

The Capture of Fingernail and Scalp Psoriasis Pictures Through a Mobile Application in a Real-World Ixekizumab Observation Study



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OBJECTIVE

- To describe the real-world use of a mobile device camera application designed to capture images of fingernail and scalp psoriasis (PsO)

CONCLUSION

- The camera application enables collection of images that can be used to visually assess changes in a patient's nail and scalp PsO over time
- The application may also enable:
 - Telehealth-use cases between patient and provider
 - The potential creation of an artificial intelligence tool for automated nail PsO scoring

BACKGROUND

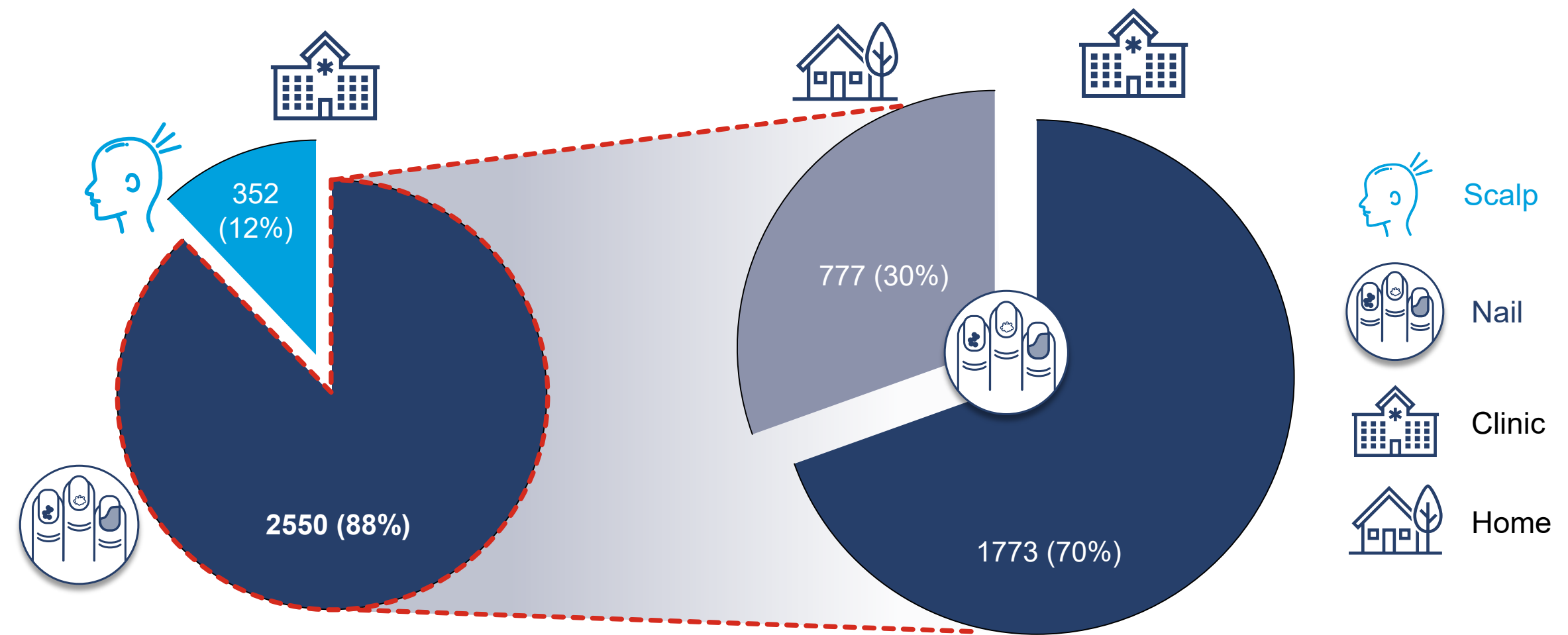
- The remote capture of health data by digital health technologies can enable decentralized clinical trials, telehealth, and real-world data collection
- PsO studies can effectively leverage digital health technologies since mobile devices with cameras are commonplace and photography captures many features of PsO

RESULTS

Between January 31 and October 31, 2023

2902 images were submitted from 148 patients across 37 sites (clinic or patient's home)

88% of images were of fingernails 70% of fingernail images were taken at a clinic



METHODS

The Camera Application

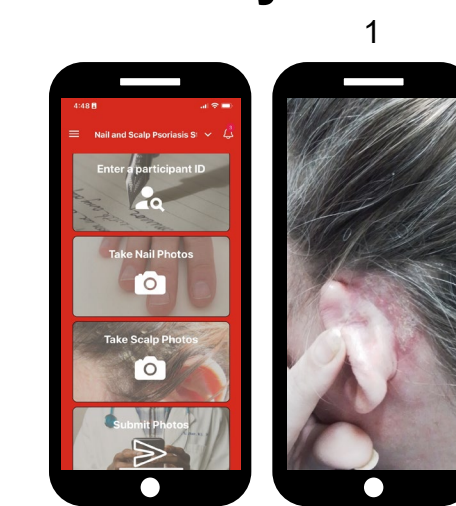
- The application uses computer vision and artificial intelligence to capture images of a patient's condition, assure standardization of images, and facilitate submission to the sponsor through the in-app submission function
- The application can be downloaded by clinic staff and patients onto their study tablets or at-home devices, respectively
- Application support is provided via in-app support, training documents for clinic staff and patients, and virtual workshops for clinic staff

Study Design

- The utility of the camera application is being explored among patients enrolled in PSoSA (PSoriasis Special Areas), a single-arm, prospective, observational study of fingernail and scalp PsO improvement in patients treated with ixekizumab
- Clinic staff take and submit photos of patients' fingernails and scalp at each study visit
- For each patient, the following are taken:
 - 6 photos of hands to show nail PsO
 - Up to 3 photos of a target scalp lesion, in those with scalp PsO (PSSI >0)
- Participating patients, or their caregivers, have the option of taking and submitting photos of their fingernails from home at baseline and every month between study visits (6 photos)

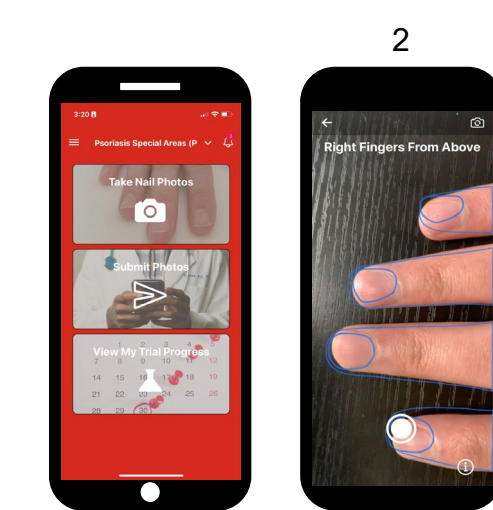
Workflow

Site only

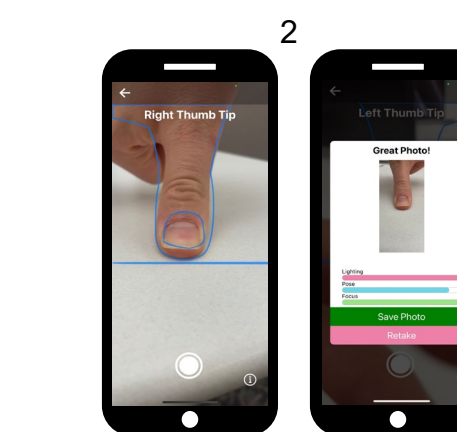


STEP 1
The clinic staff record patient details and take photos of a target lesion on the scalp

Site and Patient



STEP 1a
The clinic staff, patients, or their caregivers, take photos of the nails, guided by the sequence of poses provided within the application



STEP 2
The application prompts the user to retake any photos that are below the image quality standard in lighting, pose, or focus

STEP 3
Once all photos have been taken, the user submits the images via the application to the sponsor's secure cloud database

¹ Image is from an actual study patient

² Images are an example and do not show actual patient with psoriatic disease

Limitations

- Low-quality images can be submitted despite the in-built functionality prompting retaking of images that do not meet quality standards in lighting, pose, or focus
- Assistance of a caregiver to operate the camera application may be required, particularly by those with functional impairment of their hands

Abbreviations: PSSI=Psoriasis Scalp Severity Index; PsO=psoriasis; PSoSA=PSoriasis Special Areas

Disclosures: P. Shannon and W. McFalda have no disclosures to declare; M. Feely is associate staff at Mount Sinai Hospital, Mount Sinai West, and Mount Sinai Morningside; is a current employee and shareholder of: Eli Lilly and Company; and has received consulting, travel, or speaker fees from: Aerolase, American Academy of Dermatology, Castle Biosciences, CeraVe-L'Oréal, DREAM USA, Galderma Aesthetics, Glow Recipe, La Roche-Posay-L'Oréal, Revian, Sonoma Pharmaceuticals, Sun Pharma, and Suneva Medical; N. Rance is an employee of: MatchLab; D. Onken, K. Gottlieb, S. Morton, A. Vadhariya and W. N. Malatestinic are current employees and shareholders of: Eli Lilly and Company; A. Spizuoco has served as a speaker and/or investigator for: Amgen, Arcutis, Bristol Myers Squibb, CeraVe-L'Oréal, Dermavant, Eli Lilly and Company, Galderma, Incyte Corporation, Ortho Dermatologics, Sanofi Regeneron, and Verrica Pharmaceuticals

Medical writing assistance was provided by Clare Weston, MSc, of ProScribe – Envision Pharma Group, and was funded by Eli Lilly and Company

Patient Images Captured by Clinic Site



¹ Images are from actual study patients