conditions of the patients and to make adequate and optimal decisions about their treatments.

It is believed that the data mining can significantly help in the Lung Cancer research and ultimately improve the quality of health care of Lung Cancer patients. It can also be implemented using several classification techniques. Future models can be used in the design of clinical decision support system for mining Lung Cancer.

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