

## Applications of UV-Induced Fluorescence (UVF) Dermoscopy in Infectious Dermatoses (UVF-Infectiouscopy)

Noemi Plozner<sup>1</sup>, Yasmeeen J Bhat<sup>2</sup>, Enzo Errichetti<sup>1</sup>

<sup>1</sup> Institute of Dermatology, Department of Medical Area, University of Udine, Udine, Italy

<sup>2</sup> Department of Dermatology, Venereology and Leprology, Government Medical College, University of Kashmir, Srinagar, Jammu and Kashmir, India

**Citation:** Plozner N, Bhat YJ, Errichetti E. Applications of UV-Induced Fluorescence (UVF) Dermoscopy in Infectious Dermatoses (UVF-Infectiouscopy). *Dermatol Pract Concept*. 2025;15(2):5441. DOI: <https://doi.org/10.5826/dpc.1502a5441>

**Accepted:** April 30, 2024; **Published:** April 2025

**Copyright:** ©2025 Plozner et al. This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial License (BY-NC-4.0), <https://creativecommons.org/licenses/by-nc/4.0/>, which permits unrestricted noncommercial use, distribution, and reproduction in any medium, provided the original authors and source are credited.

**Funding:** None.

**Competing Interests:** None.

**Authorship:** All authors have contributed significantly to this publication.

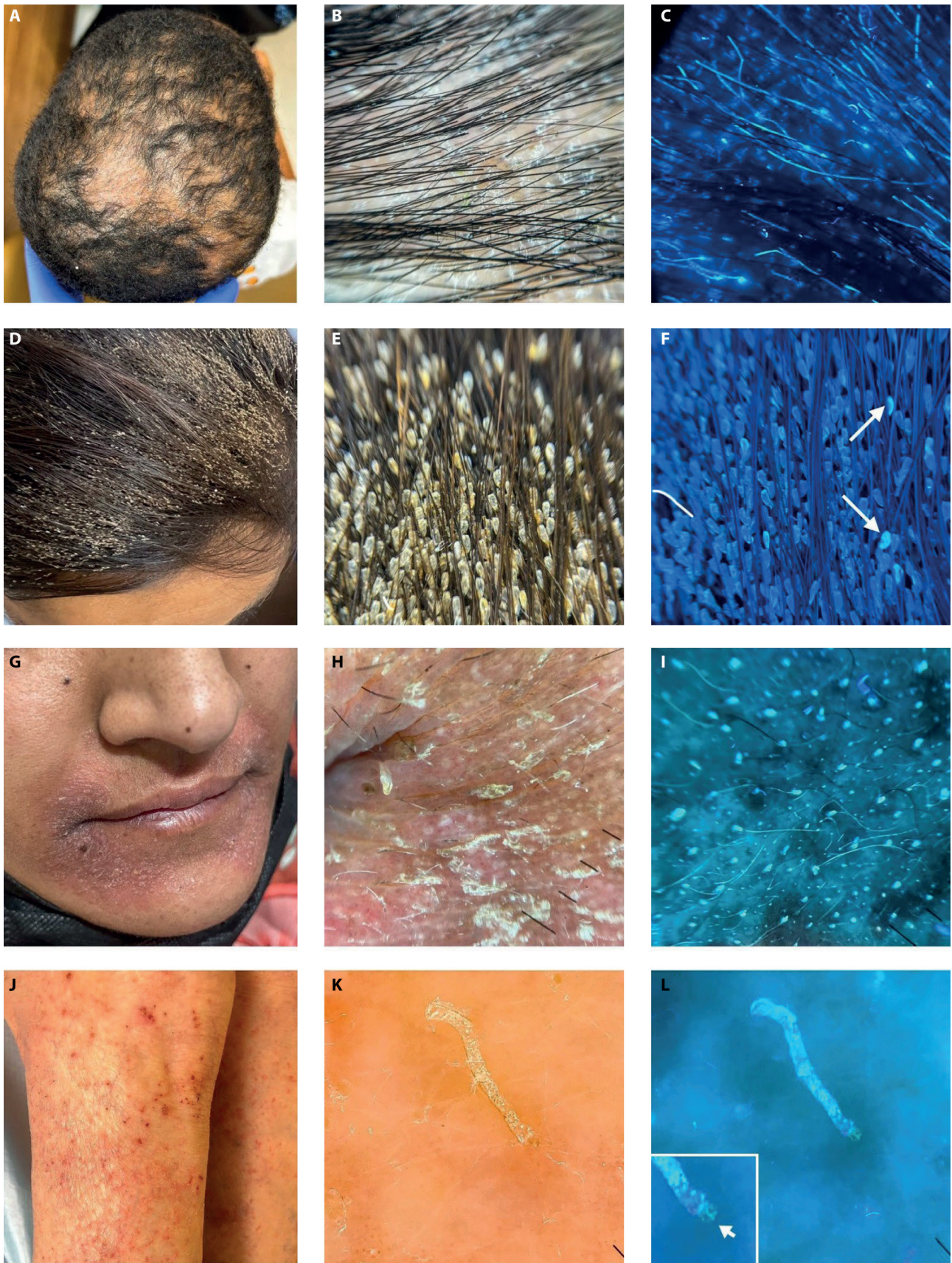
**Corresponding Author:** Dr Noemi Plozner, MD, Institute of Dermatology, Department of Medicine, University of Udine, Piazzale Santa Maria della Misericordia, 15. 33100 – Udine, Italy. ORCID ID: 0009-0006-0212-4818. E-mail: [noemiplozner@hotmail.it](mailto:noemiplozner@hotmail.it)

### Case Presentations

We present four instances of skin infections, including *Microsporum spp*-related tinea capitis (Case 1), pediculosis capitis (Case 2), perioral dermatitis-like demodicosis (Case 3), and scabies (Case 4). All were confirmed by either culture (Case 1) or microscopy examination (Cases 2-4) (Figures 1A-D). In each case, polarized dermoscopy (Figures 1E-H) showed some features, such as unspecific white scaling (Cases 1 and 3), numerous nits difficult to evaluate in terms of viability (Case 2), and serpiginous gray tract (Case 4). Instead, UV-induced fluorescence dermoscopic assessment (Figures 1I-L) revealed *Microsporum spp*-related green fluorescence in Case 1, numerous nits with clearly evident viable lice in some of them in Case 2, protruding follicular plugs in Case 3, and serpiginous bluish tract with a green dot in Case 4. All findings were characteristic of the aforementioned diagnoses.

### Teaching Point

UV-induced fluorescence (UVF) dermoscopy is a novel imaging technique that has shown to highlight several features not visible to either the naked eye or polarized dermoscopic assessment.<sup>1</sup> This report emphasizes the usefulness of UVF-dermoscopy in evaluating tinea capitis, pediculosis capitis, demodicosis, and scabies. In particular, such a technique may reveal green fluorescence in *Microsporum spp*-related tinea capitis, thus helping to discriminate it from instances due to *Trichophyton spp*, which typically do not display green fluorescence. Additionally, UVF-dermoscopy may also facilitate the view of structures which could be sometimes difficult to detect on polarized dermoscopy, including viable nits in pediculosis, protruding follicular plugs in demodicosis, and mite body (green dot) in scabies.



**Figure 1.** *Tinea capitis*: (A) Clinical image shows scaling and hair loss, (B) polarized dermoscopy reveals unspecific white scaling, and (C) UVF-dermoscopy highlights green fluorescence characteristic of *Microsporum spp.* *Pediculosis capitis*: (D) Clinical image displays nits, (E) polarized dermoscopy shows numerous nits, with viability difficult to assess, and (F) UVF-dermoscopy clearly reveals viable lice within nits (arrows). *Perioral dermatitis-like demodicosis*: (G) Clinical image shows perioral erythema and scaling, (H) polarized dermoscopy displays unspecific white scaling, and (I) UVF-dermoscopy demonstrates protruding follicular plugs. *Scabies*: (J) Clinical image displays a scratch-induced lesion, (K) polarized dermoscopy shows the serpiginous gray tract, and (L) UVF-dermoscopy reveals a bluish serpiginous tract with a green dot, representing the mite body (better seen in the inset—arrow).

## References

1. Errichetti E, Pietkiewicz P, Bhat YJ, Salwowska N, Szlązak P, Stinco G. Diagnostic accuracy of ultraviolet-induced fluorescence dermoscopy in non-neoplastic dermatoses (general dermatology): A multicentric retrospective comparative study. *J Eur Acad Dermatol Venereol.* 2025 Jan;39(1):97-108. DOI: 10.1111/jdv.19795. PMID: 38288676.