EXPERT SYSTEM DIAGNOSIS OF DISEASES IN THE LUNGS USING A COMBINATION OF CASE BASED REASONING AND CERTAINTY FACTOR METHODS

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ABSTRACT

The lungs are one of the most important respiratory organs in humans and are located in the rib cage. The lungs have a very important task, because it will be very dangerous to breathe polluted air and have viral diseases that will stick to the lungs during the process of exchanging oxygen with carbon dioxide. To find out the lung disease suffered, then a confession is made for the diagnosis of lung disease. Pulmonary diagnosis is confirmed by anamnesis, physical examination, and supporting examinations. Anamnesis is a collection of questions that are conducted to interview patients who are submitting complaints to doctor. At the stage of establishing this anamnesis, it can take quite a long time because data and medical history from the patient are needed. Therefore, an expert system for diagnosing diseases of the lungs was developed using a combination of Case Based Reasoning and Certainty Factor methods which had a value of 29.6% based on a system analysis that was intended as a presumptive result with the final result of a doctor's diagnosis covering the entire process of enforcing.

***Keywords* :** *Expert System, Lungs, Case Based Reasoning, Certainty Factor.*