

Supplemental Online Content

Jiang SW, Flynn MS, Kwock JT, et al. Quality and perceived usefulness of patient-submitted store-and-forward teledermatology images. *JAMA Dermatol*. Published online July 27, 2022. doi:10.1001/jamadermatol.2022.2815

eFigure. Experimental set up to evaluate 1200 patient-submitted images

eAppendix. Questionnaire assigned to each image and instructions for evaluators

This supplemental material has been provided by the authors to give readers additional information about their work.

eFigure. Experimental set up to evaluate 1200 patient-submitted images

A

Condition	Number	Percentage
Analyzed	1200	41.2%
De-identification not possible	72	2.5%
No skin condition depicted	259	8.9%
Not analyzed	1384	47.4%

B

Images	Evaluator 1	Evaluator 2	Evaluator 3
1-200	Senior faculty 1	Junior faculty 1	Resident 1
201-400	Senior faculty 2	Junior faculty 2	Resident 2
401-600	Senior faculty 3	Junior faculty 3	Resident 3
601-800	Senior faculty 1	Senior faculty 2	Senior faculty 3
801-1000	Junior faculty 1	Junior faculty 2	Junior faculty 3
1001-1200	Resident 1	Resident 2	Resident 4

eAppendix. Questionnaire assigned to each image and instructions for evaluators

- 1. What type of skin condition do you think is pictured?**
 - Inflammatory
 - Infectious
 - Neoplastic
 - Alopecia
 - Wound
 - Other
 - The purpose of the photo is unclear
 - The image quality is insufficient to make a guess

- 2. Is the skin condition positioned at an appropriate distance from the camera?**
 - Too close
 - Too far away
 - Appropriate distance

- 3. How is the brightness of the photograph?**
 - Too dark
 - Too bright
 - Well lit

- 4. Is the skin condition in focus?**
 - No
 - Yes

- 5. Is the background free from distractions (e.g. other people, bright-colored objects, etc.)?**
 - No
 - Yes

- 6. Is the image sufficient in quality to include in the patient's chart on Epic?**
 - No
 - Yes

- 7. Would you feel comfortable making a medical decision based on this photo?**
 - No
 - Yes

- 8. (Optional) Click below if this image is very similar to previous image(s)**
 - Yes, it is similar

1. *What type of skin condition do you think is pictured?*

- *Inflammatory*
- *Infectious*
- *Neoplastic*
- *Alopecia*
- *Wound*
- *Other*
- *The purpose of the photo is unclear*
- *The image quality is insufficient to make a guess*

Please use the table below to guide diagnostic categorization. The table does not have an exhaustive list of diagnoses but can be used to aid in categorization.

Category	Subcategory	Diagnosis
Inflammatory (n = 225, 66.2%)	Dermatitis (n = 82, 36.4%)	Contact dermatitis*, Unspecific eczema*, Hand eczema*, Seborrheic dermatitis*, Atopic dermatitis*, Nummular eczema, Dyshidrotic eczema*, Cheilitis*, Chronic paronychia*, Erythema annulare centrifugum*, Lichen simplex chronicus*, Lichenoid dermatitis, Pseudotinea amiantacea. *
	Acne/rosacea (n = 78, 34.7%)	Acne*, Rosacea*, Hidradenitis suppurativa, Perioral dermatitis
	Autoimmune (n = 34, 15.1%)	Morphea*, Cutaneous lupus*, Bullous disease*, Vitiligo*, Poikiloderma* (dermatomyositis), Lichen sclerosus, Amicrobial pustulosis of the folds, Complex aphthosis, Calcinosis cutis.
	Papulosquamous (n = 17, 7.6%)	Psoriasis*, Pityriasis rosea*, Lichen nitidus*, Pityriasis lichenoides chronica*.
	Others inflammatory (n = 14, 6.2%)	Urticaria*, Insect bite*, Exantema, Postinflammatory hypopigmentation, Postinflammatory hyperpigmentation*, Grover's disease, Pemio Like Eruption, Sarcoidosis, Ulcers*.
Infectious (n = 52, 15.3%)	Viral (n = 22, 42.3%)	Warts*, Herpes zoster*, Viral rash*, Eczema herpeticum*, Molluscum contagiosum*, Condylomas*.
	Fungal (n = 21, 40.4%)	Tinea*, Onychomycosis*, Pityriasis Versicolor*, Balanitis, Angular cheilitis*, Candidal intertrigo.
	Bacterial (n = 8, 15.4%)	Ingrown nail*, Folliculitis*, Paronychia*, Furuncle*, Impetigo*, Pyoderma.
	Parasitic (n = 1, 1.9%)	Demodicosis.
Neoplastic (n = 32, 9.4%)	Benign (n = 28, 87.5%)	Melanocytic nevus*, Seborrheic keratosis*, Actinic Keratosis*, Dermatofibroma*, Epidermal cyst*, Keloid*, Organoid nevus*, Inflamed nevus, Telangiectatic granuloma*, Targetoid Hemosiderotic Hemangioma, Milia*, Inverted follicular keratosis, Cutaneous horn*.
	Malignant (n = 4, 12.5%)	Basal cell carcinoma*, Bowen's disease*.
Alopecias (n = 15, 4.4%)	Scarring (n = 8, 53.3%)	Lichen planus pilaris, Folliculitis decalvans, Non-specified.
	Non-scarring (n = 7, 46.7%)	Androgenetic alopecia*, Effluvium telogen, Alopecia Areata*.
Other (n = 16, 4.7%)		Striae distansae*, Scar*, Acne scar*, Burn*, Hematoma*, Erythema ab igne*, Galli-Galli disease, Portwine stain*.

Muñoz-López C, Ramírez-Cornejo C, Marchetti MA, et al. Performance of a deep neural network in teledermatology: a single-centre prospective diagnostic study. *J Eur Acad Dermatology Venereol.* 2021;35(2):546-553. doi:<https://doi.org/10.1111/jdv.16979>

2. *Is the skin condition positioned at an appropriate distance from the camera?*

- *Too close*
- *Too far away*
- *Appropriate distance*

Too close: the entire skin condition does not fit into the image.

Too far away: the entire skin condition fits into the image, but is positioned far enough such that important details cannot be appreciated without zooming in.

Appropriate distance: the entire skin condition fits into the image and is positioned such that important details can be appreciated without zooming in.

3. *How is the brightness of the photograph?*

- *Too dark*
- *Too bright*
- *Well lit*

Too dark: visualization of the skin condition is limited by lack of flash or excess shadows in crucial areas of the skin.

Too bright: visualization of the skin condition is limited by excess flash or excess bright light in crucial areas of the skin.

Well lit: visualization of the skin condition is not limited by excess bright light or excess shadows.

4. *Is the skin condition in focus?*

- *No*
- *Yes*

No: the skin condition is blurry and out of focus.

Yes: the skin condition is crisp, sharply in-focus, and well-visualized.

5. *Is the background free from distractions (e.g. other people, bright-colored objects, etc.)?*

- *No*
- *Yes*

No: the background contains objects or people which draw attention away from the skin condition being portrayed.

Yes: the background is limited in or free from distracting features, such as objects or other people.

6. *Is the image sufficient in quality to include in the patient chart on Epic?*

- *No*
- *Yes*

Please answer “yes” if this image were hypothetically taken in clinic and you would approve of uploading this to the patient’s chart.

7. *Would you feel comfortable making a medical decision based on this photo?*

- *No*
- *Yes*

Please answer “yes” if this image could be used to make a diagnosis, manage prescriptions, or recommend a biopsy/clinic visit. Please answer “no” if this image could not be used for the aforementioned functions or if its quality limited its utility in making medical decisions.

8. *(Optional) Click below if this image is very similar to previous image(s)*

- *Yes, it is similar*

Please answer “yes” if this image appears very similar to another image on this survey, such that they were taken by the same patient of the same skin condition/area.