AI system could help clinicians assess psoriasis severity

21 July 2022

An artificial intelligence (AI) system could aid clinicians in assessing psoriasis severity, according to a short report published online June 28 in the *Journal of the European Academy of Dermatology and Venereology*.

Takashi Okamoto, from the University of Yamanashi in Japan, and colleagues developed a simplified Psoriasis Area and Severity Index (PASI) system (Single-Shot PASI) and associated AI models capable of assessing psoriasis severity. Model development used 705 psoriasis images of a patient's trunk front and back, and 10 images were used to validate the deep learning system.

Thirteen board-certified dermatologists or residents and nine medical students scored test sets without AI assistance and subsequently referred to the AI scores, then reevaluated their previous scores. With AI assistance, mean absolute differences from AI scores and standard deviation among evaluators were significantly reduced.

"For dermatologists, the Single-Shot PASI system reduces the burden of scoring psoriasis severity. Even when the AI scores of the Single-Shot PASI system are not directly used, referencing them reduces deviations in the evaluation between dermatologists," the authors write. "Furthermore, the Single-Shot PASI system and our AI application can be an instant tool to objectively check psoriasis severity for patients with psoriasis. Finally, we hope that the Single-Shot PASI system will be used by many dermatologists and patients."

More information: T. Okamoto et al, Artificial intelligence for the automated single?shot assessment of psoriasis severity, *Journal of the European Academy of Dermatology and Venereology* (2022). DOI: 10.1111/jdv.18354