44. UTILIZING LINER ARTIFICIAL INTELLIGENCE IMAGE RECOGNITION FOR IDENTIFYING SKIN DISORDERS IN SKIN OF COLOR

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BACKGROUND: Advances in artificial intelligence (AI) with machine learning have allowed for the use of this technology to identify the contents of images and answer questions about the contents of the images. Technologies, such as artificial intelligence, offer a potential avenue to improve medical care to marginalized communities. In this study we attempted to see how well the Liner AI model was able to detect ten dermatological diseases from Skin of Color images of the diseases. **METHODS**: To test the model, two to three images each from the Dermatology Atlas for Skin of Color for the following diseases: vitiligo, mycosis fungoides, tinea, lentigines, acne vulgaris, rosacea, hidradenitis suppurativa, basal cell carcinoma, squamous cell carcinoma, and melanoma were input into the AI model and the AI model was prompted with the question: "What is the differential diagnosis?" **RESULTS**: Liner generated variable length lists for the images and these differential diagnoses lists were analyzed. Liner's accuracy of correctly diagnosing the correct diagnosis as the first diagnosis in the generated differential diagnosis list was only 34.6%, but the accuracy of the model to generate a differential diagnosis list that contained the correct diagnosis was 53.8%. **CONCLUSION**: Liner demonstrated limited diagnostic accuracy, critically missing all the basal cell carcinoma cases, demonstrating present diagnostic limitations for potential future clinical use. Further, research could look to compare Liner against other patient demographics to see if the limitations were limited to the Skin of Color cases tested and to guide future development of this technology.

Table: Correct First Diagnosis/Differential Compared Against Images Tested.

Case	Correct 1st Diagnosis /# of Images	Correct Differential /# of Images
Vitiligo	3/3	3/3
Mycosis Fungoides	0/2	0/2
Tinea	2/2	2/2
Lentigines	0/3	2/3
Acne Vulgaris	1/3	1/3
Rosacea	1/2	1/2
Hidradenitis suppurativa	0/2	1/2
Basal Cell Carcinoma	0/3	0/3
Squamous Cell Carcinoma	1/3	1/3
Melanoma	1/3	3/3
Average Overall Percentage Correct	**34.6%**	**53.8%**

Key Words: Machine learning, Dermatology, Vitiligo, Tinea, and acne vulgaris.