

# How to best interact with your hair pathologist

Curtis T. Thompson, M.D.

CTA Pathology

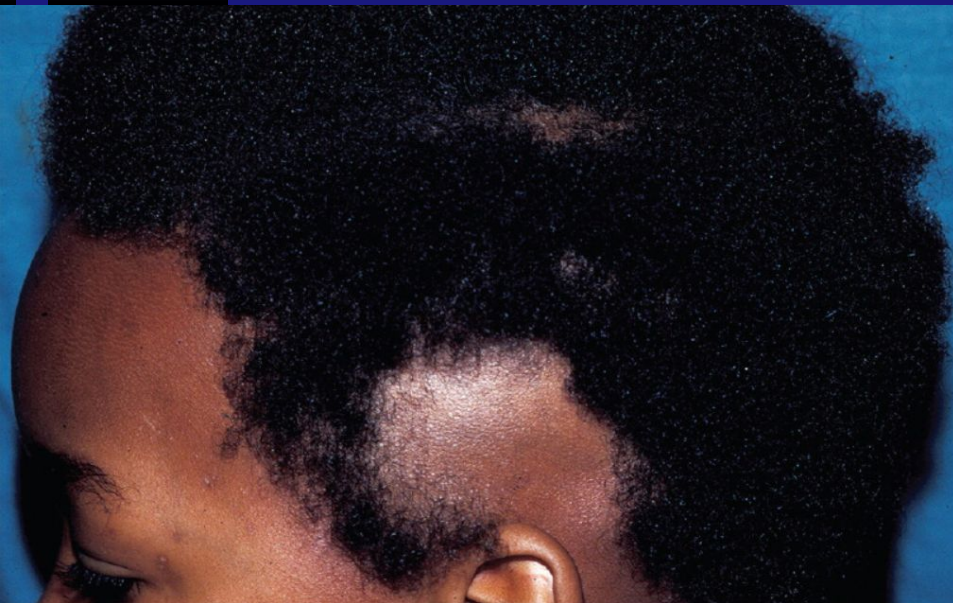
and

Clinical Professor of Dermatology and Pathology

Oregon Health & Sciences University

# Communication

- Pertinent clinical information
  - ◆ Patchy vs Diffuse



# Communication

- Pertinent clinical information
  - ◆ +Hair Pull Test or complaint of shedding



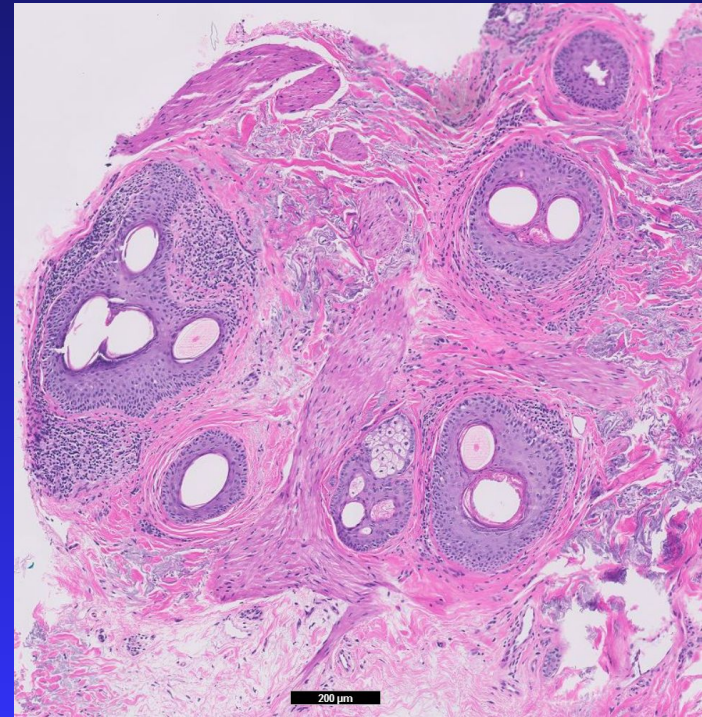


# Communication

- Pertinent clinical information
  - ◆ Seborrheic dermatitis? Treated?



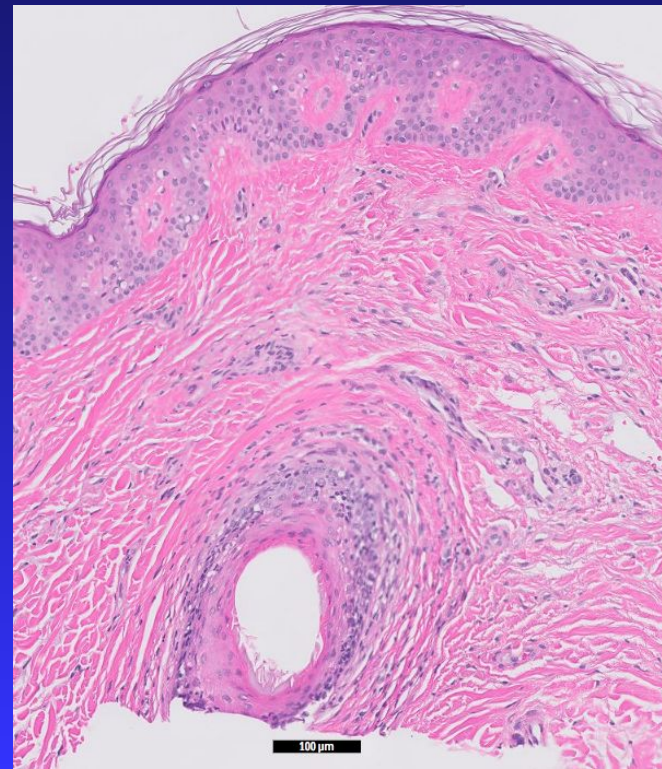
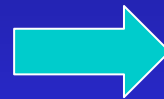
<https://my.clevelandclinic.org/health/diseases/14403-seborrheic-dermatitis>





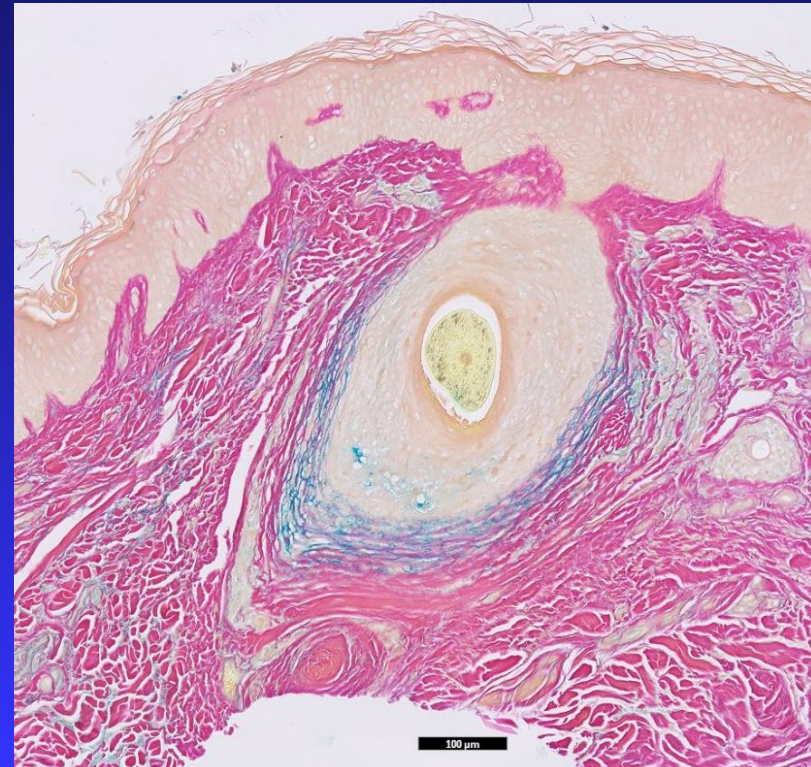
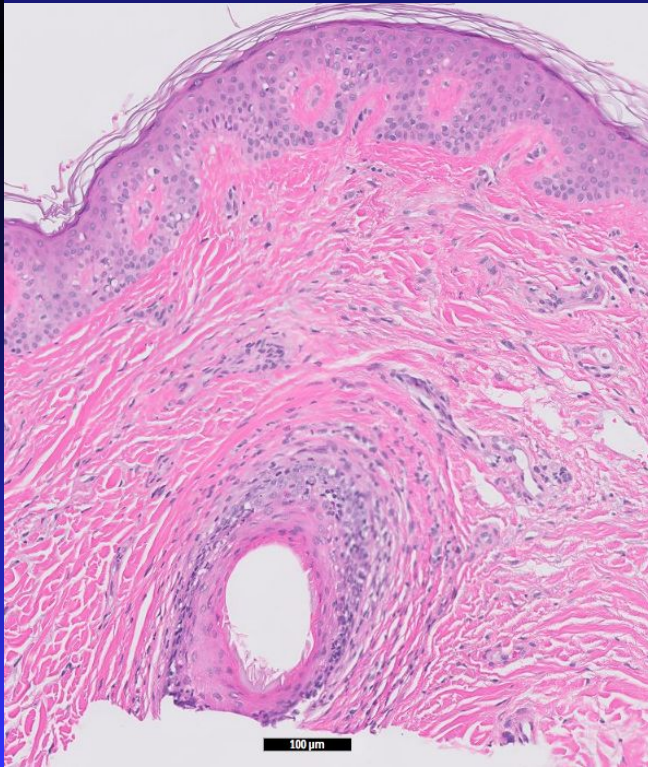
# Communication

- Pertinent clinical information
  - ◆ Evidence of subtle scarring



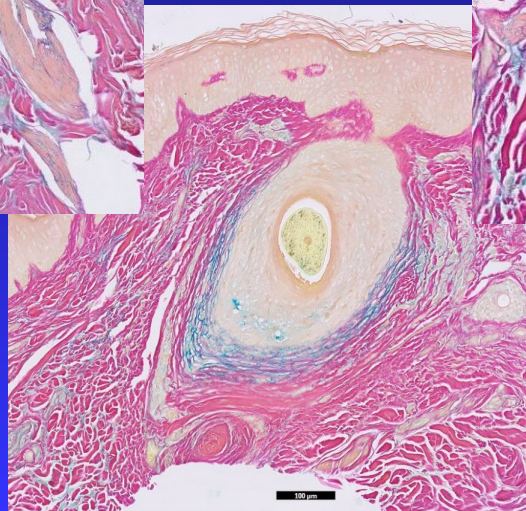
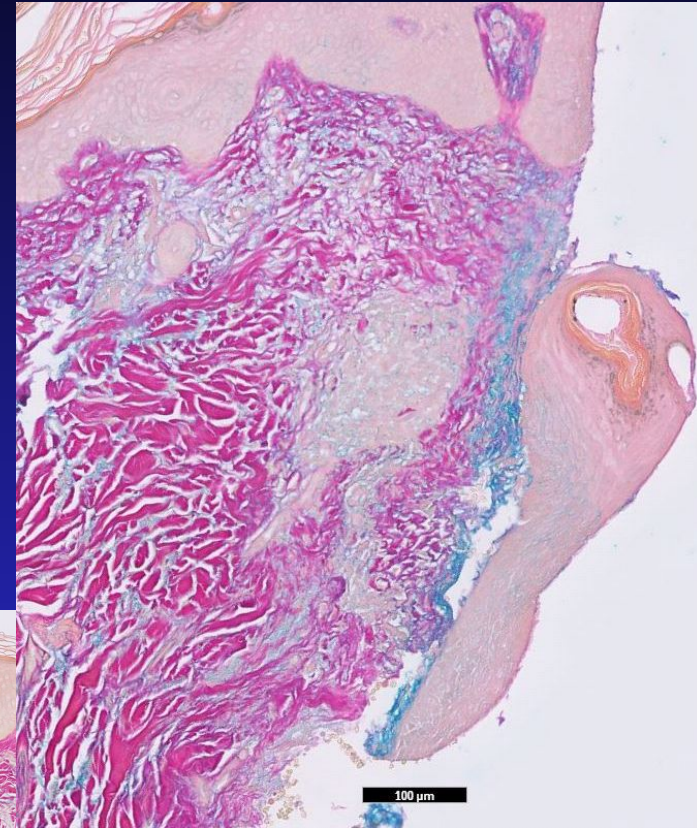
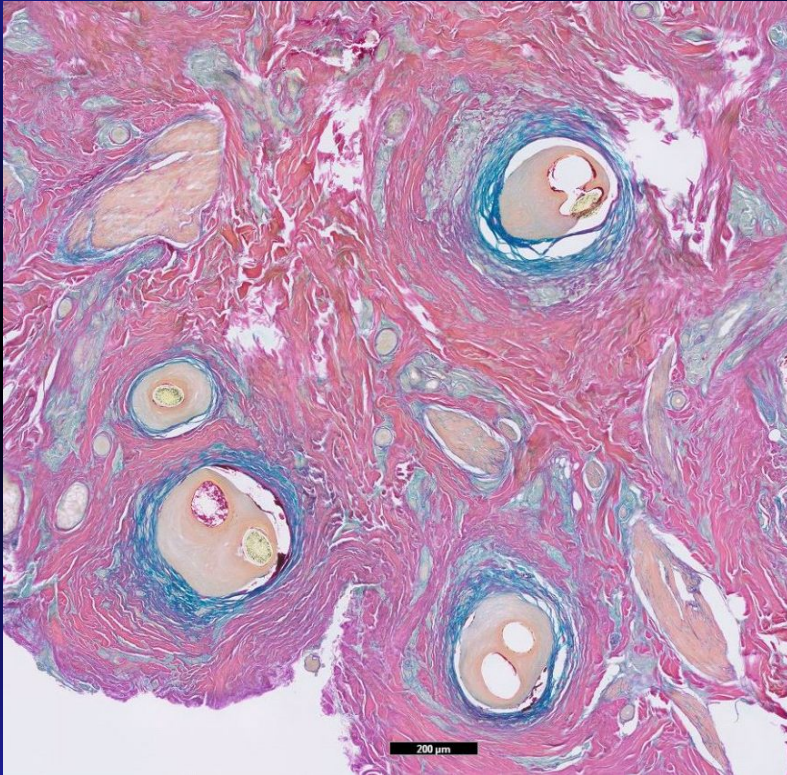
# Communication

- Evidence of scarring



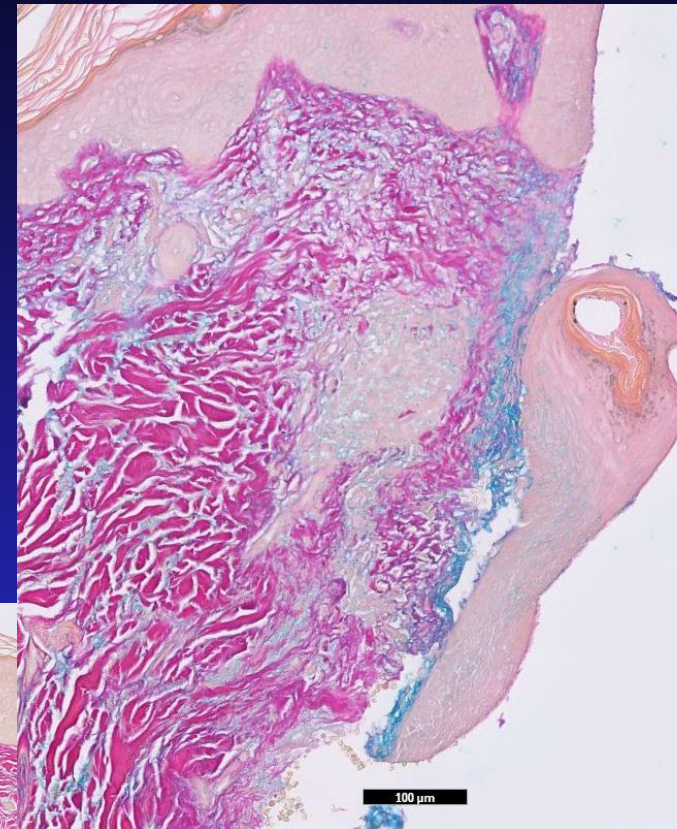
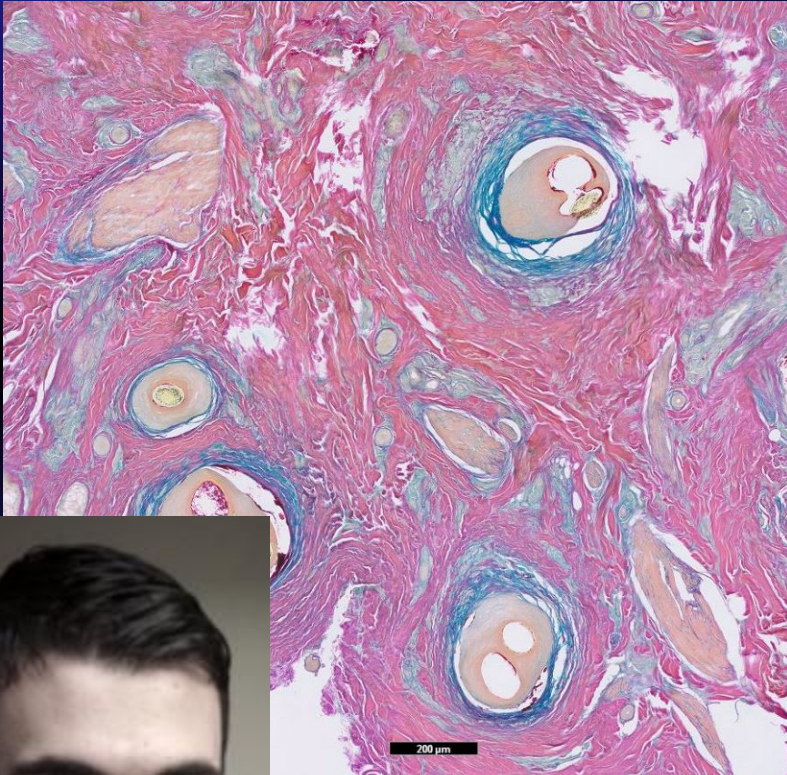


# Mucin stains identify scarring





# Mucin stains identify scarring



Athanassios Kolivras, MD, PhD, Belgium

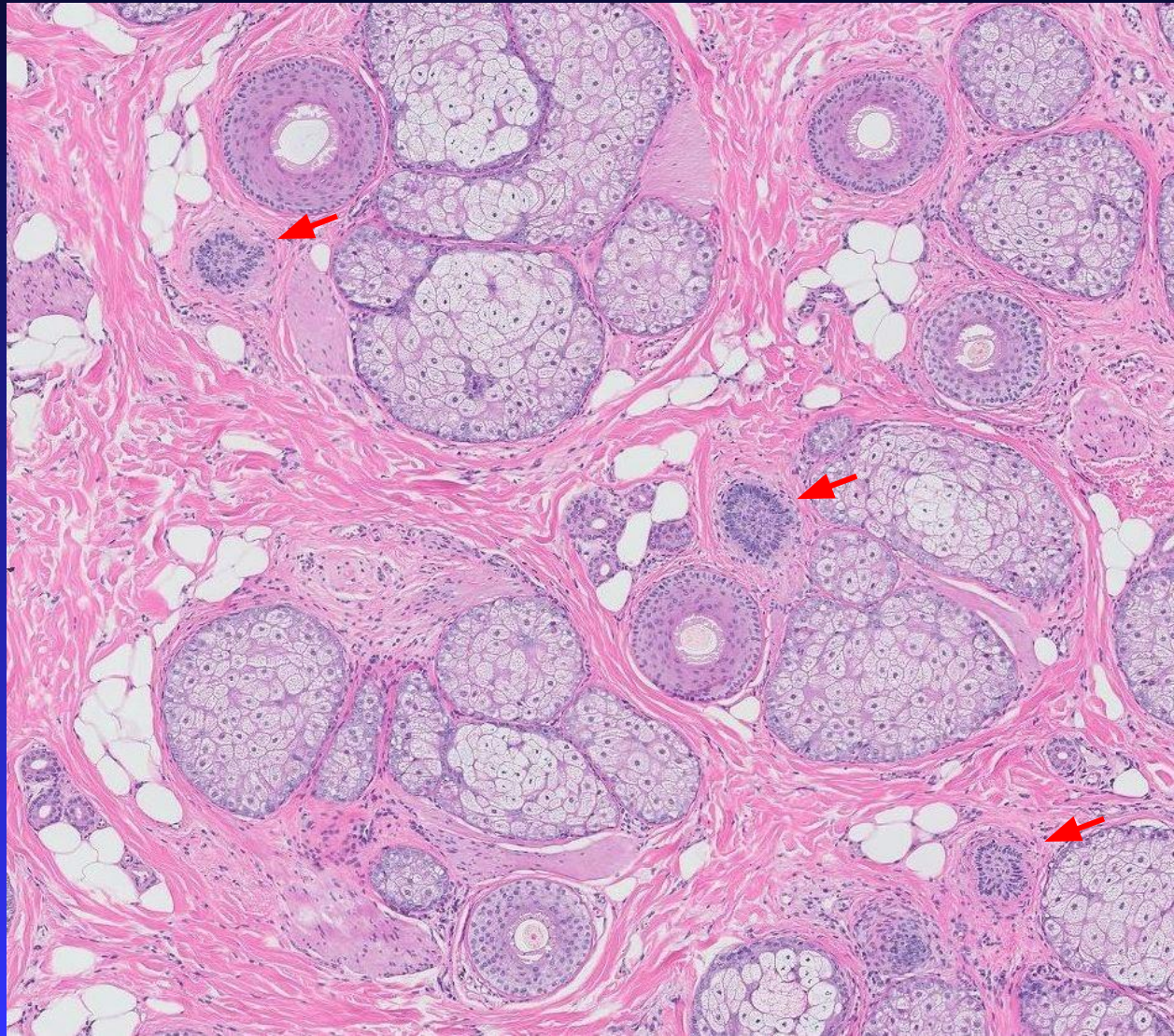
# Communication

- If the diagnosis doesn't match your clinical assessment, pick up the phone and call the pathologist.



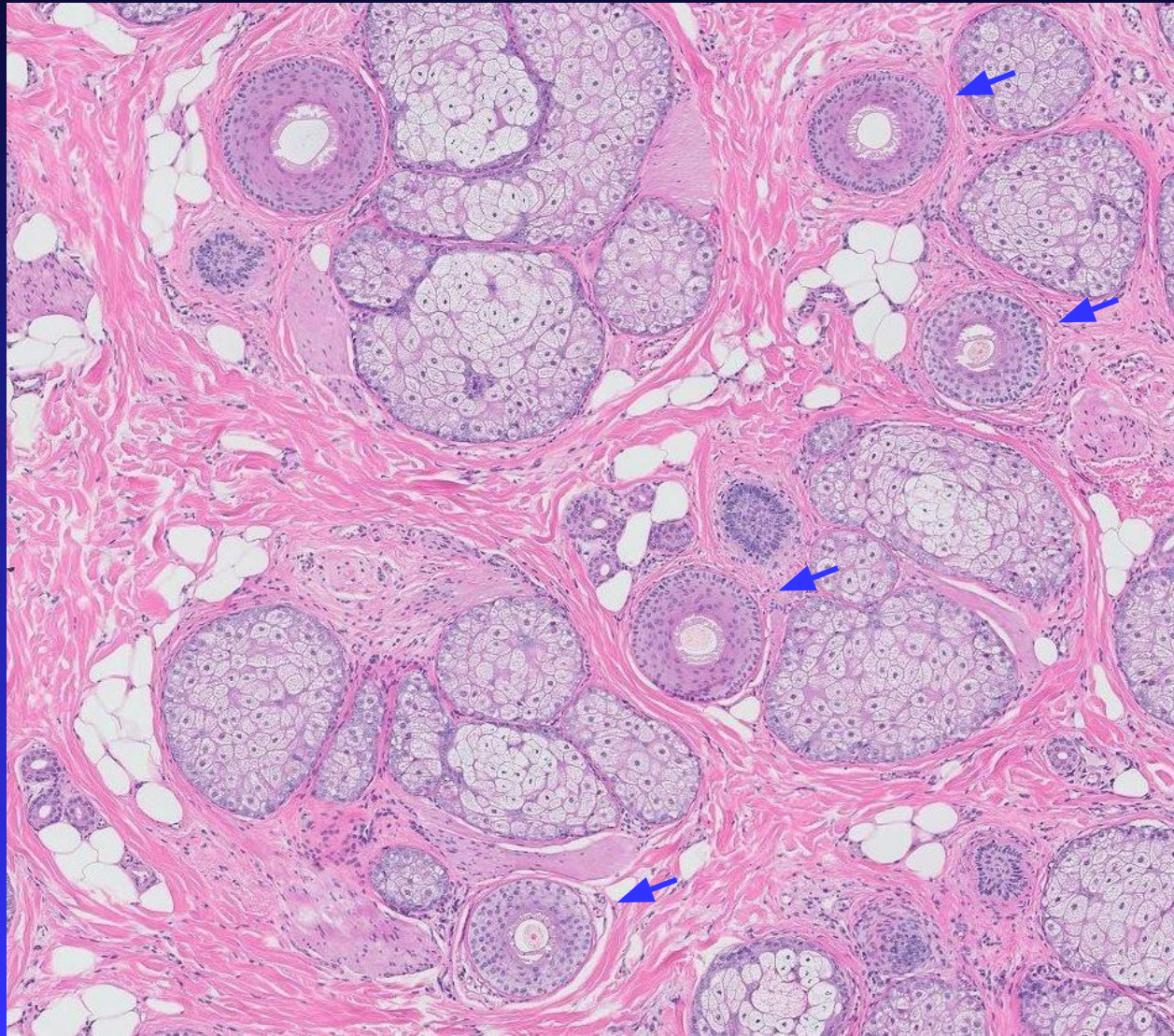


# Subacute alopecia areata

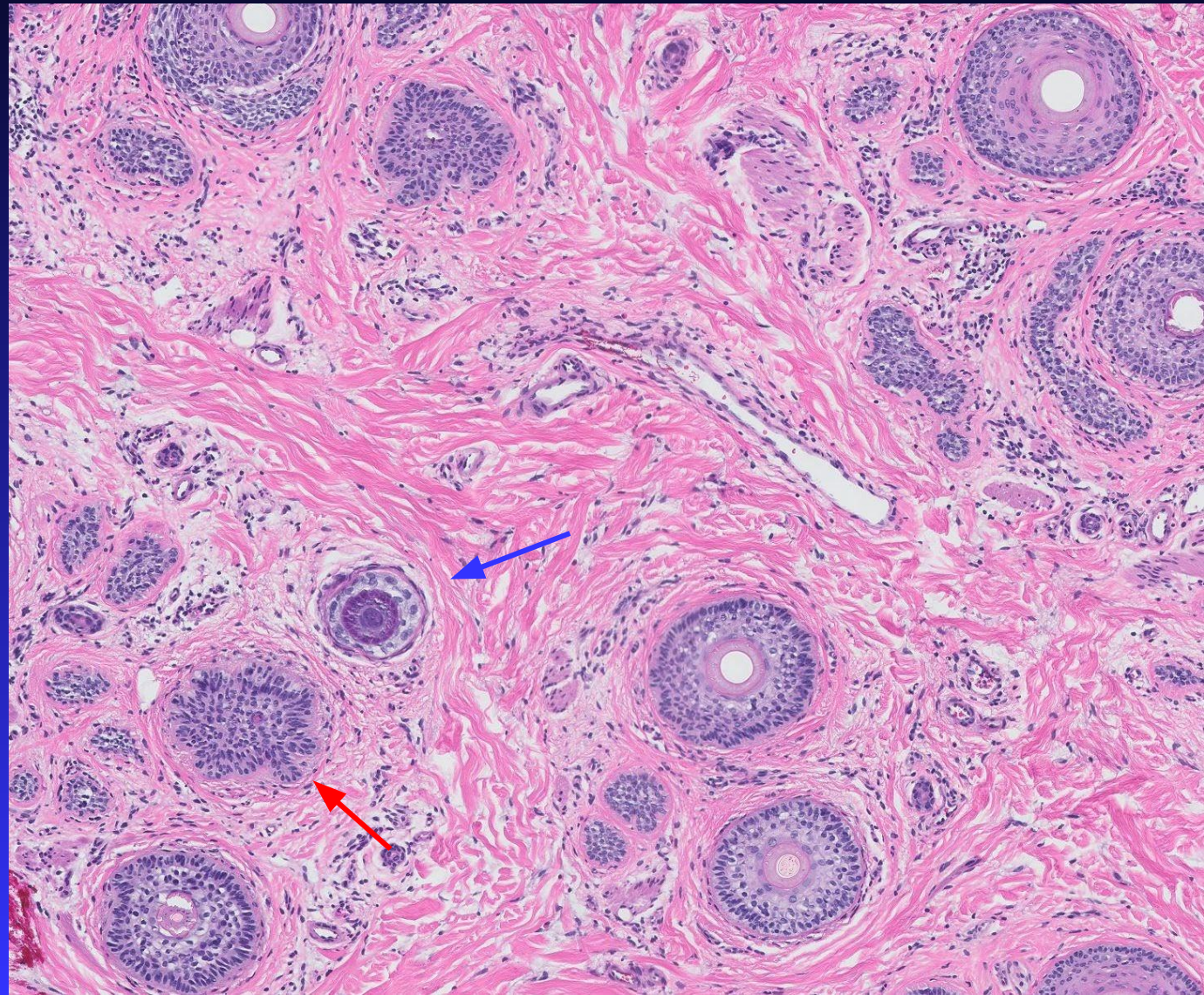




# Subacute alopecia areata

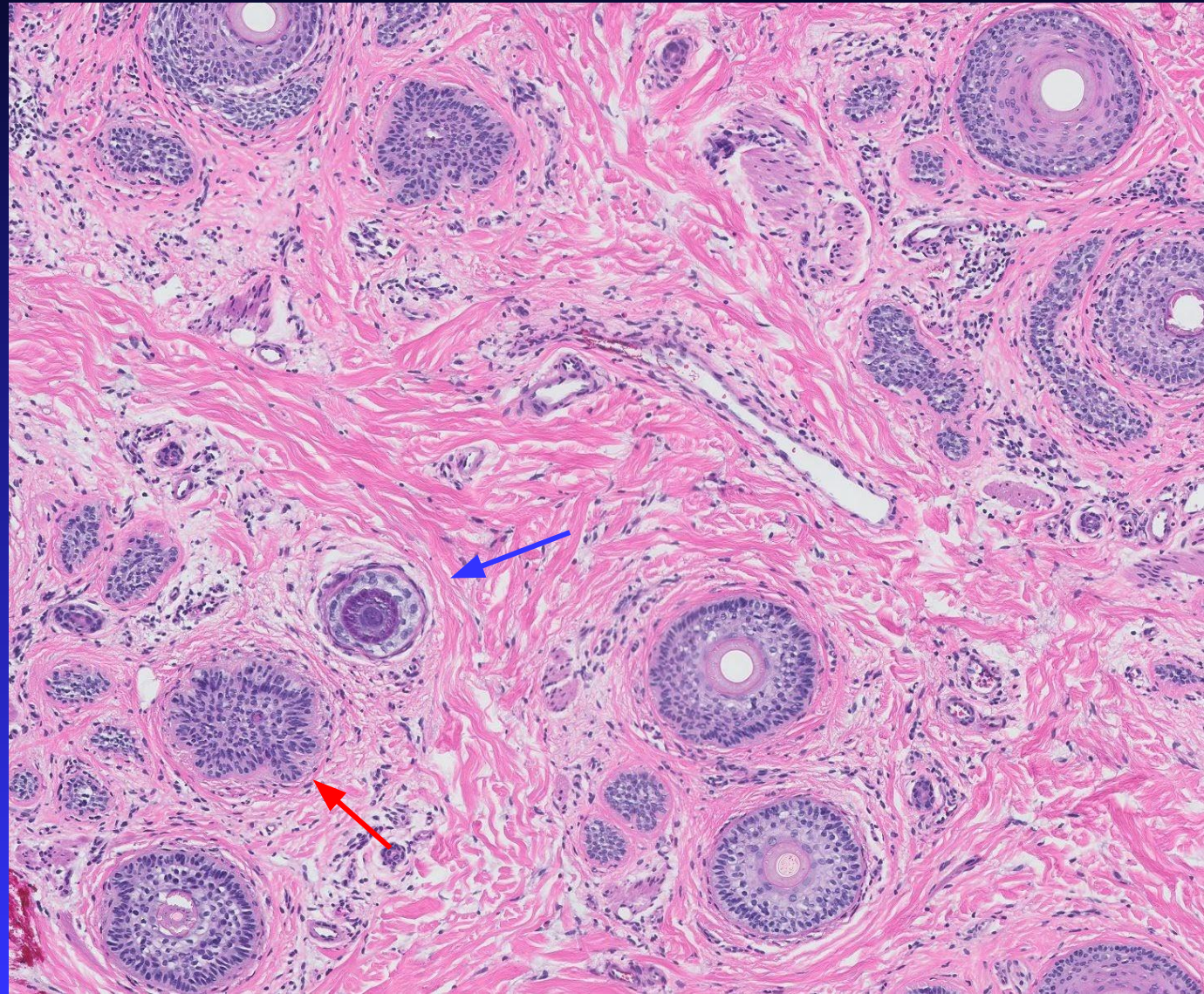






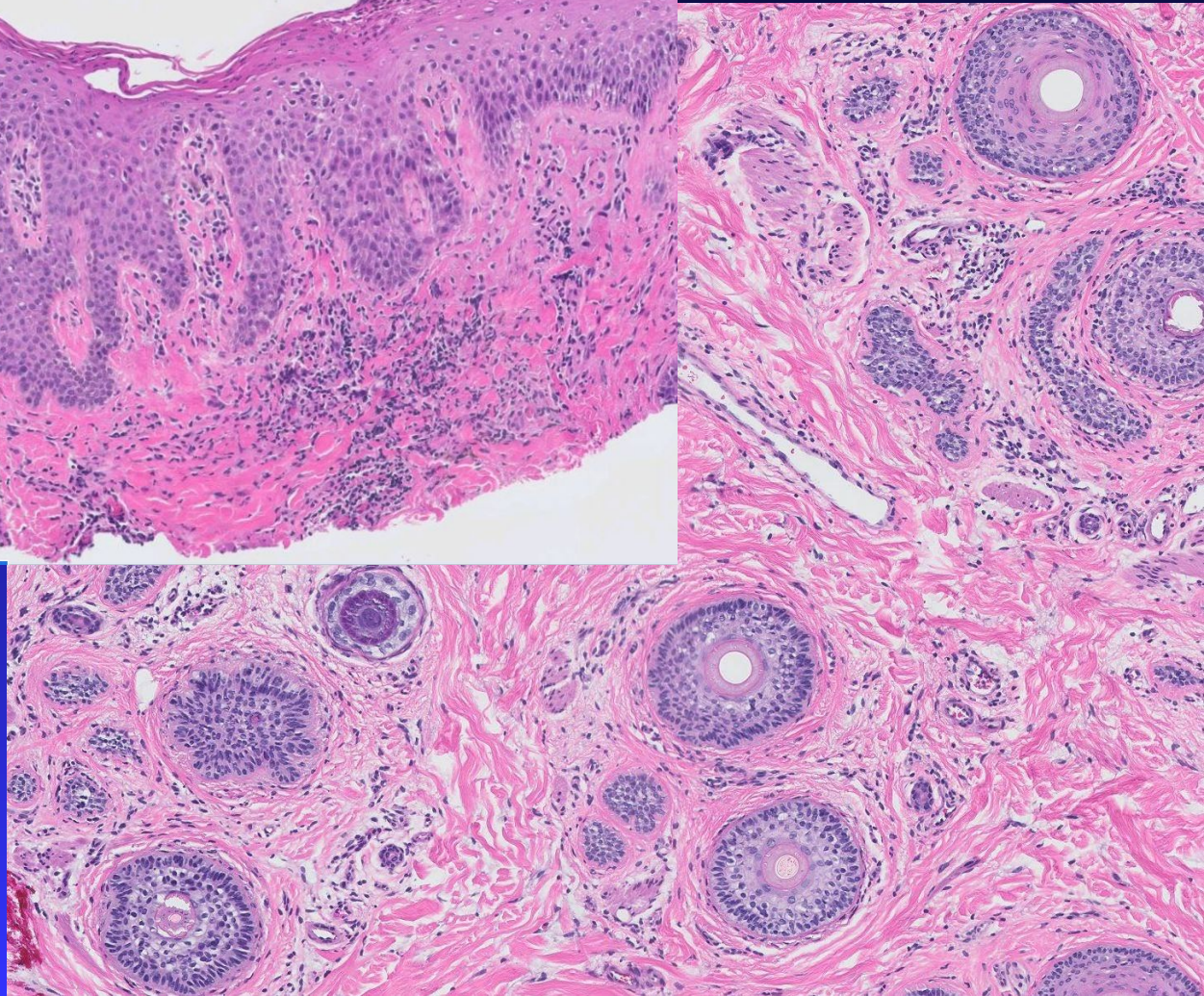
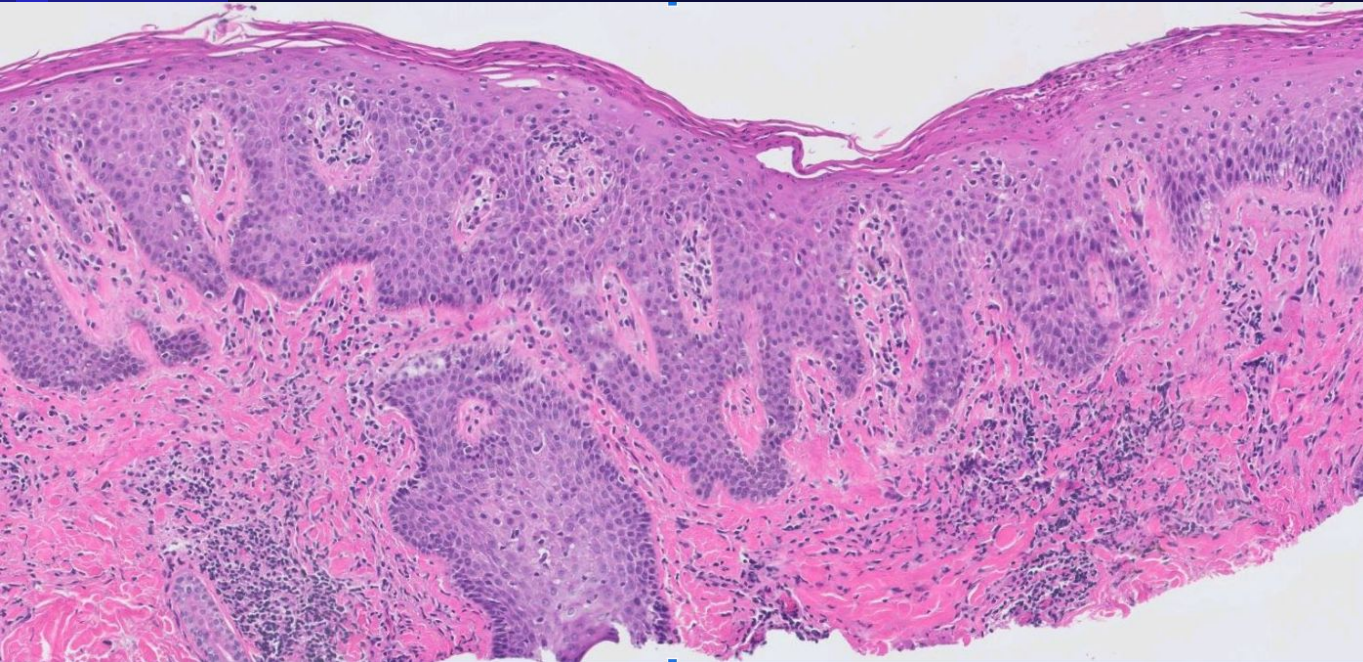


# Alopecia areata?






# Psoriatic alopecia



# Alopecia areata-like pattern: A new unifying concept

**Curtis T. Thompson MD<sup>1,2,3</sup>**  | **Athanassios Kolivras MD, PhD<sup>4</sup>**

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<sup>2</sup>Department of Dermatology, Oregon Health and Sciences University, Portland, Oregon

<sup>3</sup>Department of Pathology, Oregon Health and Sciences University, Portland, Oregon

<sup>4</sup>Département inter-hospitalier de Dermatologie, Saint-Pierre, Brugmann and HUDERF University Hospitals, Université Libre de Bruxelles, Brussels, Belgium

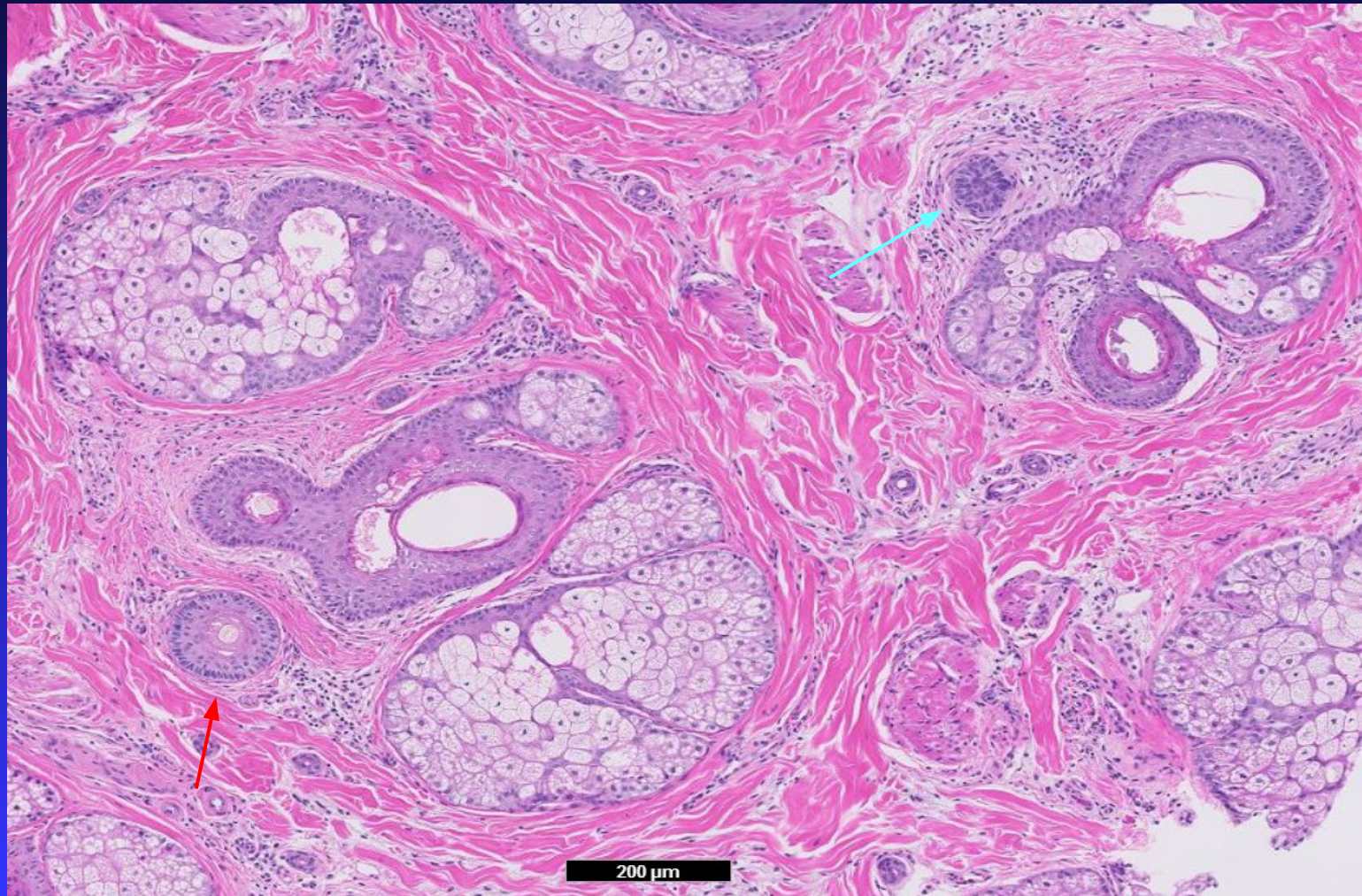


# Alopecia Areata-like Pattern

- Psoriasis
- Lupus erythematosus
- Syphilis
- Permanent chemotherapy induced alopecia (pCIA)
- Systemic amyloidosis
- Linear morphea (en coup de sabre)

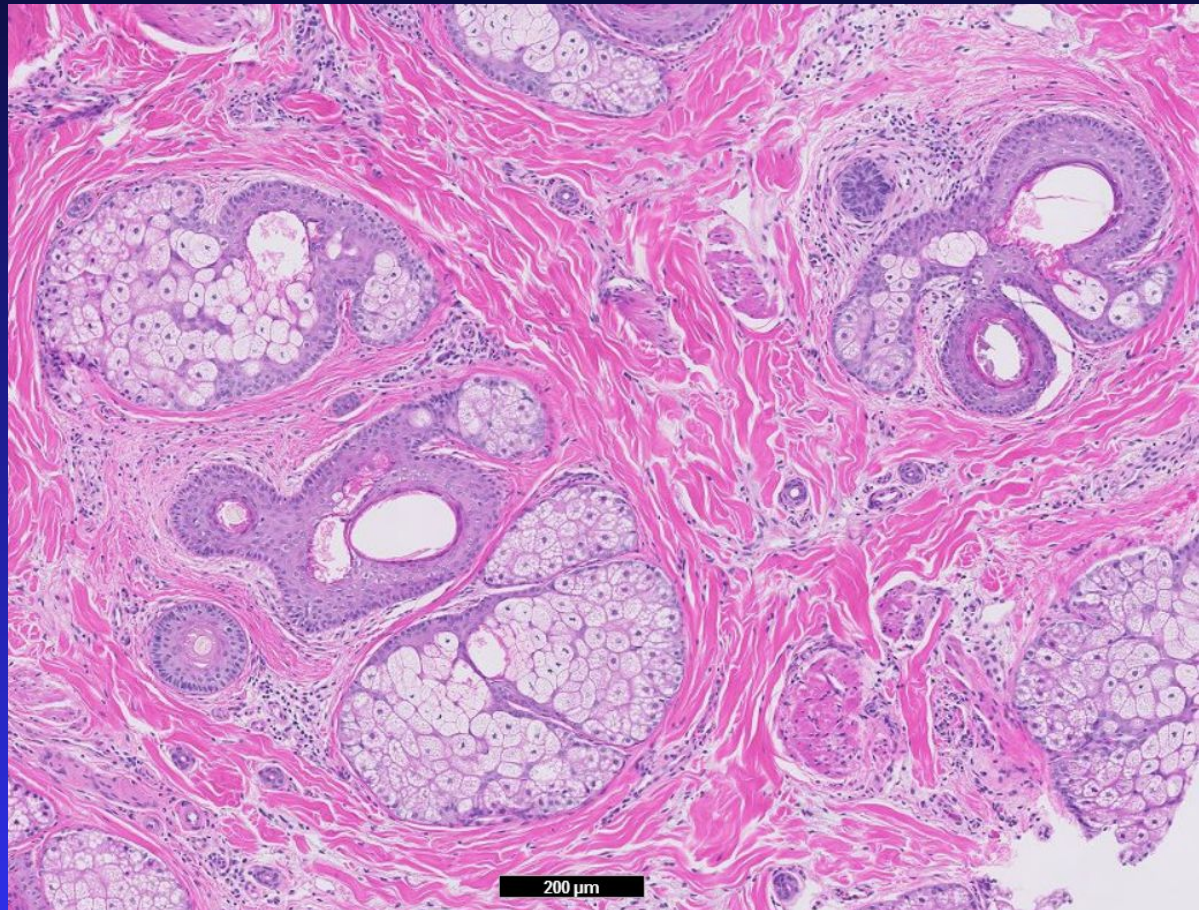
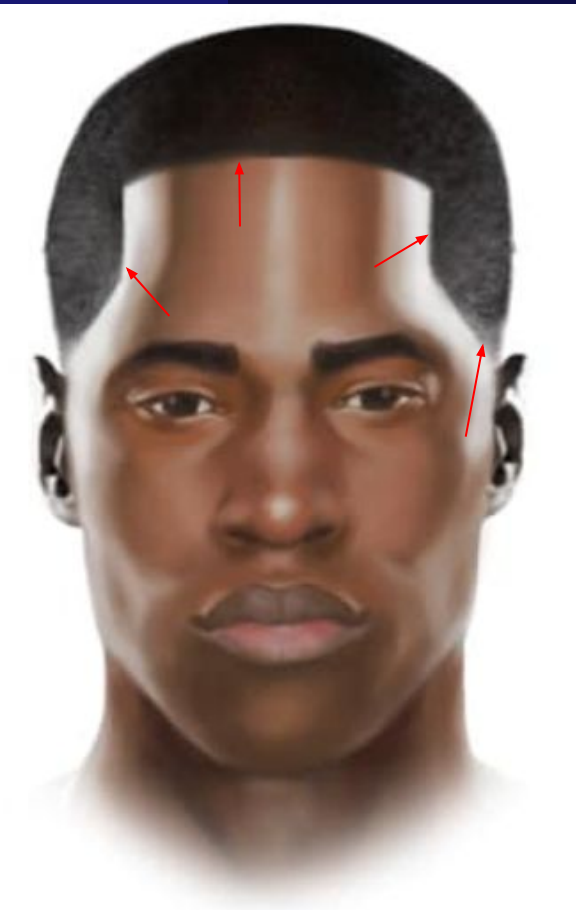


# Alopecia areata?





# Avoid biopsies from the hairline



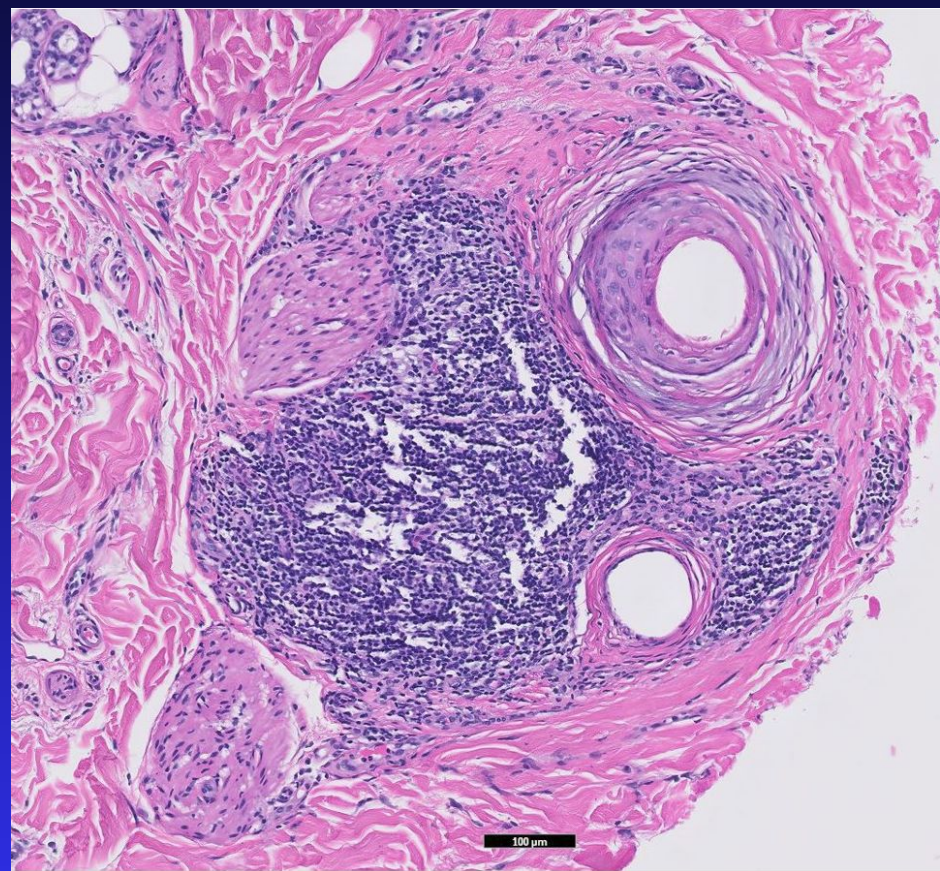
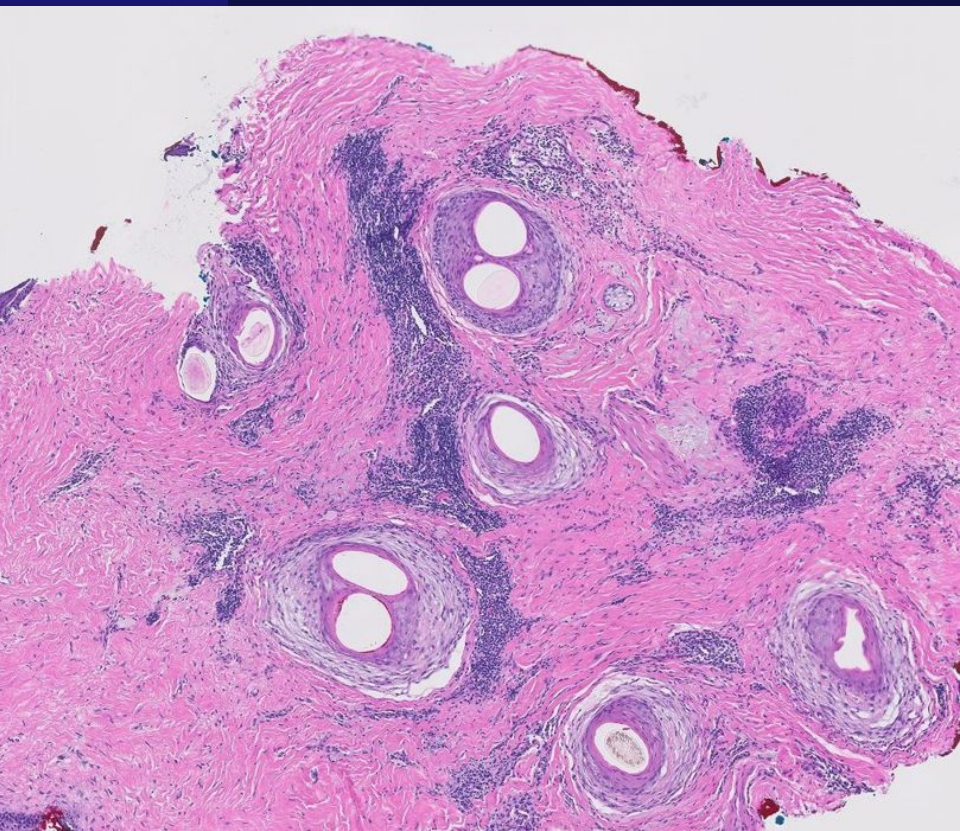
Another Alopecia Areata Simulant



# Communication

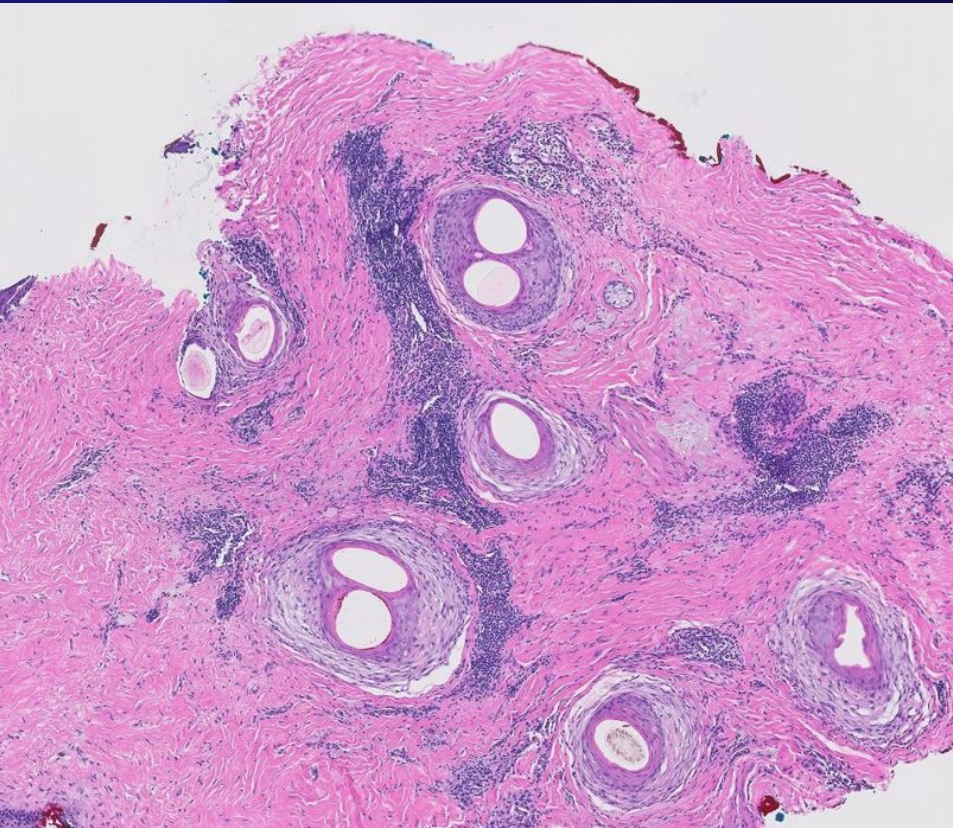
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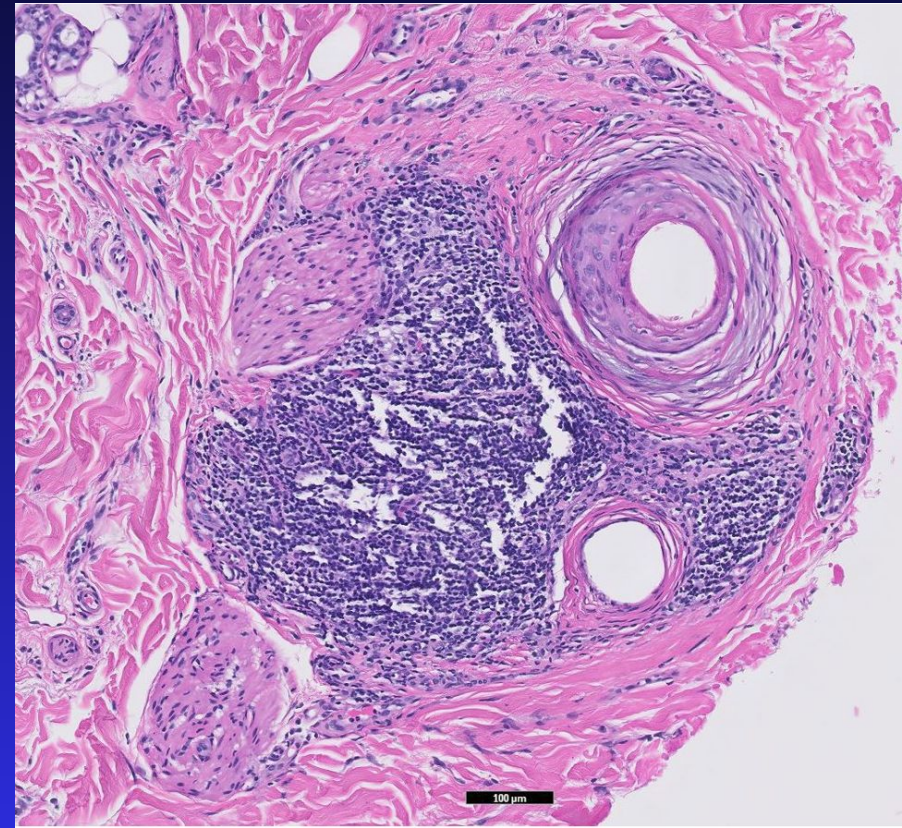




# LPP versus Folliculitis decalvans



LPP



Folliculitis decalvans



# JCP

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CUTANEOUS PATHOLOGY

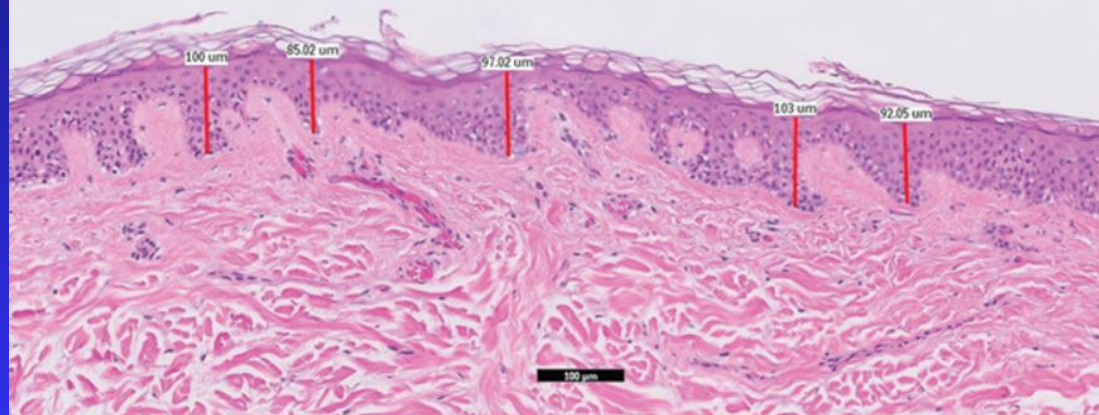
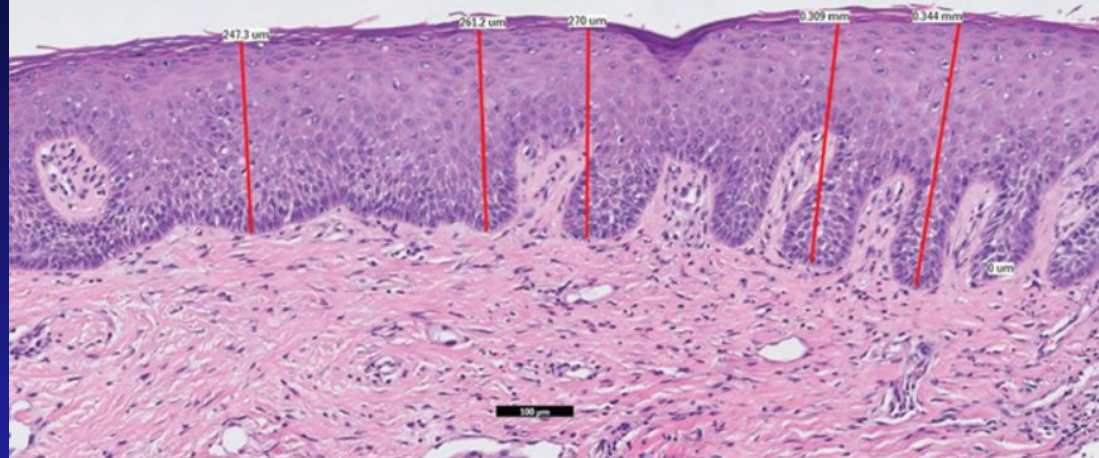
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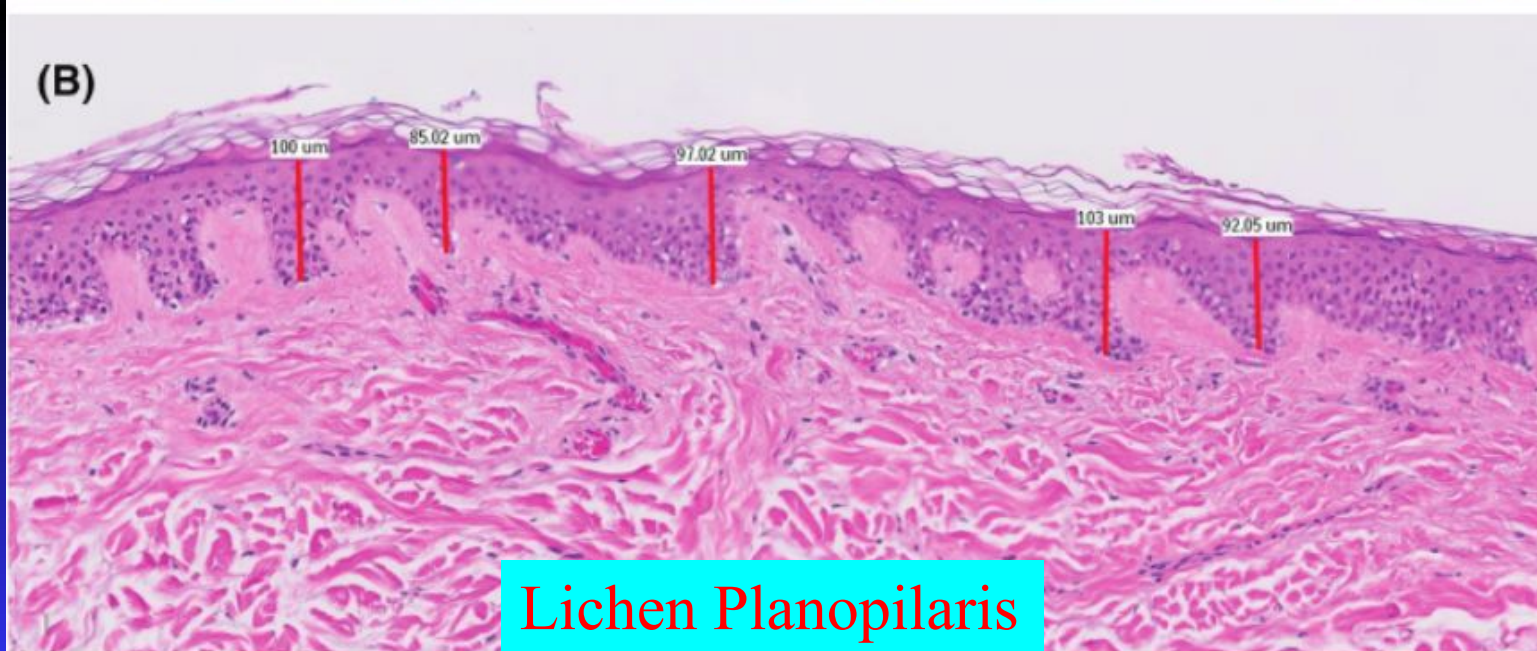
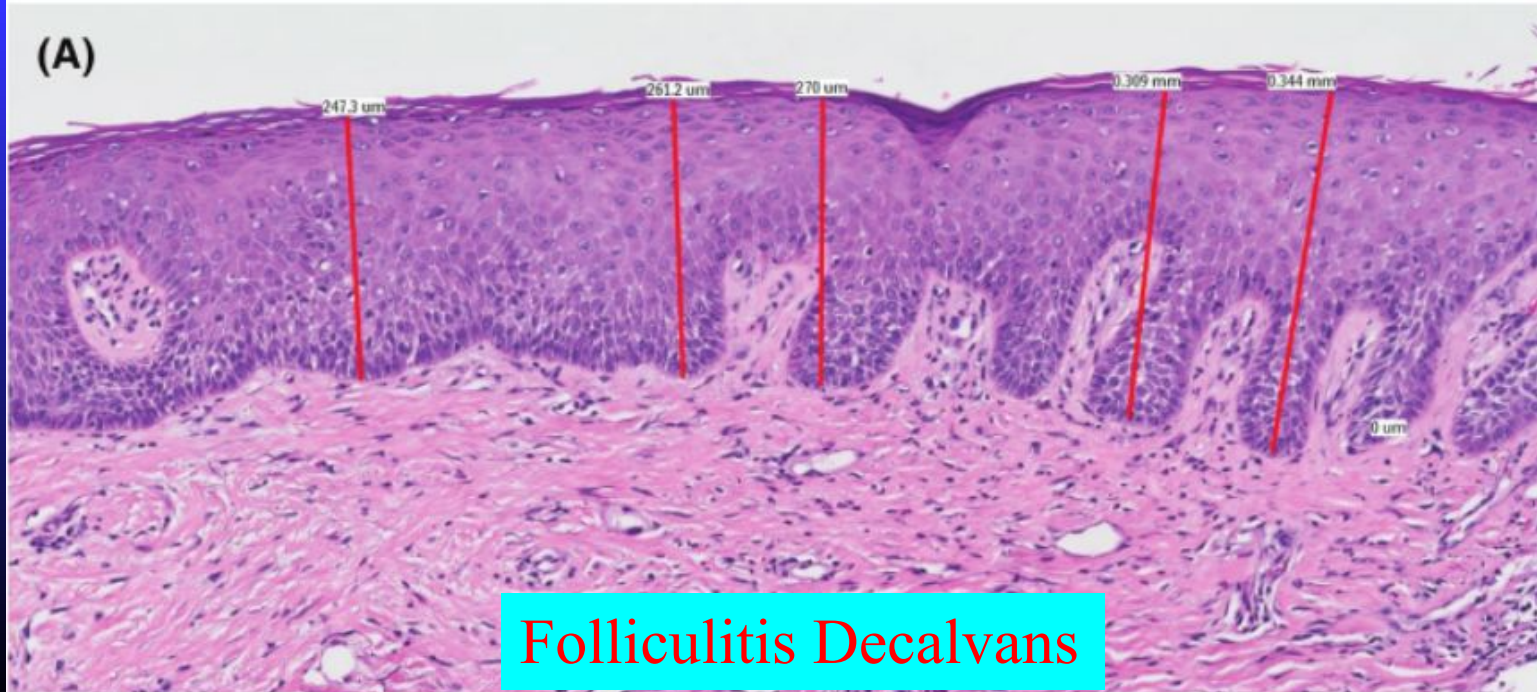
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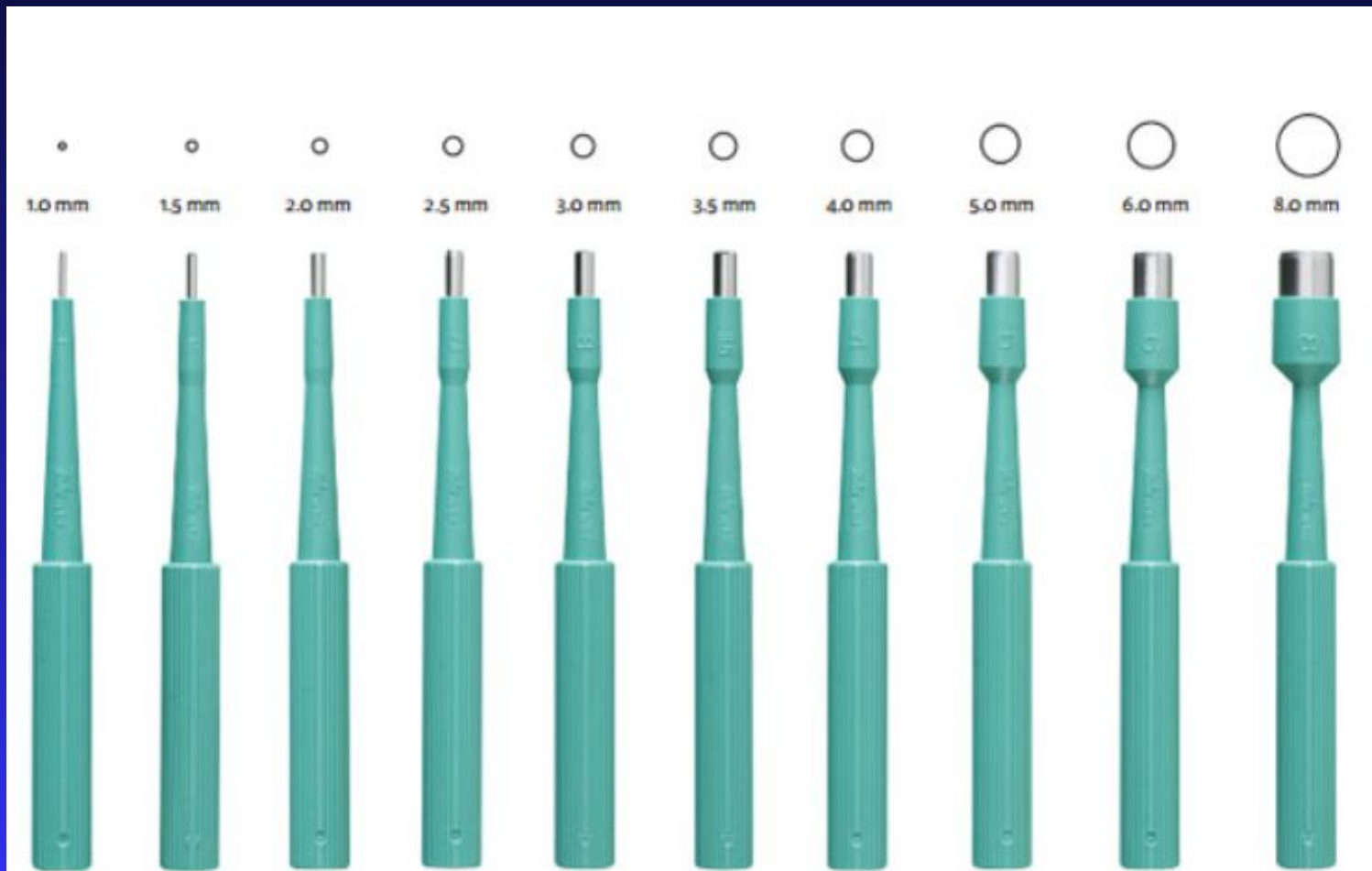


WILEY





# Size of the punch biopsy?





# A method for more precise sampling of the scalp and eyebrows in frontal fibrosing alopecia



Curtis T. Thompson, MD,<sup>a,b,c</sup> and Antonella Tosti, MD<sup>d</sup>  
*Portland, Oregon, and Miami, Florida*

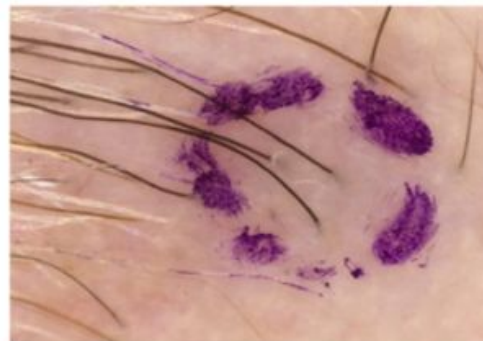
**Key words:** alopecia; biopsy; cicatricial; FFA; frontal fibrosing alopecia; lichen planopilaris; LPP; scarring.

## TECHNICAL CHALLENGE

Early diagnosis of frontal fibrosing alopecia (FFA) often requires performing a biopsy on a cosmetically sensitive area, such as the widow's peak or eyebrows.<sup>1</sup>

## SOLUTION

We present a modified, horizontal sectioning technique<sup>2</sup> that allows identification of diagnostic features from a 2-mm dermoscopy-guided punch biopsy specimen (Fig 1).<sup>3</sup> The biopsy specimen is first sent through histologic processing without sectioning or inking. After processing, the specimen is embedded epidermis down. The initial sections contain the epidermis, and the subsequent horizontal step-level sections are taken through the entire tissue segment for a total of 3 slides (3 sections per slide). A few unstained slides are obtained between each of the 3 slides for possible special stains or research because no tissue remains in the paraffin block (Fig 2).



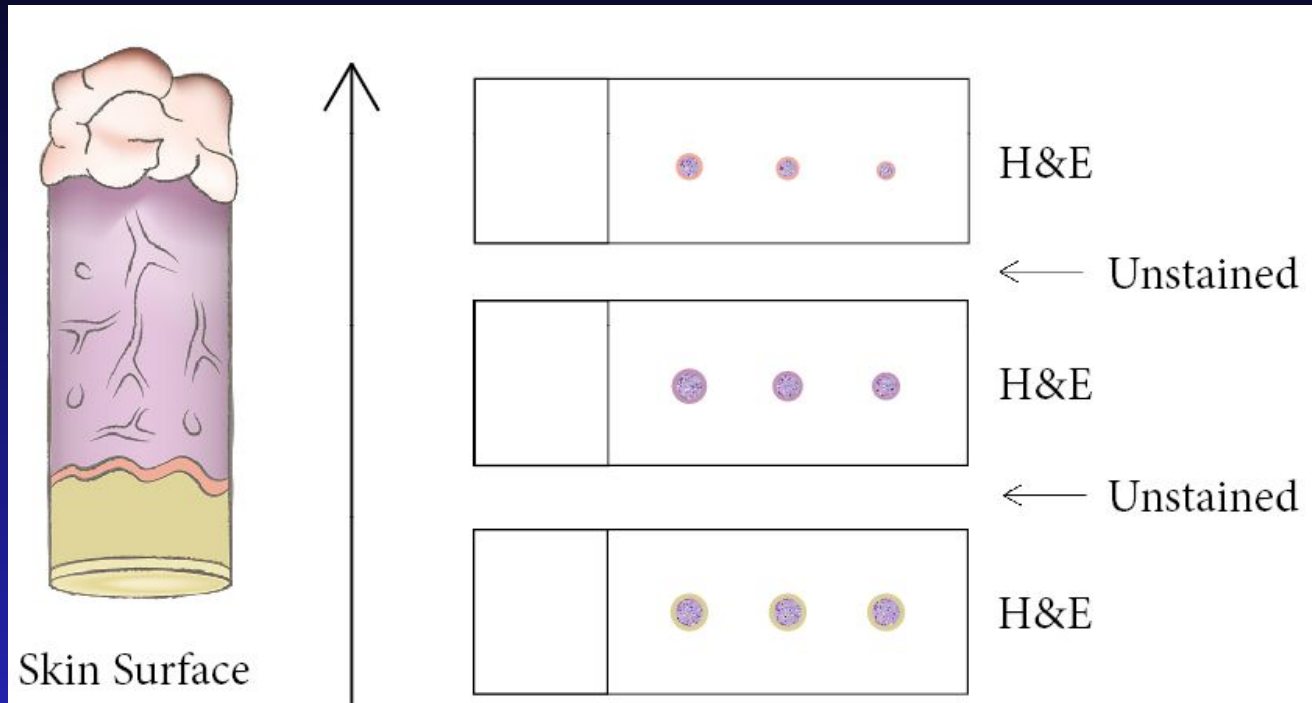
**Fig 1.** Dermoscopic image of a terminal hair with a peripilar cast, outlined before the 2-mm biopsy specimen is obtained.

# Dermoscopic identification of disease





# 2mm punch—exhaust tissue



3 slides total with 9 cross  
sections; 3 sections per slide

1. Tissue is embedded epidermis-down
2. Step through entire block on initial H&E stains
3. Obtain unstained slides

# Size of punch to use?

- 2mm for Frontal Fibrosing Alopecia
- 4mm for everything else

## A method for more precise sampling of the scalp and eyebrows in frontal fibrosing alopecia

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**Fig 1.** Dermoscopic image of a terminal hair with a peripilar cast, outlined before the 2-mm biopsy specimen is obtained.



# Imaging modalities united!

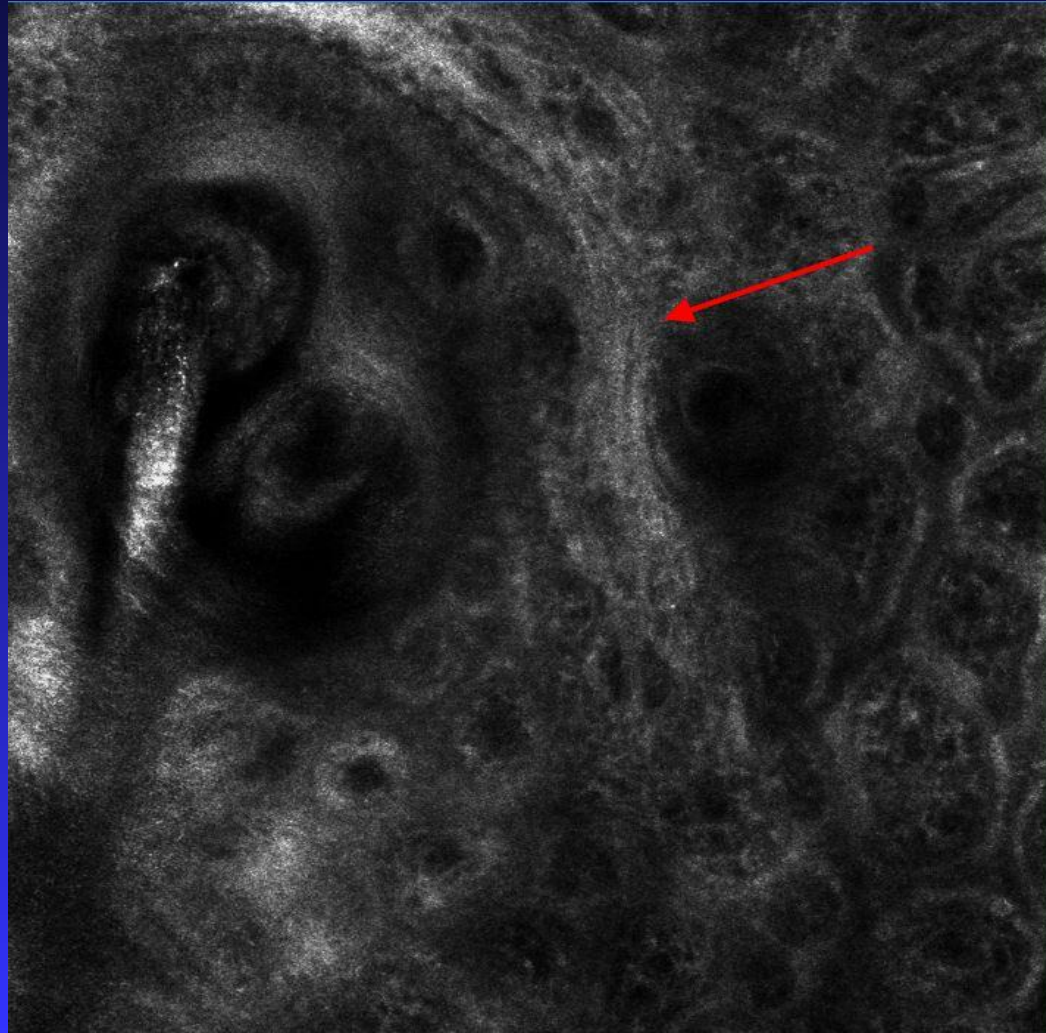
- Dermoscopy
- *In vivo* confocal microscopy
- 2mm transverse H&E sectioning

# Dermoscopy





# *In vivo* confocal microscopy



# 2mm transverse H&E sections



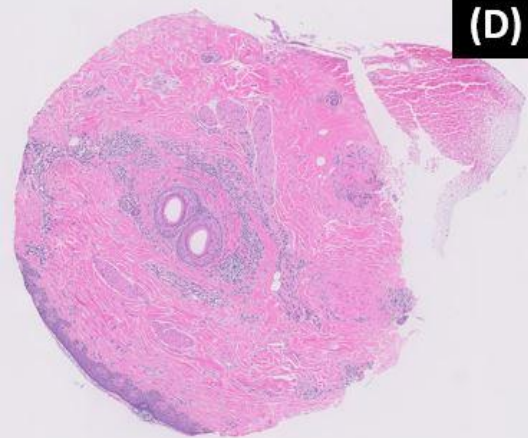
(A)



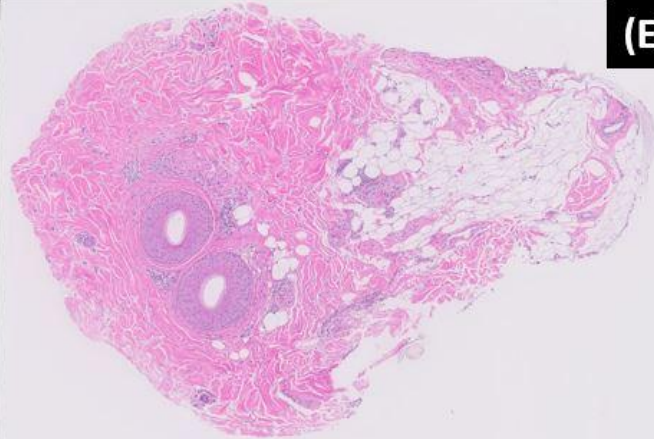
(B)



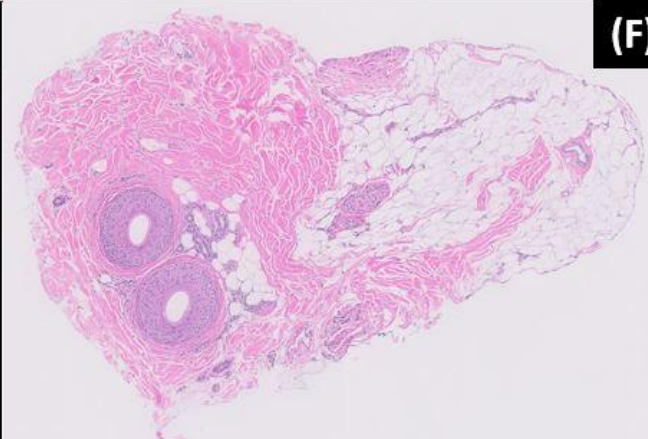
(C)



(D)

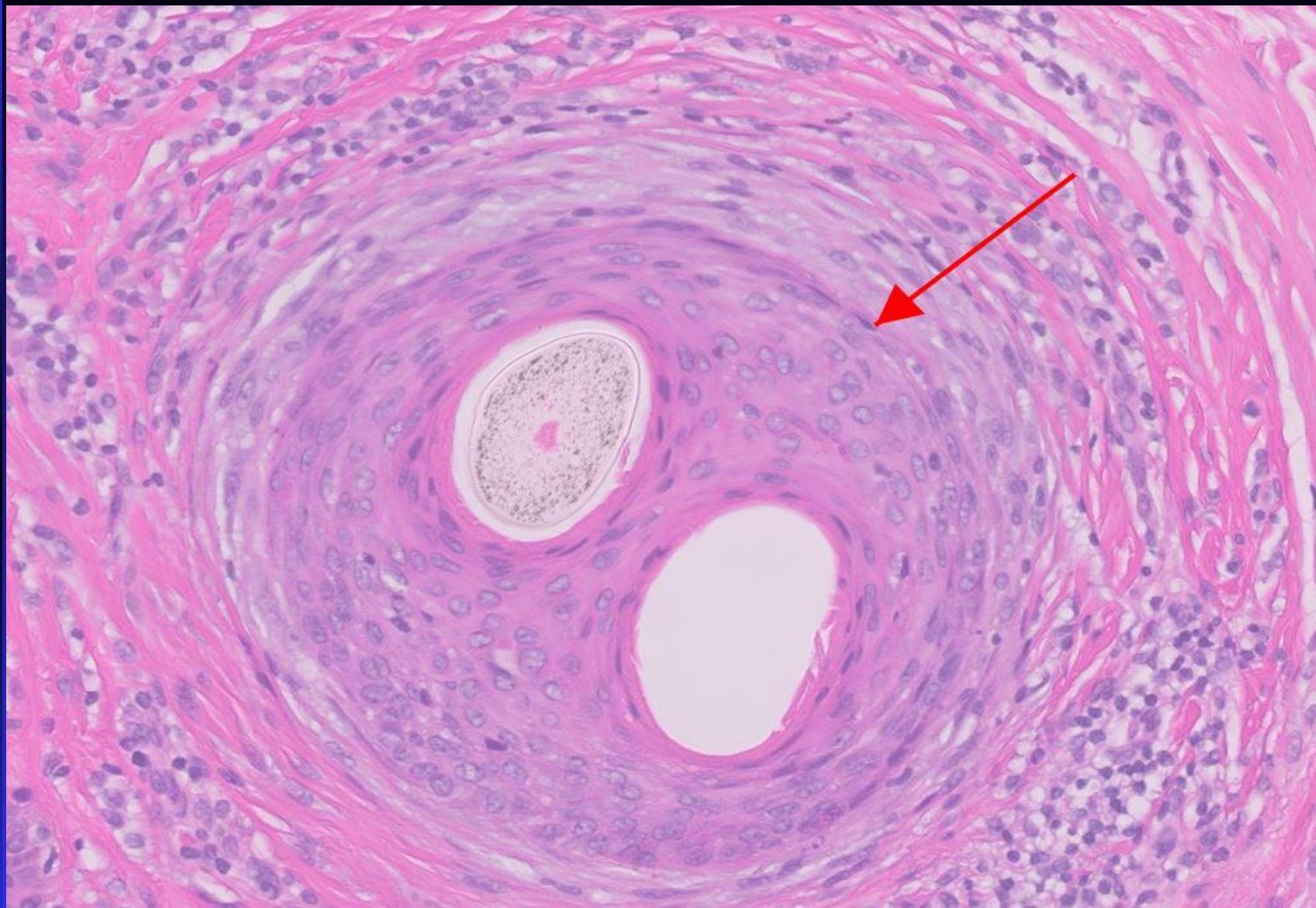


(E)



(F)











| Patient Name       |             | Birth Date | Sex          | Report to: Name, Address, Fax |
|--------------------|-------------|------------|--------------|-------------------------------|
|                    |             | 5/17/1950  | F            |                               |
| Path/Report Number | Report Date | Recvd Date | Collect Date |                               |
| CT21-21799         | 09/17/2021  | 09/16/2021 | 09/16/2021   |                               |

**DIAGNOSIS:**

SKIN, SCALP, BIOPSY:

**LICHEN PLANOPILARIS.**

COMMENT: The histologic pattern of frontal fibrosing alopecia may be identical to that of lichen planopilaris, and correlation with clinical findings is recommended for distinction.

**GROSS:**

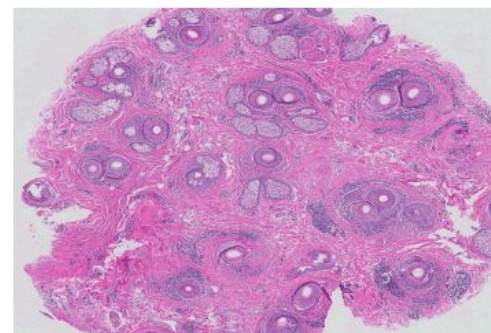
4x4x4.5mm skin punch, submitted entirely in one cassette. Level sections through the tissue block performed.

**MICROSCOPIC:**

Horizontal sections show perifollicular fibrosis, compound follicles and a folliculocentric lichenoid infiltrate of lymphocytes. A PAS-D stain is negative for fungal hyphae. All controls show appropriate reactivity.

**HORIZONTAL SECTIONS**

|                               |        |
|-------------------------------|--------|
| Terminal anagen               | 16     |
| Catagen/telogen               | 2      |
| Vellus/Miniaturized hairs     | 6      |
| TOTAL                         | 24     |
| Compound follicles            | 2+     |
| Perifollicular fibrosis       | 3+     |
| Lymphohistiocytic infiltrate  | 3+     |
| Follicular structures/mm2     | 1.9: 1 |
| Terminal:indeterminate/vellus | 2.4: 1 |
| Anagen%/catagen-telogen%      | 92: 2  |



# Final words of advice

- Let alopecia pathology expert's lab process the tissue
- If you have an extended wait in your clinic, get the outside clinician to perform the biopsy.



# Thanks to:

- Miami and Bologna--Antonella Tosti
- Brussels--Athanasios Kolivras
- Mexico City--Maria Abril Martinez Velasco
- Portland--Janet Roberts and Nisha Desai



Thanks!

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