World Academy of Science, Engineering and Technology
International Journal of Medical and Health Sciences
Vol:17, No:09, 2023

Artificial Intelligence in Melanoma Prognosis: A Narrative Review

Authors : Shohreh Ghasemi

Abstract : Introduction: Melanoma is a complex disease with various clinical and histopathological features that impact prognosis and treatment decisions. Traditional methods of melanoma prognosis involve manual examination and interpretation of clinical and histopathological data by dermatologists and pathologists. However, the subjective nature of these assessments can lead to inter-observer variability and suboptimal prognostic accuracy. AI, with its ability to analyze vast amounts of data and identify patterns, has emerged as a promising tool for improving melanoma prognosis. Methods: A comprehensive literature search was conducted to identify studies that employed AI techniques for melanoma prognosis. The search included databases such as PubMed and Google Scholar, using keywords such as "artificial intelligence," "melanoma," and "prognosis." Studies published between 2010 and 2022 were considered. The selected articles were critically reviewed, and relevant information was extracted. Results: The review identified various AI methodologies utilized in melanoma prognosis, including machine learning algorithms, deep learning techniques, and computer vision. These techniques have been applied to diverse data sources, such as clinical images, dermoscopy images, histopathological slides, and genetic data. Studies have demonstrated the potential of AI in accurately predicting melanoma prognosis, including survival outcomes, recurrence risk, and response to therapy. AI-based prognostic models have shown comparable or even superior performance compared to traditional methods.

Keywords : artificial intelligence, melanoma, accuracy, prognosis prediction, image analysis, personalized medicine
Conference Title : ICDDS 2023 : International Conference on Dermatology and Dermatologic Surgery
Conference Location : Toronto, Canada
Conference Dates : September 18-19, 2023