AI Chatbot Accurately Identifies Skin Cancers from Dermoscopy Images, Study Finds

MIAMI, FL, UNITED STATES, September 10, 2025 /EINPresswire.com/ -- Can artificial intelligence help in diagnosing skin disease? A new study shows that artificial intelligence (AI) can accurately recognize skin cancer and other skin conditions by analyzing photos. Researchers tested ChatGPT-4o, a widely used AI chatbot, to see if it could identify common benign and malignant skin lesions. The results were very promising, suggesting that AI tools may one day play an important role in helping doctors diagnose skin cancer earlier and more accurately.

> AI tools like ChatGPT-4o could transform dermatology by improving access to accurate diagnosis—even in underserved settings."
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University of Miami researchers reviewed 150 dermoscopic images of 10 different skin conditions, including melanoma, basal cell carcinoma (BCC), squamous cell carcinoma (SCC), actinic keratosis, seborrheic keratosis, and others. For each image, ChatGPT-4o was asked to generate a list of five possible diagnoses ranked from most likely to least likely. The AI was then compared to expert-confirmed diagnoses.

ChatGPT-4o correctly identified 78% of the images on the first attempt and 96% of the images within its top five guesses. Most notably, the AI detected all of the melanomas with 100% not missing a single case. This is important because melanoma is the deadliest form of skin cancer and early detection can save lives.

The study also highlighted differences in accuracy among skin conditions. The AI was very strong at identifying skin cancer and some benign lesions, while it had more difficulty with some other skin diesease. Even in these more challenging cases, however, accuracy improved greatly when looking at the top five possible diagnoses rather than just the first guess.

The researchers believe AI could be especially useful for teledermatology and in underserved communities. Many rural or low-resource areas do not have enough dermatologists, which leads to delays in diagnosis and treatment. With tools like ChatGPT-4o, doctors could have an extra layer of support, and patients may receive earlier guidance on whether a suspicious lesion needs further testing or treatment.

Still, the study authors caution that AI is not yet ready to replace trained physicians. Future studies will need to include larger and more diverse populations to ensure the technology works

across all skin types.

This study adds to a growing body of research showing that AI can help improve healthcare outcomes. With more testing and validation, tools like ChatGPT-4o could help transform the way skin cancer and other conditions are diagnosed and managed.

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