Dermatology Practical & Conceptual

Special Issue on Artificial Intelligence in Dermatology: A Call for Collaborative Innovation

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Artificial intelligence is transforming medicine, and dermatology stands at the forefront of this transformation. Over the past decade, machine learning has progressed from experimental image classification to systems capable of matching or even surpassing expert performance in specific diagnostic tasks [1, 2]. While convolutional neural networks (CNNs) and image-based skin cancer diagnosis dominated the early stages of this development [3], recent advances point toward more general and versatile foundational models that can address a wide variety of downstream tasks beyond diagnosis [4, 5]. Yet the excitement surrounding these breakthroughs is accompanied by equally significant challenges. The real test for AI in dermatology is not performance in a carefully curated sandbox like setting, but its meaningful integration into the complexities of real-world care [6, 7].

It is precisely at this pivotal moment that *Dermatology: Practical and Conceptual* is launching a Special Issue on Artificial Intelligence in Dermatology. The issue will be accompanied by an inaugural summit on *AI in Dermatology* to be held on 29 September 2026 in Vienna, Austria. With this combined initiative we aim to create a forum for rigorous, interdisciplinary scholarship and to invite clinicians, engineers, policy makers, and patient advocates to shape the future of AI in dermatology together.

The need for such a forum has never been greater. AI models are now entering clinics, regulatory bodies are beginning to grant approvals, and health systems are experimenting with deployment. Yet clinical evidence still lags behind technical promise. Most models have been validated retrospectively, on narrowly defined image sets, and outside

the varied conditions of daily practice. There is an urgent need for prospective clinical trials, robust external validations, and health economic analyses to determine whether AI systems genuinely improve patient outcomes and workflow efficiency.

Equally important is the recognition that AI is not merely a technological add on but a catalyst for rethinking how dermatological care is organized. The next generation of tools will be embedded in clinical pathways, influencing everything from triage and differential diagnosis to follow up and education. Such integration will only succeed if AI is conceived and built through genuine co-development. Clinicians must articulate the clinical questions that matter most and ensure that outputs are interpretable and actionable at the bedside. Engineers and data scientists need to translate these questions into robust, reproducible models while remaining attentive to the nuances of clinical practice. Patients should have a voice in defining priorities and acceptable trade-offs, ensuring that issues of consent, accessibility, and user experience are addressed from the outset. Policy makers and regulators must help craft forward looking frameworks for safety, reimbursement, and accountability. Only through this continuous dialogue among all stakeholders can AI become a trustworthy partner that augments rather than replaces human expertise.

This special issue and the accompanying summit aim to nurture precisely such dialogue. We welcome contributions that range from cutting edge model developments to careful clinical evaluations, from theoretical reflections on ethics and regulation to case studies of real-world deployment. We are particularly interested in work that crosses disciplinary boundaries and in manuscripts that document lessons learned from collaborative projects in which clinicians, engineers, and patients have worked side by side. By bringing together these diverse perspectives, the issue will not only showcase scientific advances but also chart a path for responsible and inclusive innovation.

The invitation to authors is broad and inclusive. Whether your expertise lies in computer vision, clinical dermatology, ethics, data governance, patient empowerment, basic research, public health or health policy, we welcome your insights and especially encourage contributions that reflect international perspectives, recognizing that patterns of skin disease and access to dermatological care vary widely across regions and that AI must serve global as well as local needs. By dedicating a special issue to Artificial Intelligence in Dermatology, *Dermatology: Practical and Conceptual* aims to create more than a record of the current state of the art. We invite you to join this endeavor and to help define what responsible, clinically meaningful, and patient centered AI in dermatology should look like. The submission deadline is 15 May 2026. Manuscripts should be submitted through the *DPC* online submission system under the article category "Special Issue: AI in Dermatology." Submission fees will be waived for this special issue, and, as is customary for *DPC*, no publication fees will be charged. All submissions will undergo rigorous double blind peer review and accepted original articles will be showcased at the accompanying summit, where they will reach an international audience of leading AI specialists, industry innovation leaders, and distinguished clinicians.

Our goal is to provide a lasting reference and source of guidance at a time when AI is prepared to influence every aspect of skin health. We hope that the articles collected here will inspire new collaborations, inform research, clinical and policy decisions, and help ensure that the benefits of AI are shared equitably.

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