

〈教育セミナー〉

第49回教育セミナー (2024)・「皮膚から“情報”を得る～ヒトの皮膚こそデータの宝庫～」

臨床予測モデルの肌老化への応用：顔情報から未来のシワを予測する

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Application of Clinical Prediction Models to Skin Aging: Predicting Future Wrinkles from Facial Information

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Abstract

In modern medicine, Evidence-Based Medicine (EBM) has become a fundamental approach to selecting the most appropriate treatment for patients. The practice of EBM requires the use of the latest scientific evidence to make the best decisions based on each patient's unique health condition. One of the key methodologies supporting this approach is prognostic prediction models, which are statistical tools designed to forecast future health outcomes and identify factors that influence prognosis.

In this study, we applied this prognostic prediction model to aging prevention and developed a wrinkle prediction model using multiple skin condition measurements. Our findings revealed that skin brightness (L value), redness (a value), and sebum level significantly impact future wrinkle formation. This research scientifically suggests that personalized skincare based on an individual's current skin condition can effectively help prevent skin aging.

In this article, we will introduce the fundamental theories of clinical prediction models, which encompass prognostic prediction models, and explain the statistical methodologies used in their application.

Key words: prediction, statistics, modeling, wrinkle, prognostic.