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## ACCURACY OF DIAGNOSIS AND TREATMENT PLANS IN TELEDERMATOLOGY: A PILOT STUDY

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Limited mobility, high costs of transportation and specialized care, make it very difficult to get specialized care services for the elderly, especially those living in nursing homes, particularly in the field of skin diseases. In this study, we evaluate the accuracy of diagnostic and treatment plan in teledermatology compared to in-person examination. The population of this quasi-experimental study, consisted of 280 elderly people living in Kahrizak Charity Foundation in Tehran. The exclusion criteria included: emergency skin conditions and genital skin lesions. All participants should have signed a consent form. No sampling was done since there were few qualified individuals (n = 46) finally, 37 patients participated in the study. In order to calculate the accuracy of diagnosis and treatment planning, simple statistical methods were used. The participants with skin diseases, consisted of 37 elderly patients (aged 62 to 89), 22 of whom were men. The accuracy of diagnosis and treatment planning for patients provided by teledermatology compared to those of in-person examination were, 86% and 84%, respectively. The result shows that teledermatology can be considered as a solution to overcome these barriers and improve access to specialized skin care services and the elderly can benefit from teledermatology in nursing homes and have better access to specialized services and avoid unnecessary trips to dermatology clinics.

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## APPLICATIONS OF ARTIFICIAL NEURAL NETWORKS FOR MEDICAL DIAGNOSTICS AND PROGNOSTICS

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In the medical field, diagnostic and prognostic remain the most important step to identify disease type and thereby define the adequate treatment before reaching catastrophic and fatal states. However, clinical symptoms and syndromes are not sufficient to detect some diseases. Consequently, the definition of new advanced techniques for medical diagnostics and prognostics are becoming of great interest to assist specialists in clinical researches and hence to ensure safety for millions of people. Artificial neural networks (ANNs) are inspired by the way that the brain performs computations: they are classified as one of the best and most used soft computing techniques. In this context, two innovative methods for early-stage Alzheimer's disease diagnosis and blood glucose level prediction of Type 1 diabetes prediction and other cancer image analysis will be presented, as well as the result interpretation and some case studies. The aim of this work is to show the great assistance provided by these advanced techniques to the medical staff where the big data are processed through a trained ANNs leading accurate statistics leading suitable diagnostic decision making.

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