

A Century in Focus: Reflections on Dermoscopy

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Dear Editor,

Dermoscopy, once a niche curiosity in clinical microscopy, has become an essential tool in the modern dermatological arsenal. The origin of dermoscopy predates the emergence of dermatology as a specialty with its basic principle of transillumination of a lesion and studying it with a high magnification to visualize subtle features barely visible to the human eye. Its evolution over the past century reflects not only advances in optics and imaging but also a broader shift in how clinicians approach the visual diagnosis of skin disease.

The roots of dermoscopy trace back to the 17th century with early magnification tools used to examine nailfold capillaries in rheumatology. However, it was not until the early 20th century that dermoscopy began to take shape as a diagnostic discipline. Early dermatoscopes required a magnifier, oil immersion and an external light source. It was a messy, inconvenient procedure until the development of polarized light dermoscopy in the 1990s, which eliminated the need for oil. Dr. Johann Saphier (1877-1954), a German physician, is often credited with laying the foundations by using oil immersion microscopy to examine pigmented lesions — a technique that would later evolve into modern epiluminescence microscopy¹.

Throughout the latter half of the 20th century, dermoscopy remained largely confined to academic centres in Europe and South America, where pioneers like Dr. Harold Kittler and Dr. Giuseppe Argenziano developed the first standardized algorithms for evaluating melanocytic lesions². By the 1990s, dermoscopy had matured into a structured clinical method with evidence supporting its ability to improve diagnostic accuracy for melanoma and reduce unnecessary excisions³.

In the 21st century, dermoscopy has moved far beyond melanoma detection. It now plays a role in diagnosing inflammatory dermatoses, parasitic infections and even hair and nail disorders. The emergence of digital dermoscopy, total body photography and more recently, artificial intelligence-driven analysis, has expanded its scope — from bedside practice to big data research. Smartphone attachments and teledermoscopy are now enabling remote evaluation, a development of particular relevance to rural or underserved populations.

Despite its widespread international adoption, challenges remain. In many healthcare systems, dermoscopy is still viewed as a specialist tool rather than a skill all clinicians can learn. Several studies have shown that brief, focused training can significantly enhance general practitioners' ability to triage pigmented lesions — yet formal dermoscopy training remains inconsistent at undergraduate and postgraduate levels⁴.

Dermoscopy exemplifies a clinical principle that is often overlooked in the digital age: the value of seeing more by looking closer. It is, in essence, a marriage of technology and visual reasoning — a skill that combines the precision of pattern recognition with the nuance of experience. As dermatology embraces artificial intelligence and diagnostic automation, dermatoscopic examination remains a tactile, interpretive and remarkably human act.

In reflecting on the rise of dermoscopy over the past century, we are reminded that meaningful clinical progress occurs not only with innovation, but with observation — refined, disciplined and focused.

Declarations of Conflicts of Interest:

None declared.

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