JMIR Publications
The Leading eHealth Publisher

Mobile Applications in Dermatology From 2013 to 2025: Cross-Sectional Study of Categories, Pricing, and AI Use

Lana Kamel, Monika Ziogaite, Victoria Asuquo, Patrick McClain, Cory Dunnick, Robert Dellavalle

Submitted to: JMIR Dermatology
on: September 08, 2025

Preprint
JMIR Publications

Disclaimer: © The authors. All rights reserved. This is a privileged document currently under peer-review/community review. Authors have provided JMIR Publications with an exclusive license to publish this preprint on it's website for review purposes only. While the final peer-reviewed paper may be licensed under a CC BY license on publication, at this stage authors and publisher expressively prohibit redistribution of this draft paper other than for review purposes.

Table of Contents

Preprint
JMIR Publications

Mobile Applications in Dermatology From 2013 to 2025: Cross-Sectional Study of Categories, Pricing, and AI Use

Lana Kamel[1*] BS; Monika Ziogaite[2*] BS; Victoria Asuquo[3] BS; Patrick McClain[4] BS, MS; Cory Dunnick[5] MD; Robert Dellavalle[1] MD, MSPH, PhD

[1] Medical School University of Minnesota Minneapolis US
[2] Kansas City University College of Osteopathic Medicine Kansas City US
[3] Morehouse School of Medicine Atlanta US
[4] Rocky Vista University College of Osteopathic Medicine Englewood US
[5]Department of Dermatology University of Colorado Anschutz Medical Campus Aurora US
[*]these authors contributed equally

Corresponding Author:
Lana Kamel BS

Medical School
University of Minnesota
420 Delaware St SE
Minneapolis
US

Preprint
JMIR Publications

Abstract

Background: Dermatology, a specialty grounded in visual assessment, is uniquely positioned to be influenced by advances in mobile health technology. The rapid growth of mobile applications, particularly those utilizing artificial intelligence, provides insight into how technological innovation is transforming patient education, self-care, diagnostic support, and clinical workflows. Examining these apps provides valuable information for understanding current trends in digital dermatology and anticipating their impact on future practice.

Objective: To identify and categorize current mobile dermatologic-related apps available on the Apple and Google Play stores.

Methods: Dermatology-related search terms were queried in the Apple and Google Play stores. Applications were assigned to 12 categories based on description. Apple App Store and Google Play Store, January–May 2025. Applications were included if they contained name, type, price, number of reviews, target audience, and use of AI were recorded.

Results: From 229 apps in 2013 to 474 in 2025, the dermatology-related application market has more than doubled. The most represented categories were Skin Analysis (21.3%), Product Information & Ingredient Checker (17.9%), Educational Aids (11.6%), and Self-Diagnosis & Self-Surveillance Tools (10.8%). Over half of the apps were free, with the remainder split between subscription-based, paid, or free with in-app purchases. Target audiences included consumers, healthcare providers, and a smaller portion designed for both. Notably, 176 apps (37.1%) included artificial intelligence features, most often for image analysis and beauty scoring.

Conclusions: Dermatology-related mobile applications have more than doubled in number since 2013, with substantial expansion in consumer-facing and AI-enabled tools. Although these apps may improve patient engagement and access to care, concerns remain regarding accuracy, privacy, and clinical oversight. Dermatologists should remain informed about app use to help guide patients toward safe and validated digital resources.

(JMIR Preprints 08/09/2025:83772)
DOI: https://doi.org/10.2196/preprints.83772

Preprint Settings

1) Would you like to publish your submitted manuscript as preprint?

✓ **Please make my preprint PDF available to anyone at any time (recommended).**
Please make my preprint PDF available only to logged-in users; I understand that my title and abstract will remain visible to all users.

Only make the preprint title and abstract visible.
No, I do not wish to publish my submitted manuscript as a preprint.

2) If accepted for publication in a JMIR journal, would you like the PDF to be visible to the public?

✓ **Yes, please make my accepted manuscript PDF available to anyone at any time (Recommended).**
Yes, but please make my accepted manuscript PDF available only to logged-in users; I understand that the title and abstract will remain v
Yes, but only make the title and abstract visible (see Important note, above). I understand that if I later pay to participate in <a href="http
No. Please do not make my accepted manuscript PDF available to anyone. I understand that if I later pay to participate in <a href="https:/

Preprint JMIR Publications

Original Manuscript

Preprint
JMIR Publications

Title: Mobile Applications in Dermatology Updated from 2013 to 2025

1. Lana Kamel, BS[1]; Monika Ziogaite, BS[2]; Victoria Asuquo, BS[3]; Patrick McClain, BS, MS[4]; Cory A. Dunnick, MD[5]; Robert Dellavalle, MD, PhD, MSPH[1,5]

Affiliations:

[1] University of Minnesota Medical School, Minneapolis, MN
[2] Kansas City University College of Osteopathic Medicine, Kansas City, MO
[3] Morehouse School of Medicine, Atlanta, GA
[4] Rocky Vista University College of Osteopathic Medicine, Englewood, CO
[5] Department of Dermatology, University of Colorado School of Medicine, Aurora, CO

Corresponding Author: Lana Kamel, University of Minnesota Medical School, 632 Erie St SE, Minneapolis, MN 55414

Email: kamel034@umn.edu

Phone: 714-853-8357

ORCID: 0009-0005-0925-4132

Preprint JMIR Publications

Background: Dermatology, a specialty grounded in visual assessment, is uniquely positioned to be influenced

by advances in mobile health technology. The rapid growth of mobile applications, particularly those utilizing artificial intelligence, provides insight into how technological innovation is transforming patient education, self-care, diagnostic support, and clinical workflows. Examining these apps provides valuable information for understanding current trends in digital dermatology and anticipating their impact on future practice.

Objective: To identify and categorize current mobile dermatologic-related apps available on the Apple and Google Play stores.

Methods:

Dermatology-related search terms were queried in the Apple and Google Play stores. Applications were assigned to 12 categories based on description. Apple App Store and Google Play Store, January–May 2025. Applications were included if they contained name, type, price, number of reviews, target audience, and use of AI were recorded.

Results: From 229 apps in 2013 to 474 in 2025, the dermatology-related application market has more than doubled. The most represented categories were Skin Analysis (21.3%), Product Information & Ingredient Checker (17.9%), Educational Aids (11.6%), and Self-Diagnosis & Self-Surveillance Tools (10.8%). Over half of the apps were free, with the remainder split between subscription-based, paid, or free with in-app purchases. Target audiences included consumers, healthcare providers, and a smaller portion designed for both. Notably, 176 apps (37.1%) included artificial intelligence features, most often for image analysis and beauty scoring.

Conclusion: Dermatology-related mobile applications have more than doubled in number since 2013, with substantial expansion in consumer-facing and AI-enabled tools. Although these apps may improve patient engagement and access to care, concerns remain regarding accuracy, privacy, and clinical oversight. Dermatologists should remain informed about app use to help guide patients toward safe and validated digital resources.

Keywords: Dermatology; Mobile Applications; Smartphone; Mobile Health; mHealth; Artificial Intelligence; Skin Diseases; Teledermatology; Consumer Health Information; Digital Health; App Store; Cosmetic

Ingredients

Preprint
JMIR Publications

Introduction:

In 2023, there were 6.97 billion mobile network users worldwide, nearly doubling from 3.7 billion users in 2016. [1] In 2015, a survey assessed that 58.23% of mobile phone users had downloaded a health-related mobile app.[2] In recent years, mobile app usage in the general population and among healthcare providers has increased.[3] A scoping review of 10 studies from 2016–2021 found that physicians most commonly use smartphones and mobile apps for communication, clinical decision-making, drug references, and medical

education, highlighting their widespread use in clinical practice.[4]

Consumers, in contrast, use apps for tasks ranging from cosmetic dermatology to skin diagnosis. [5] Regarding cosmetic use, applications are utilizing artificial intelligence (AI) for skin analysis in order to detect skin quality and identify areas that may need improvement.[6,7] Areas of focus include hyperpigmentation, infraorbital lines, under eye circles, elasticity, and lack of radiance. [8] Through the use of this information, these AI-based applications create customized product regimens for consumers.[9] Some applications will even generate a score based on various skin parameters and recommend products over days, weeks, or months that the consumer can track inside the application. [10] These home-based apps increase patient involvement in their skin care decisions which can potentially streamline the patient-physician experience. [11]

Current evidence indicates that apps used to evaluate suspicious skin lesions for malignancy remain limited in real-world clinical settings. [12, 13] A study assessing the accuracy of commercially available dermatology-related applications for the detection of melanoma found highly variable performance, with overall low sensitivity (0.28) and moderate specificity (0.81).[14] A 2023 analysis of 41 AI-powered dermatology apps found that most were designed for patient use (78%) and commonly focused on skin cancer detection, condition identification, and mole tracking. [15]However, the study revealed major concerns about transparency, clinical validation, and safety, highlighting a lack of scientific evidence, minimal dermatologist involvement, and opaque data and algorithm practices that may pose risks to users.[16, 17] An early 2020 review cataloged AI-enabled dermatology apps, noting that most centered on image-based assessment and that reporting on model validation was limited. [2]

Regarding diagnostic use, applications such as VisualDx, MyDermPath, YouDemoscopy helps increase user knowledge, lessen unnecessary patient biopsies, and increase patient satisfaction. This can be especially beneficial for those in underserved and rural settings. [1]

Methods:

From January to May 2025, a systematic search of publicly available dermatology-related mobile applications

was conducted in the Apple App Store (Version 3.0 [1009.4.56] on macOS Sonoma 14.6.1) and the Google Play Store (play.google.com). Searches were performed using the app store interface of each platform. The following keywords were used: *dermatology*, *skin*, *skin cancer*, *acne*, *psoriasis*, *melanoma*, *eczema*, *rash*, *beauty product*, *beauty products*, *beauty products review*, *sunscreen*, *sunscreen review*, *UV recommendations*, *teledermatology*, *skin scanner*, *hair health*, *analyze skin*, *skin care*, *skin products*, *product review*, *collagen*, *glowy skin*, *poreless*, *dermoscopy*, *hair care*, and *skin tracker*.

Applications were excluded if they were primarily focused on retail, product advertising, general medical reference, appointment scheduling for dermatology clinics, national dermatology conference content, or if they claimed to cure skin disease without substantiated evidence.

Duplicate apps across platforms were excluded. If an app appeared under different names but had identical descriptions, it was counted once. If an app existed on both platforms with different names and non-identical descriptions, it was treated as a separate entry. For apps available on both platforms, review counts were combined to calculate the total number of user reviews.

Each included app was categorized into one of 12 functional categories based on its official store description: (1) Product Information & Ingredient Checker, (2) Skin Analysis, (3) Hair Analysis & Haircare Recommendations, (4) UV Monitoring & Recommendations, (5) Teledermatology Platforms, (6) Educational Aids & Tools, (7) General Dermatology Reference & Disease Guides, (8) Self-Diagnosis & Surveillance Tools, (9) Beauty Scoring, (10) Custom Skincare & Routine Builders, (11) Dermoscopy (12) Other Specialized Tools.

Additionally, based on app descriptions, we identified the intended target audience as *patients*, *consumers*, *health care providers*, or a *combination* thereof. Applications were not downloaded or evaluated beyond the app store description and metadata.

Results:

Category	Google Play	Total, No.	%

Skin Analysis	61	101	21.3
Product Information & Ingredient Checker	60	85	17.9
Educational Aids & Study Tools	49	55	11.6
Self Diagnosis & Self-Surveillance Tools	39	51	10.8
General Dermatology Reference & Disease Guides	37	46	9.7
Custom Skincare & Routine Builders	13	32	6.8
Hair Analysis & Haircare Recommendations	12	29	6.1
Other Specialized Tools	13	19	4
UV Monitoring & Recommendations	8	18	3.8
Beauty Scoring	13	17	3.6
Teledermatology & Platforms	12	13	2.7
Dermoscopy	6	8	1.7

Table 1: Total Applications

The number of dermatology-related applications has increased by nearly 110% from 2013 to 2025. These applications were identified and grouped into 12 categories. The most represented were Skin Analysis (21.3%), Product Information & Ingredient Checker (17.9%), Educational Aids & Study Tools (11.6%), and Self-Diagnosis & Self-Surveillance Tools (10.8%). Following these were General Dermatology Reference & Disease Guides (9.7%), Custom Skincare & Routine Builders (6.8%), Hair Analysis & Hair Recommendations (6.1%), and UV Monitoring & Recommendations (3.8%), Beauty Scoring (3.6%), Teledermatology Platforms (2.7%), and lastly Dermoscopy (1.7%) (Table 1).

The largest proportion of apps fell into the Skin Analysis category (n [%] = 101 [21.3%]), encompassing tools

that assess skin health through photographs, analyze complexion, or track changes over time. Product Information & Ingredient Checker apps (n [%] = 85 [17.9%]) provided ingredient safety information, allergen alerts, or product comparisons. Educational Aids & Study Tools (n [%] = 55 [11.6%]) included flashcards, quizzes, and exam preparation materials for trainees and clinicians. Self-Diagnosis & Self-Surveillance Tools (n [%] = 51 [10.8%]) allowed users to log symptoms, photograph lesions, and receive algorithm-based or professional feedback. General Dermatology Reference & Disease Guides (n [%] = 46 [9.7%]) offered disease overviews and treatment recommendations for conditions such as acne, eczema, or psoriasis. Smaller categories included Custom Skincare & Routine Builders (6.8%), Hair Analysis & Haircare Recommendations (6.1%), Other Specialized Tools (4.0%), UV Monitoring & Recommendations (3.8%), Beauty Scoring (3.6%), Teledermatology Platforms (2.7%), and Dermoscopy (1.7%).

More than half of all apps were available for free (54.4% [258]), while 27.6% (131) were free with in-app purchases, 15.2% (72) required a subscription, 1.7% (8) used another pricing model, and 1.1% (5) required direct payment.

Application	No. of Reviews	Category	Platform	Cost, $	Target Audience
PicsArt AI Photo Editor	12,522,000	Beauty Scoring	Apple, Google Play	Free (additional Subscription)	Consumers
Camera360 Beauty Selfie Cam	5,034,300	Beauty Scoring	Apple, Google Play	Free (in-app purchases)	Consumers
YouCam Makeup	4,328,600	Skin Analysis	Apple, Google Play	Free (in-app purchases)	Consumers
Sweet Selfie	2,370,000	Beauty Scoring	Google Play	Free (in-app purchases)	Consumers
Nykaa – Beauty Shopping App	1,881,600	Other Specialized Tools	Apple, Google Play	Free	Consumers
goodrx	1,004,600	Product Information & Ingredient Checker	Apple. Google Play	Free (additional Subscription)	Providers and Consumers
Ipsy: Personalized Beauty	377,736	Product Information & Ingredient Checker	Apple, Google Play	Free	Consumers
Purplle Online Beauty Shopping	316,00	Other Specialized Tools	Google Play	Free	Consumers
Yuka	239,400	Product Information & Ingredient	Apple, Google	Free (additional	Consumers

		Checker	Play	subscription)	
AI Mirror: Art Photo Editor	205,800	Skin Analysis	Apple, Google Play	Free (in-app purchases)	Consumers

Table 2: Most Reviewed Applications

PicsArt AI Photo Editor, a beauty scoring app available on both Apple and Google Play, had the highest number of reviews (13,522,000), followed by Camera360 Beauty Selfie Cam (5,034,300) and YouCam Makeup (4,328,600). Several other high-ranking apps, such as Sweet Selfie (2,370,000) and Nykaa Beauty Shopping App (1,881,600), were all mostly targeted towards consumer use (Table 2). GoodRx, which targeted both consumers and providers with medication pricing and discount information, received over 1 million reviews. The remaining top-reviewed apps included IPSY: Personalized Beauty (377,736), Purplle Online Beauty Shopping (316,000), Yuka (239,400), and AI Mirror: AI Art Photo Editor (205,800). The vast majority of apps had fewer than 5,000 reviews, while only 39 apps fell between 5,000 and 50,000 reviews.

Of the 474 apps identified, 176 (37.1%) incorporated AI. AI integration was most common in Skin Analysis, Product Information & Ingredient Checker, Educational Aids & Study Tools, and Self-Diagnosis & Self-Surveillance Tools. The most common AI functions included image recognition for skin analysis, ingredient scanning for allergen detection, beauty scoring, and automated diagnostic support.

A total of 474 applications were identified (Table 1). In comparison to the 2013 analysis (Table 1 in Brewer et al[18]), where the largest proportion of applications were general dermatology references (26.6%), the 2025 dataset shows a marked shift toward consumer-facing tools, with Skin Analysis (21.3%) and Product Information & Ingredient Checker apps (17.9%) representing the largest categories. Educational Aids & Study Tools increased (11.6% in 2025 vs 8.7% in 2013). In 2013, 17.0% of apps focused on a single skin condition, but by 2025 these were mostly folded into broader reference and self-check categories. Apps for self-diagnosis and self-tracking made up 17.9% of apps in 2013 and 10.8% in 2025, but have become more interactive and often now use AI to help with assessments. Categories such as UV Monitoring & Recommendations, Beauty Scoring, and Custom Skincare, Routine Builders, which were minimally

represented or absent in 2013, now account for a larger share of the market. Teledermatology Platforms represent a smaller proportion (5.2% in 2013 vs 2.7% in 2025) while Dermoscopy apps remain to have a low representation in both datasets (0.9% in 2013; 1.7% in 2025).

In 2013, the most reviewed apps had far fewer total reviews, with the top app, Ultraviolet ~ UV Index, receiving just 355 reviews (Table 2 in Brewer et al[18]). Most of the top 10 were focused on UV recommendations, general dermatology references, or basic self-check tools, and all but two were free. By 2025, the scale of user engagement had dramatically increased. The most reviewed app, PicsArt AI Photo Editor, had over 13.5 million reviews. The focus of popular apps also shifted: instead of mostly medical reference and sun safety tools, 2025's dataset reflected larger reviews by consumer-oriented beauty, image editing, and shopping apps, such as Camera360 Beauty Selfie Cam (5,034,300) and YouCam Makeup (4,328,600). Medical-focused tools like GoodRx still appeared on the list but were outnumbered by cosmetic and retail platforms. Pricing models have also changed while many apps remain free, there is now a greater use of in-app purchases or subscription add-ons.

Discussion:

From 229 in 2013 to 474 in 2025, the dermatology-related app market has more than doubled, reflecting both the rapid evolution of mobile health technology and dermatology's unique suitability for visual, technology-driven tools.[18] While dermatology reference tools, disease guides, and self-surveillance/diagnosis apps remain key categories, the market has diversified considerably, with notable growth in consumer skincare tools, teledermatology platforms, and AI-powered image analysis, categories that were absent or minimally represented in 2013.

In the current review, the largest category was Skin Analysis (21.3%), followed by Product Information & Ingredient Checker (17.9%), and Educational Aids & Study Tools (11.6%). The most striking change since 2013 was the emergence and proliferation of AI-based applications, representing 37.1% of all dermatology-related platforms. These AI tools most commonly include lesion classification, skin quality scoring, personalized skincare recommendations, and triage decision support. While such capabilities promise to enhance diagnostic efficiency and patient engagement, their accuracy and reliability remain variable,

especially when algorithms operate without dermatologist oversight.

Pricing models have also changed since 2013, when the market was almost evenly split between free and paid apps [18]. In 2025, most apps are free (54.4%) or use a model with optional in-app purchases (27.6%), followed by subscription-based platforms (15.2%) and a smaller proportion of one-time paid apps (1.1%). While this lowers barriers to initial access, premium features are often restricted to paying users, which may exacerbate disparities in access to higher-quality dermatologic resources.

The distribution of target audiences has shifted considerably since 2013, when 51.1% of apps targeted patients, 41.0% targeted healthcare providers, and 7.9% served both groups [18]. In 2025, 88.9% of apps target patients or consumers, 10.6% target healthcare providers, and 0.5% serve both audiences. This represents a significant shift toward patient-facing tools, accompanied by a relative decline in provider-specific and dual-use platforms. While this shift may empower patients through greater access to educational resources, self-tracking tools, and AI-driven analysis, it also raises concerns about the potential for misinterpretation of clinical information without professional guidance.

Teledermatology has also experienced growth since 2013, fueled by increased internet access, improved smartphone imaging capabilities, and the global expansion of virtual care during the COVID-19 pandemic. [11] Modern teledermatology platforms often integrate AI-assisted triage and synchronous video capabilities, possibly extending dermatologic expertise to rural and underserved populations.[19] These advances reinforce mobile technology’s potential to address geographic disparities in care, though access gaps persist for individuals without adequate devices or digital literacy [20].

Regulatory oversight, while improved since 2013, remains inconsistent. The U.S. Food and Drug Administration (FDA) has expanded its Digital Health policies, including guidance for software as a medical device (SaMD) and framework for artificial intelligence and machine learning (AI/ML) medical tools, but most dermatology apps, particularly consumer wellness and cosmetic-focused products, still fall outside formal regulatory requirements.[21] The Federal Trade Commission (FTC) has acted against misleading claims, yet gaps persist around unsubstantiated AI diagnostic marketing.[16] Privacy concerns are

increasingly important, with HIPAA compliance in the U.S. and General Data Protection Regulation (GDPR) obligations internationally, but many apps lack transparent data use policies. [22]

Limitations should be acknowledged in this study. First, the analysis was based solely on publicly available app store descriptions and reviews, and the applications were not downloaded or tested for functionality, accuracy, or usability. As a result, app features may have been misrepresented, incomplete, or outdated at the time of review. Second, the search relied on specific keywords and may have excluded relevant dermatology-related apps categorized under alternative terms or not optimally indexed by app store search algorithms. Third, app categorization and intended audience were determined from developer-provided descriptions, which may introduce bias or inaccuracies, particularly when marketing language overstated clinical utility. Additionally, review counts were used as a proxy for popularity but may not accurately reflect active use, clinical impact, or user satisfaction. Finally, because the assessment was conducted at a single time point, the findings do not account for changes over time such as feature updates, pricing model adjustments, or app removal, all of which are common in the rapidly evolving mobile health marketplace.

Moving forward, ensuring the safety, accuracy, and clinical relevance of dermatology apps will require multiple coordinated efforts. [23] Rigorous clinical validation, particularly for AI-powered platforms, should become standard, with direct involvement of board-certified dermatologists in development and oversight. Collaboration between regulators, developers, and clinicians will be essential to create balanced frameworks that encourage innovation while maintaining safety and ethical standards.[24] Transparency in authorship, algorithm design, and data usage must also be prioritized to foster trust among both patients and providers. Building on priorities identified in 2013, future work should also focus on educating patients about the limitations of mobile health tools, developing curated evidence-based app recommendations from professional societies, and integrating validated platforms into clinical workflows in ways that enhance in-person dermatologic care.

Conclusion:

This review shows just how much dermatology-related mobile applications have grown and developed since

2013, not only in quantity, but also in the variety of different tools that they offer. What used to be mostly referenced guides has now expanded into everything from teledermatology services and self-diagnosis aids to more personalized skincare platforms and AI-based skin analysis. The strong shift towards patient-focused apps reflects how much mobile technology is now a part of everyday skin health. While these tools can help people better understand their skin, track changes, and access care more quickly and easily, they also raise some concerns about accuracy, data privacy, and the possibility of patients relying too heavily on them instead of seeing a licensed dermatologist.

Many of the apps are free or have free versions, which helps with accessibility, but key features are often locked behind paid subscriptions or higher one-time costs. This makes it important for users to really understand what they're getting and for healthcare providers to be familiar with the most reliable tools so they can make good recommendations to their patients. As dermatology-related apps keep evolving, especially with more AI integration features, they have the potential to improve patient engagement, expand access to care, and support earlier detection of different skin conditions. But this will only be successful if these tools are clinically proven, transparent about how they work, and used to complement, not replace, professional medical care.

References:

1. Holst A. Smartphone users worldwide 2016–2021. Statista website. Published January 23, 2019. Accessed August 8, 2025. https://www.statista.com/statistics/330695/number-of-smartphone-users-worldwide/
2. Krebs P, Duncan DT. Health app use among US mobile phone owners: a national survey. JMIR Mhealth Uhealth. 2015;3(4):e101.
3. Glines KR, Haidari W, Ramani L, Akkurt ZM, Feldman SR. Characterizing dermatology mobile

applications that use artificial intelligence. University of California eScholarship website. Published 2020.

4. Lee M, Bin Mahmood A, Lee E, Smith H, Tudor Car L. Smartphone and mobile app use among physicians in clinical practice: scoping review. JMIR Mhealth Uhealth. 2023;11:e44765. doi:10.2196/44765
5. Elder A, Ring C, Heitmiller K, Gabriel Z, Saedi N. The role of artificial intelligence in cosmetic dermatology: current, upcoming, and future trends. J Cosmet Dermatol. 2021;20(1):48-52.
6. Al-Dhubaibi MS, Mohammed GF, Atef LM, et al. Artificial intelligence in aesthetic medicine: applications, challenges, and future directions. J Cosmet Dermatol. Published online June 12, 2025.
7. Du-Harpur X, Watt FM, Luscombe NM, Lynch MD. What is AI? Applications of artificial intelligence to dermatology. Br J Dermatol. 2020;183(3):423-430.
8. Goldsberry A, Hanke CW, Hanke KE. VISIA system: a possible tool in the cosmetic practice. J Drugs Dermatol. 2014;13(11):1312-1314.
9. The Body Shop. The Body Shop unveils new skincare diagnostic tool… Marketwire Canada website. Published 2012.
10. Neutrogena. How to get an at-home skin analysis or derm consultation. Neutrogena website. Published May 5, 2023.
11. Tommasino N, Megna M, Cacciapuoti S, et al. The past, the present and the future of teledermatology: a narrative review. Clin Cosmet Investig Dermatol. 2024;17:717-723.
12. Freeman K, Dinnes J, Chuchu N, et al. Algorithm-based smartphone apps to assess risk of skin cancer in adults: systematic review of diagnostic accuracy studies. BMJ. 2020;368:m127.
13. Morley J, Floridi L, Goldacre B. The poor performance of apps assessing skin cancer risk. BMJ. 2020;368:m428.
14. Sun MD, Kentley J, Mehta P, Dusza S, Halpern AC, Rotemberg V. Accuracy of commercially available smartphone applications for the detection of melanoma. Br J Dermatol. 2022;186(4):744-746.
15. Wongvibulsin S, Yan MJ, Pahalyants V, Murphy W, Daneshjou R, Rotemberg V. Current state of

dermatology mobile applications with artificial intelligence features: a scoping review. JAMA Dermatol. Published online March 7, 2024. doi:10.1001/jamadermatol.2024.0468

16. Federal Trade Commission. FTC announces crackdown on deceptive AI claims schemes. Press release. Published September 2024.
17. Abbasi J. Artificial Intelligence–Based Skin Cancer Phone Apps Unreliable. JAMA. 2020;323(14):1336.
18. Brewer AC, Endly DC, Henley J, et al. Mobile applications in dermatology. JAMA Dermatol. 2013;149(11):1300-1304.
19. Patel S, Thompson D. AI integration in telemedicine: improving remote diagnosis and care. Unpublished/gray literature.
20. Maita KC, Maniaci MJ, Haider CR, et al. The impact of digital health solutions on bridging the health care gap in rural areas: a scoping review. Perm J. 2024;28(3):130-143.
21. US Food and Drug Administration. Artificial intelligence software as a medical device. Accessed August 13, 2025.
22. Tangari G, Ikram M, Ijaz K, Kaafar MA, Berkovsky S. Mobile health and privacy: cross-sectional study. BMJ. 2021;373:n1248.
23. Diao JA, Venkatesh KP, Raza MM, Kvedar JC. Multinational landscape of health app policy: toward regulatory consensus on digital health. NPJ Digit Med. 2022;5(1):61.
24. Dehling T, Gao F, Schneider S, Sunyaev A. Exploring the far side of mobile health: information security and privacy of mobile health apps on iOS and Android. JMIR Mhealth Uhealth. 2015;3(1):e8.

Preprint JMIR Publications

Funding/Support: None reported.

Conflict of Interest Disclosures: None reported.

Data Sharing Statement: Data are available from the corresponding author upon reasonable request. Author's Contributions: All authors contributed equally to data collection. LK drafted the introduction and methods, MZ prepared the discussion and tables, VA wrote the results, and PM drafted the conclusion. All authors reviewed and approved the final manuscript.

Abbreviations:

AI, artificial intelligence

CIR, Cosmetic Ingredient Review

FDA, US Food and Drug Administration

GDPR, General Data Protection Regulation

HIPAA, Health Insurance Portability and Accountability Act

ML, machine learning

SaMD, software as a medical device

Preprint JMIR Publications