Chronic diseases, or noncommunicable diseases (NCDs), are characterized by the fact that they are long-standing and slow to develop. Examples of chronic diseases include cardiovascular diseases (coronary artery disease, high blood pressure, and stroke), chronic respiratory diseases, and diabetes. Due to the fact that these are chronic and expensive to treat, they develop into an enormous burden to society and the family involved.

Today's global response to and control of chronic diseases remains a core topic, particularly among developing and middle-income countries. Chronic diseases account for a high percentage of the world's disease burden since the number of deaths that they account for keeps rising steadily. Chronic diseases, with many causes, are likely to result in complications that complicate the process of decision-making by doctors on the best treatment further.

Even though advanced medical equipment and technology—such as wearable health monitors and mobile medical applications that can track and store huge amounts of patient data on an ongoing basis—are present, this information is usually heterogeneous, and it includes laboratory test data, clinical data, and electrocardiograms. In order for the medical professionals to interpret and utilize the complicated data, they use the data mining and machine learning software to analyze and condense the data so that they can make the optimal treatment decisions. Machine learning (ML) is a branch of artificial intelligence (AI). AI refers to the utilization of computer systems to simulate intelligent behavior with little or no human intervention. AI is normally associated with the creation of robotics. Due to dramatic boosts in the computing powers of electronics and programming models, computers are getting close to the level of exhibiting intelligent behavior comparable to human beings. Such capabilities are driven by dramatic advances in contemporary AI theories. Artificial intelligence basically refers to intelligence executed by machines that simulates human thinking processes. In computer science, AI is specified as the ability of a machine to carry out intelligent behavior autonomously with the help of machine learning methods.

The application of artificial intelligence in medicine is evolving very rapidly. Artificial intelligence-based medical practice involves computerized diagnostic procedures and patient treatment. Increased application of AI in diagnosis and treatment will be inclined to automate most of the mundane work so that medical professionals can devote more time to the aspects of patient treatment that require human judgment and compassion. Therefore, AI technologies are increasingly being applied not only in healthcare but also in other areas, such as human resources (HR).