

# Interfollicular epidermis thickness differentiates LPP from FD

<sup>1</sup>Mary Clare Bohnett, MD, <sup>2</sup>Athanassios Kolivras, MD, PhD,  
<sup>3</sup>Abigail A. Thompson, BS and <sup>4,5</sup>Curtis T. Thompson, MD

<sup>1</sup>Department of Dermatology, University of California, San Francisco

<sup>2</sup>Université Libre de Bruxelles, Brussels, Belgium

<sup>3</sup>Department of Chemistry, University of British Columbia, Vancouver, Canada

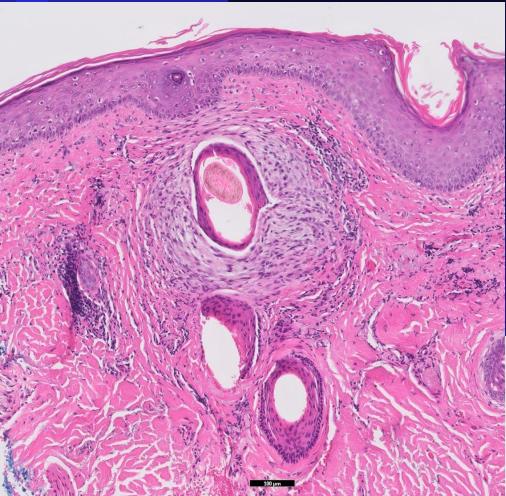
<sup>4</sup>CTA Lab, Portland, Oregon

<sup>5</sup>Departments of Dermatology and Pathology  
Oregon Health and Sciences University  
Portland, Oregon

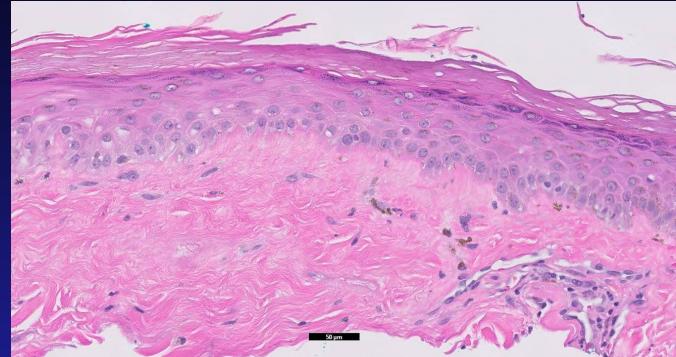
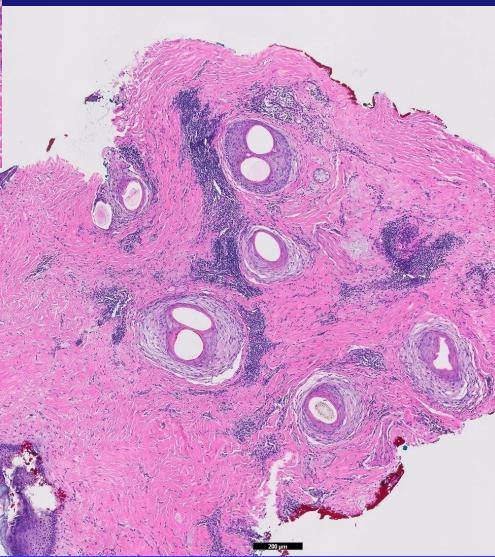
# No conflict of interest



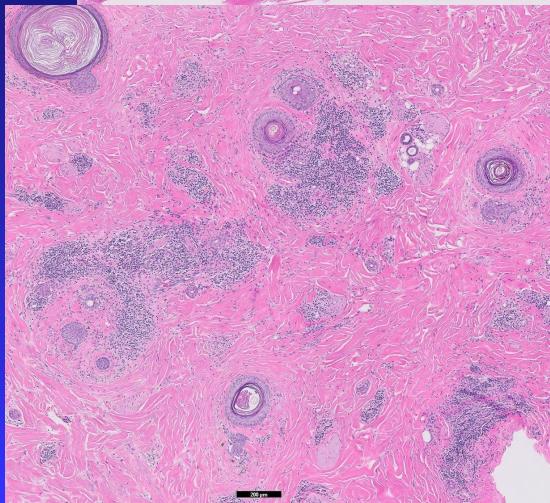
# LPP $\neq$ Lupus erythematosus



LPP



LE



# 2001 NAHRS Classification

Olsen EA *et al.*

JAAD 48:103-10, 2003

## **Lymphocytic**

- Chronic cutaneous lupus erythematosus
- Lichen planopilaris
  - Classic lichen planopilaris
  - Frontal fibrosing alopecia
  - Graham-Little syndrome
- Classic pseudopelade (Brocq)
- Central centrifugal cicatricial alopecia
- Alopecia mucinosa
- Keratosis follicularis spinulosa decalvans

## **Neutrophilic**

- Folliculitis decalvans
- Dissecting cellulitis/folliculitis (*perifolliculitis capitis abscedens et suffodiens*)

## **Mixed**

- Folliculitis (acne) keloidalis
- Folliculitis (acne) necrotica
- Erosive pustular dermatosis

## **Nonspecific**

# 2001 NAHRS Classification

## Lymphocytic

Chronic cutaneous lupus erythematosus

## Lichen planopilaris

Classic lichen planopilaris

Frontal fibrosing alopecia

Graham-Little syndrome

Classic pseudopelade (Brocq)

Central centrifugal cicatricial alopecia

Alopecia mucinosa

Keratosis follicularis spinulosa decalvans

## Neutrophilic

## Folliculitis decalvans

Dissecting cellulitis/folliculitis (*perifolliculitis capitis abscedens et suffodiens*)

## Mixed

Folliculitis (acne) keloidalis

Folliculitis (acne) necrotica

Erosive pustular dermatosis

## Nonspecific

# Folliculitis decalvans



Male

Milano A, Eur J Pediat Dermatol 28:124, 2018

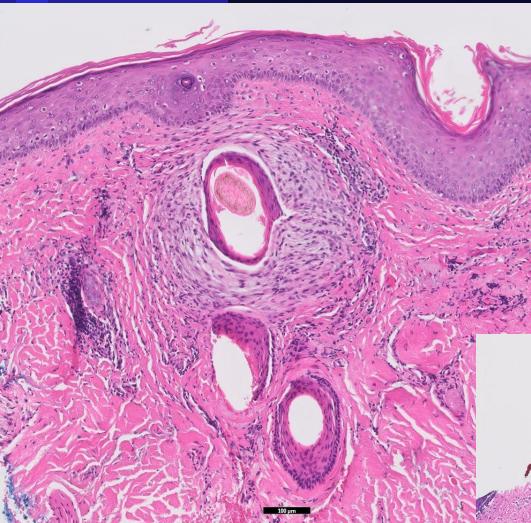
# LPP



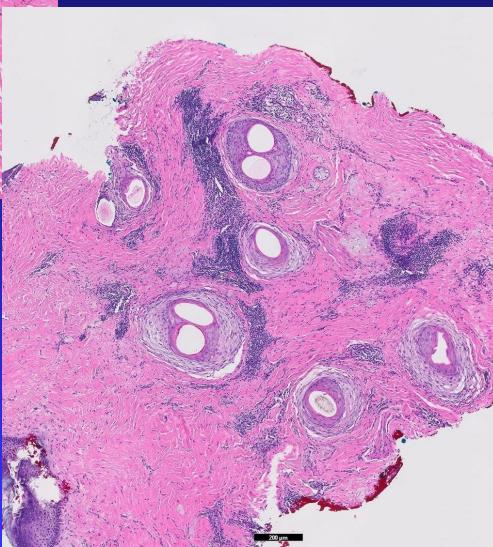
Female

<http://www.canadianhairlossfoundation.org/lichen-planopilaris>

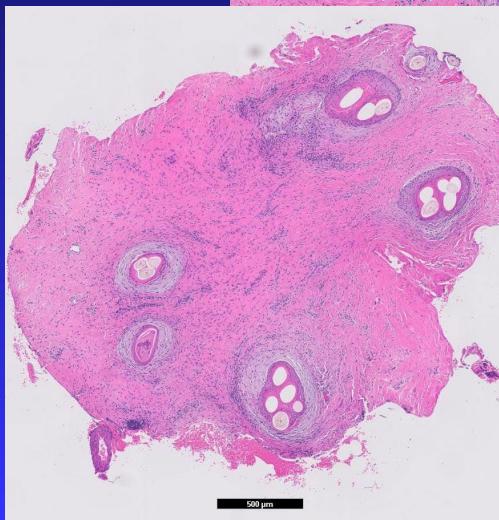
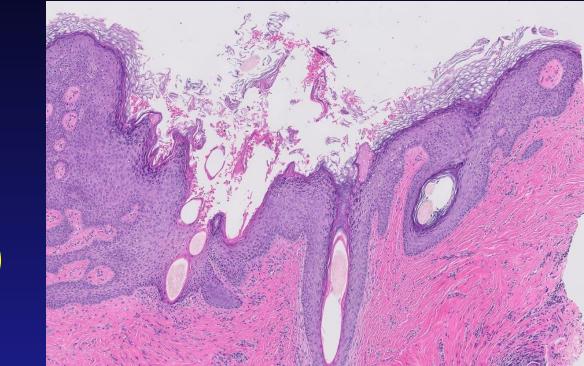
# LPP vs Folliculitis decalvans



LPP



FD



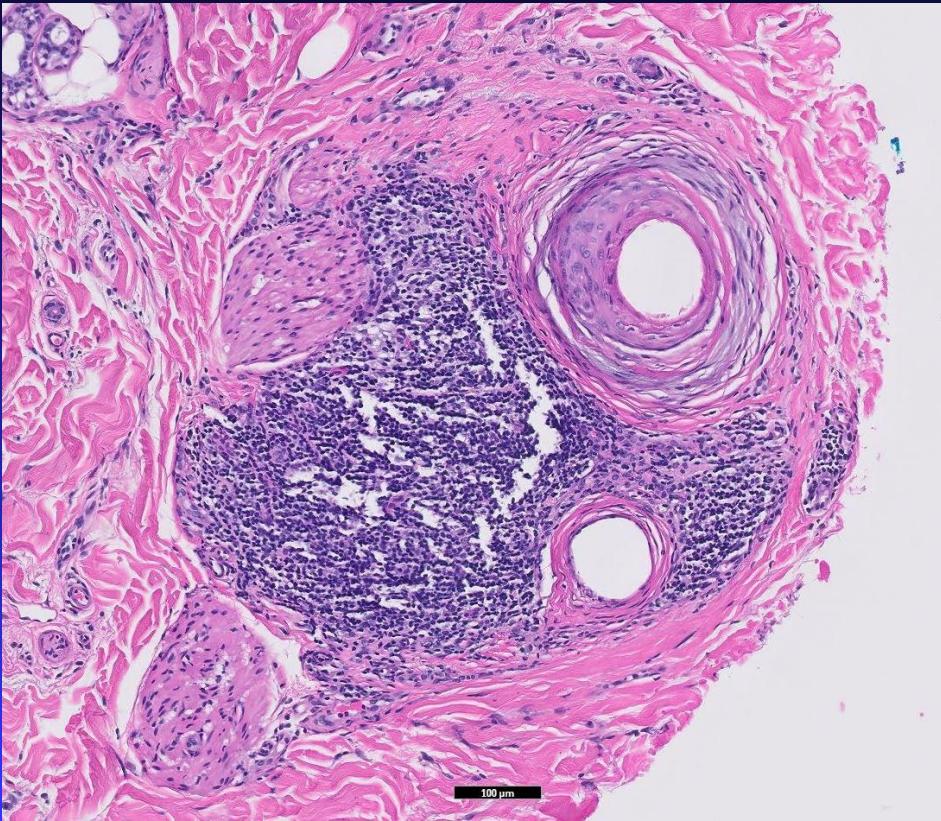
200 µm

500 µm

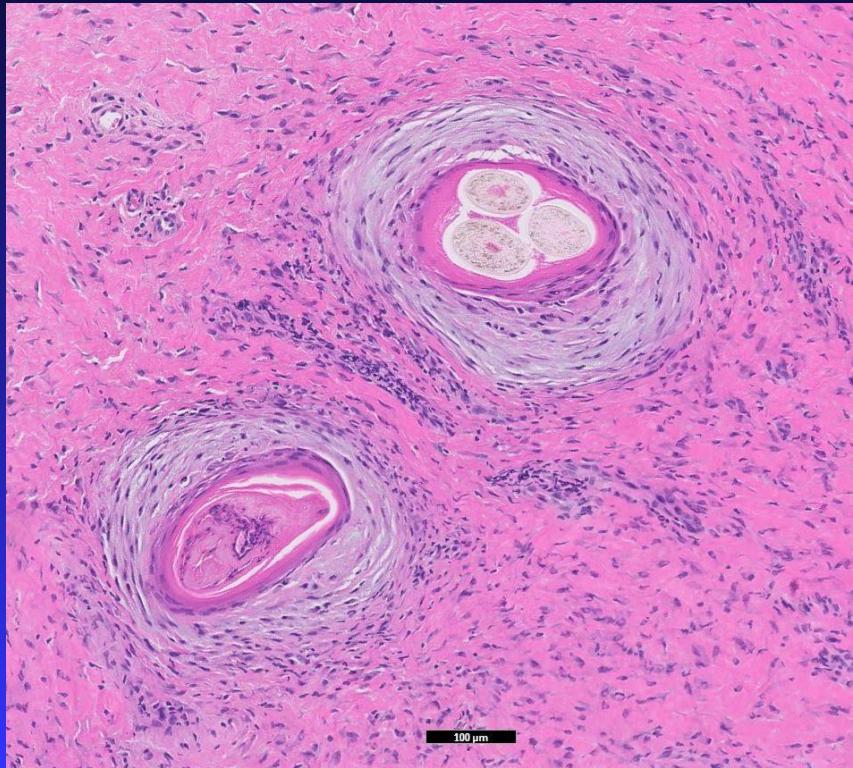
# Folliculitis decalvans



# Neutrophil-poor or Lymphocyte-predominant Folliculitis decalvans



# Folliculitis decalvans often neutrophil-poor



# 2001 NAHRS Classification

## Lymphocytic

Chronic cutaneous lupus erythematosus

Lichen planopilaris

Folliculitis decalvans

Classic lichen planopilaris

Frontal fibrosing alopecia

Graham-Little syndrome

Classic pseudopelade (Brocq)

Central centrifugal cicatricial alopecia

Alopecia mucinosa

Keratosis follicularis spinulosa decalvans

## Neutrophilic

Folliculitis decalvans

Dissecting cellulitis/folliculitis (*perifolliculitis capitis abscedens et suffodiens*)

## Mixed

Folliculitis (acne) keloidalis

Folliculitis (acne) necrotica

Erosive pustular dermatosis

## Nonspecific

## Epidermal psoriasiform hyperplasia, an unrecognized sign of folliculitis decalvans: A histological study of 26 patients.

Matard B<sup>1</sup>, Cavelier-Balloy B<sup>2</sup>, Reygagne P<sup>1</sup>.

### Author information

1 Hôpital Saint-Louis, Centre Sabouraud, Paris, France.

2 Department of Dermatopathology, Polyclinique Hôpital Saint Louis, Paris, France.

### Abstract

**BACKGROUND:** Follicular hyperkeratosis along with hyperplasia of the follicular and interfollicular epithelia are major histopathological characteristics of hidradenitis suppurativa (HS). The presence of an occasional thickening of lesional skin in some folliculitis decalvans (FD) patients and histological similarities between FD and HS led us to look for epidermal hyperplasia and follicular hyperkeratosis in FD patients.

**PATIENTS AND METHOD:** We performed a retrospective histological analysis of 26 patients with FD.

**OBJECTIVE:** We sought to find out whether the presence of hyperplasia of the interfollicular epidermis and of the follicular epithelia could be verified in FD, with reference to the work of von Laffert et al. concerning HS.

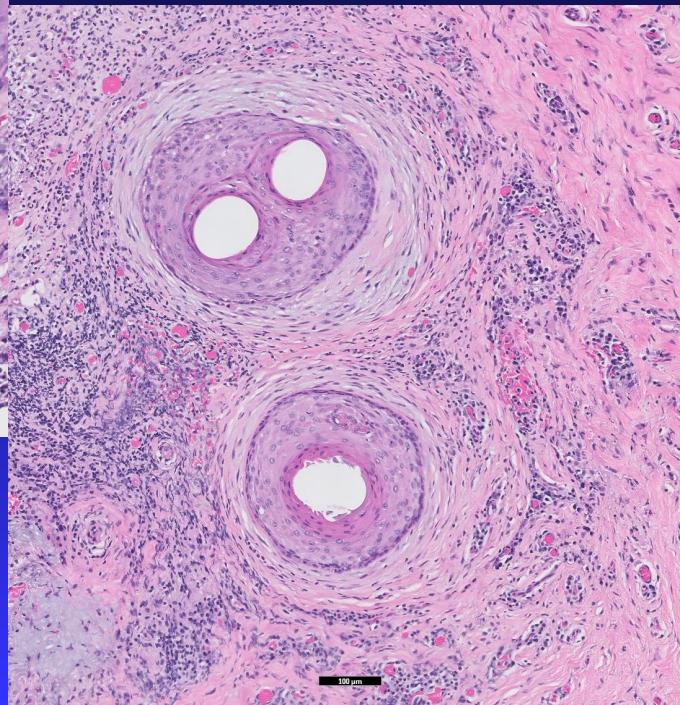
**RESULTS:** The main quantitative and qualitative data were: follicular hyperkeratosis (77%), hyperplasia of the interfollicular epidermis (92%) with a psoriasiform aspect (88%), atrophy of the follicular epithelia (85%), plasma cells in infiltrate (92%) in large quantities (42%), follicular microcysts (60%), atrophy of the sebaceous glands (85%) and polytrichia (54%).

**CONCLUSION:** Epidermal hyperplasia, sometimes psoriasiform and follicular microcysts, are significant histological signs of FD, which have been ignored until now although they seem very common.

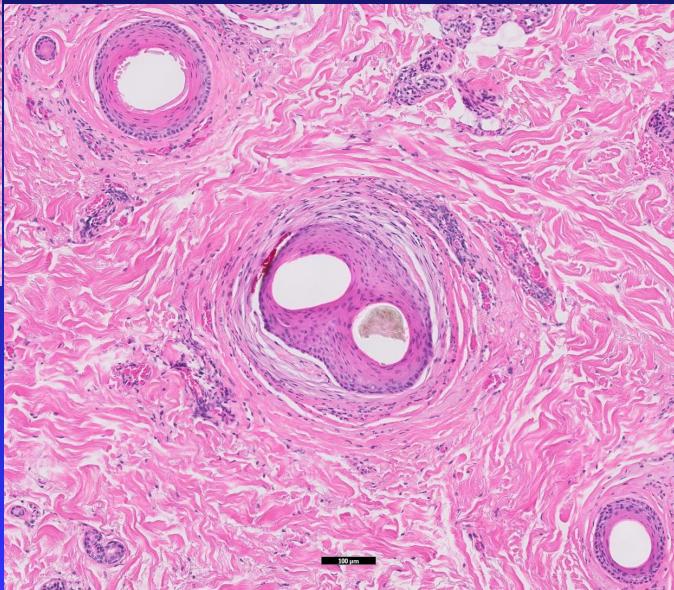
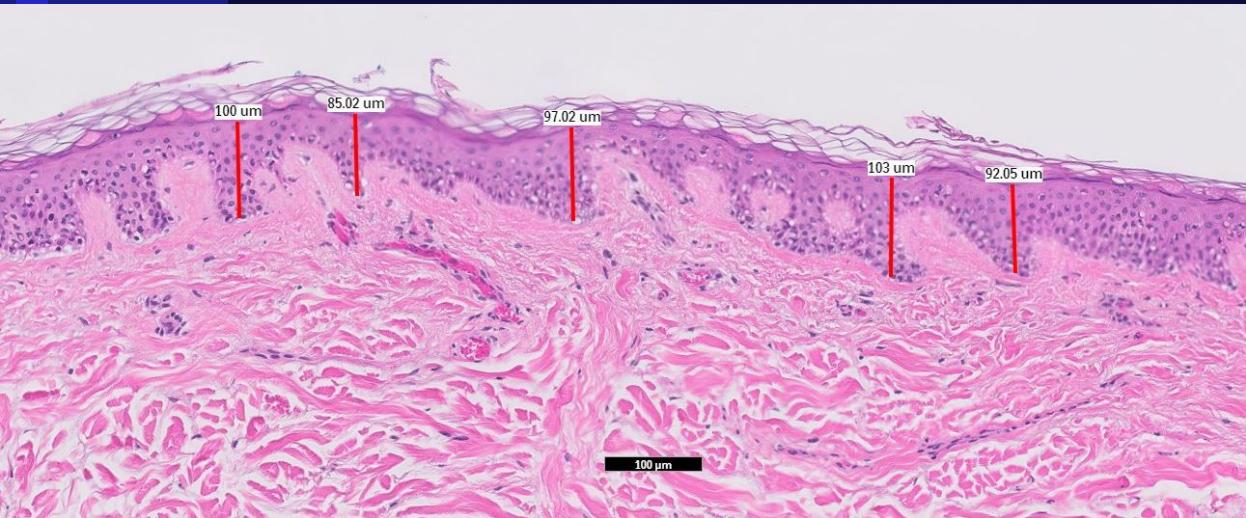
# Study

	Folliculitis decalvans	Lichen planopilaris
Number of cases reviewed (N)	30	26
Mean epidermal thickness	264.2 $\mu\text{m}$	133.3 $\mu\text{m}$
95% Confidence interval (95% CI)	[246.0, 282.4]	[126.9,139.7]
Standard deviation (SD)	+/- 17.7	+/- 6.6
Standard deviation of variance ( $\sigma$ )	105.1	39.4
P-value	P<0.0001	

# Folliculitis decalvans—Thick epidermis



# LPP—Thin epidermis



# Study

	Folliculitis decalvans	Lichen planopilaris
Number of cases reviewed (N)	30	26
Mean epidermal thickness	264.2 $\mu\text{m}$	133.3 $\mu\text{m}$
95% Confidence interval (95% CI)	[246.0, 282.4]	[126.9,139.7]
Standard deviation (SD)	+/- 17.7	+/- 6.6
Standard deviation of variance ( $\sigma$ )	105.1	39.4
P-value	P<0.0001	

# Folliculitis decalvans vs LPP

- Many cases of FD are neutrophil-poor
- Epidermal thickness FD>>LPP



## References

- 1) Matard B, Cavelier-Balloy B, Reygagne P. Epidermal psoriasiform hyperplasia, an unrecognized sign of folliculitis decalvans: A histological study of 26 patients. *J Cutan Pathol.* 2017; 44(4): 352-7.
- 2) Olsen EA, Bergfeld WF, Cotsarelis G, *et al.* Summary of North American Hair Research Society (NAHRS)-sponsored workshop on cicatricial alopecia, Duke University Medical Center, February 10 and 11, 2001. *J Am Acad Dermatol.* 2003;48(1):103-10.
- 3) Alsantali A, Shapiro J. Primary cicatricial alopecias. *Expert Rev Dermatol.* 2010; 5(2):213-227.
- 4) Tandon YK, Soman N, Cevasco NC, *et al.* A histologic review of 27 patients with lichen planopilaris. *J Am Acad Dermatol.* 2008; 59(1): 91-8.
- 5) Nguyen JV, Hudacek K, Whitten JA, *et al.* The HoVert technique: a novel method for the sectioning of alopecia biopsies. *J Cutan Pathol.* 2011; 38: 401-6.

# Thanks!

[curtisimportland@gmail.com](mailto:curtisimportland@gmail.com)

