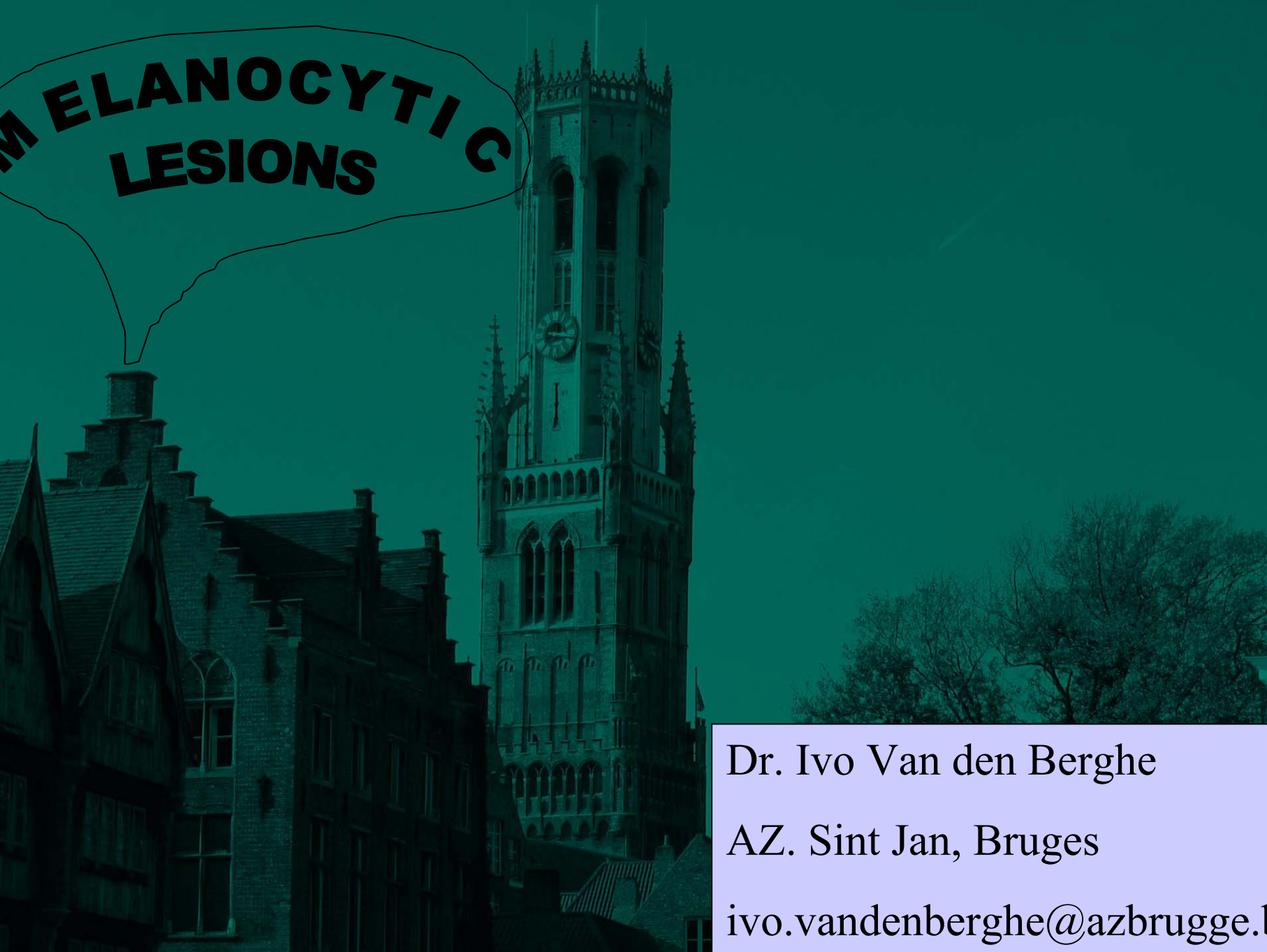
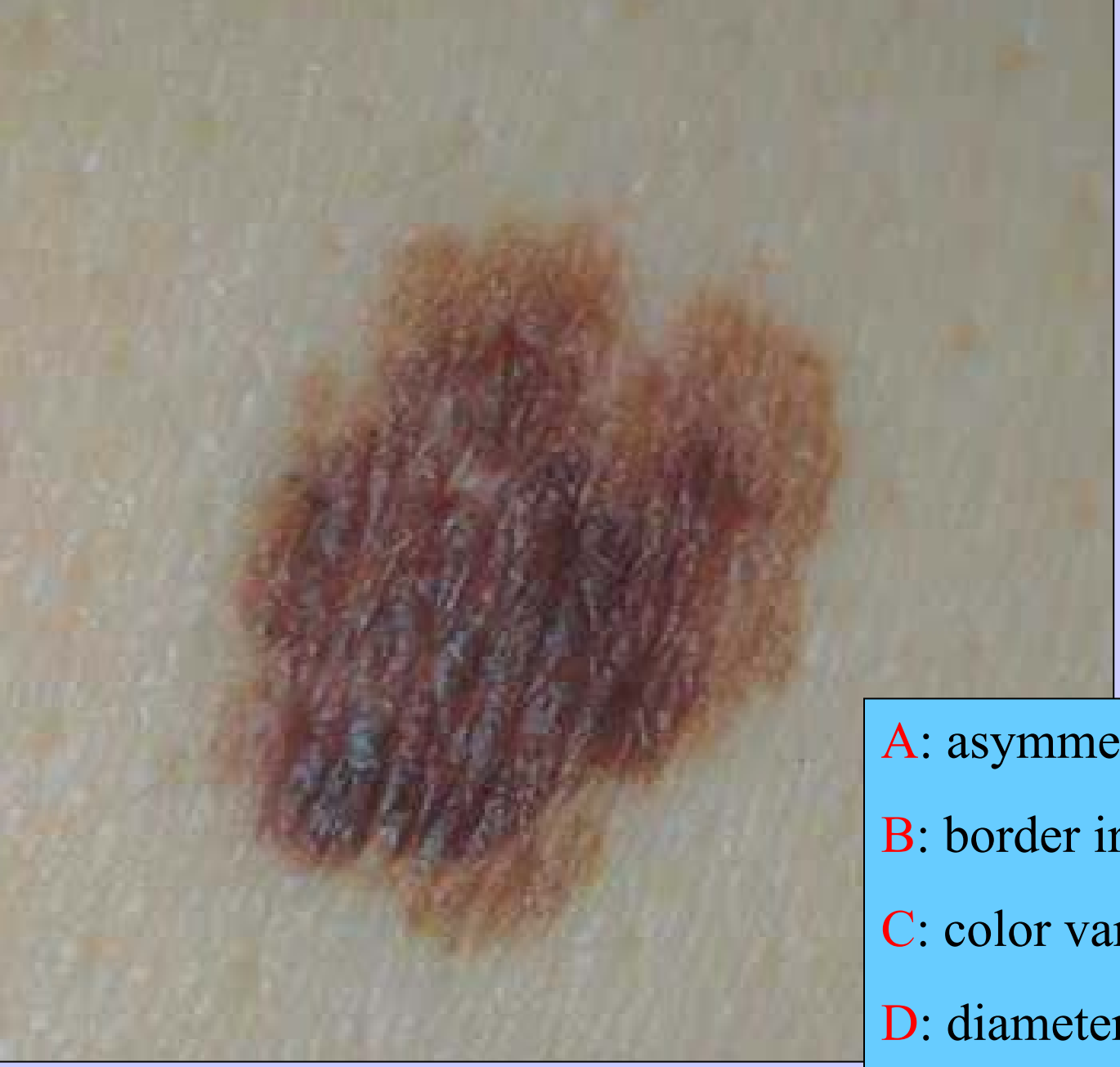


Dr. Ivo Van den Berghe

AZ. Sint Jan, Bruges

ivo.vandenberghe@azbrugge.b



A: asymmetry

B: border irregularity

C: color variation

D: diameter > 6mm

E: Elevation

WHO CRITERIA OF DYSPLASIA:

MAJOR CRITERIA:

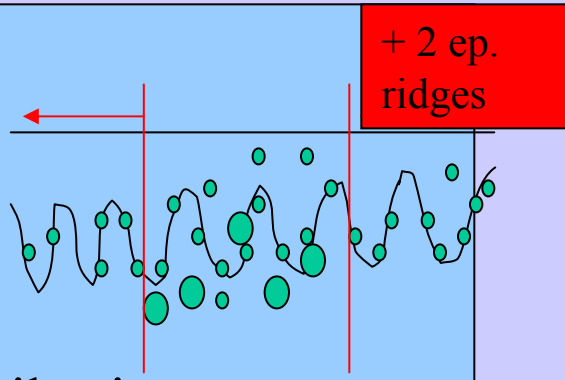
- Basal (lentiginous and “nesting”) proliferation of melanocytes
- Melanocytic atypia, lentiginous/epitheloid cell type

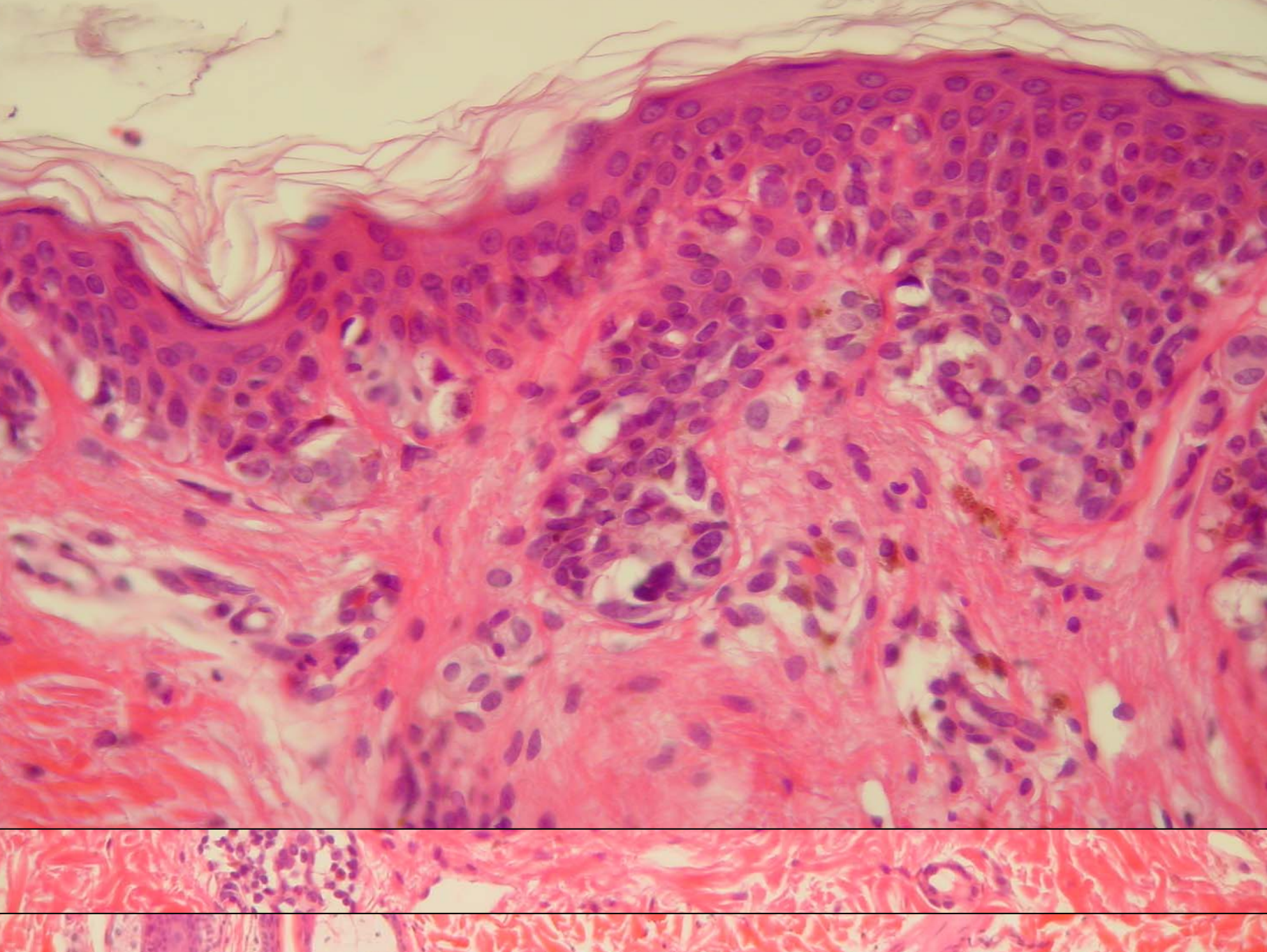
MINOR CRITERIA:

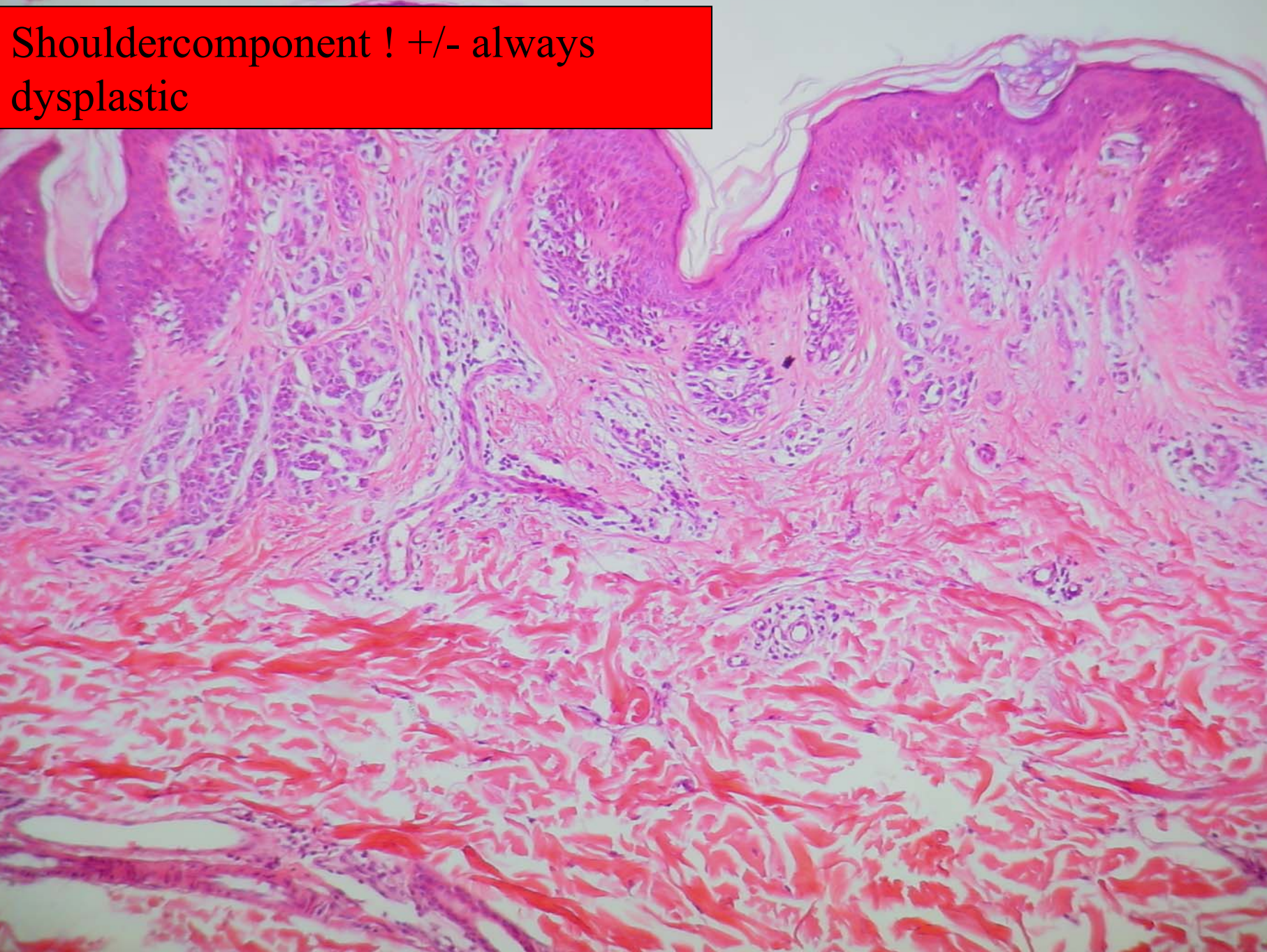
- Inflammation
- increased vascularity with endothelial hyperplasia
- concentric eosinophilic fibrosis/lammelar fibroplasia
- bridging of epidermal retae by “atypical” melanocytes

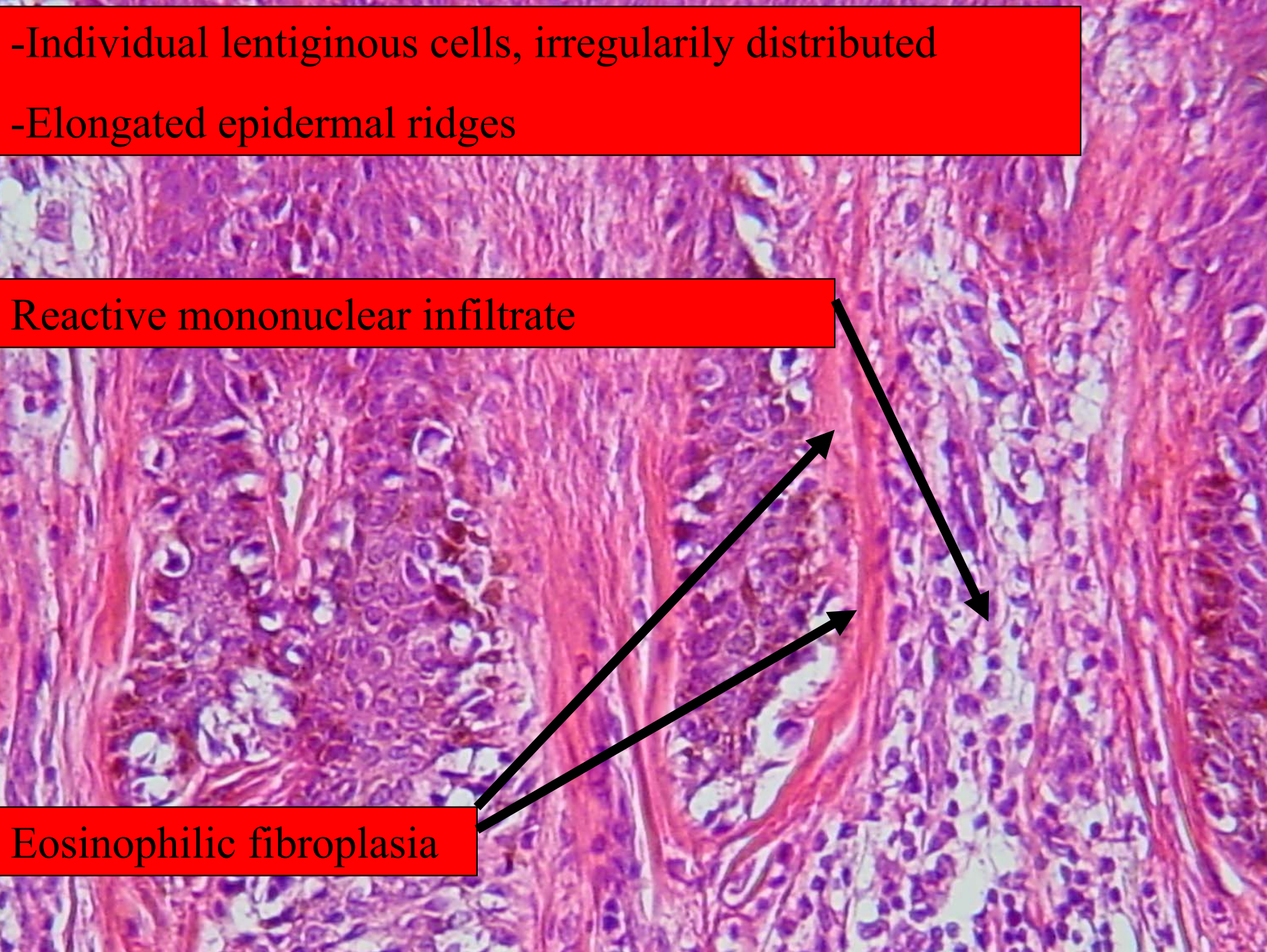
DYSPLASTIC NAEVUS : GENERAL HISTOLOGICAL HALLMARKS

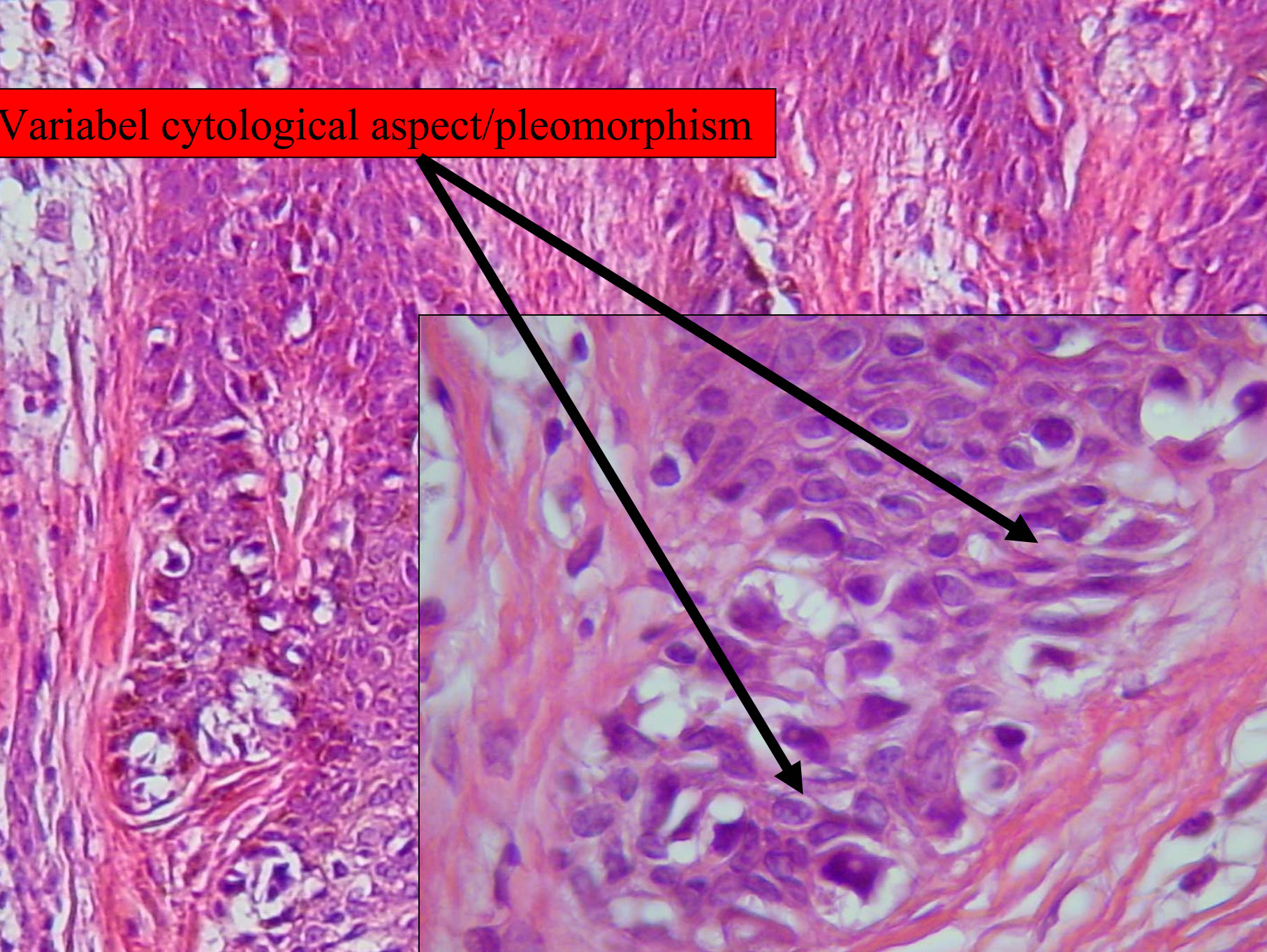
- Usually “low power” diagnosis
- Shouldereffect ! => probably dysplastic
- Elongated epidermal ridges
- Individual lentiginous cells, irregular distribution
- Bridging
- Variabel cytol. aspect/pleomorphia/atypia/hyperchrom.
- Eosinophilic fibroplasia
- Reactive mononuclear infiltration
- Melanophages in the superficial dermis
- Irregular pigmentdistribution, “olive green” pigment

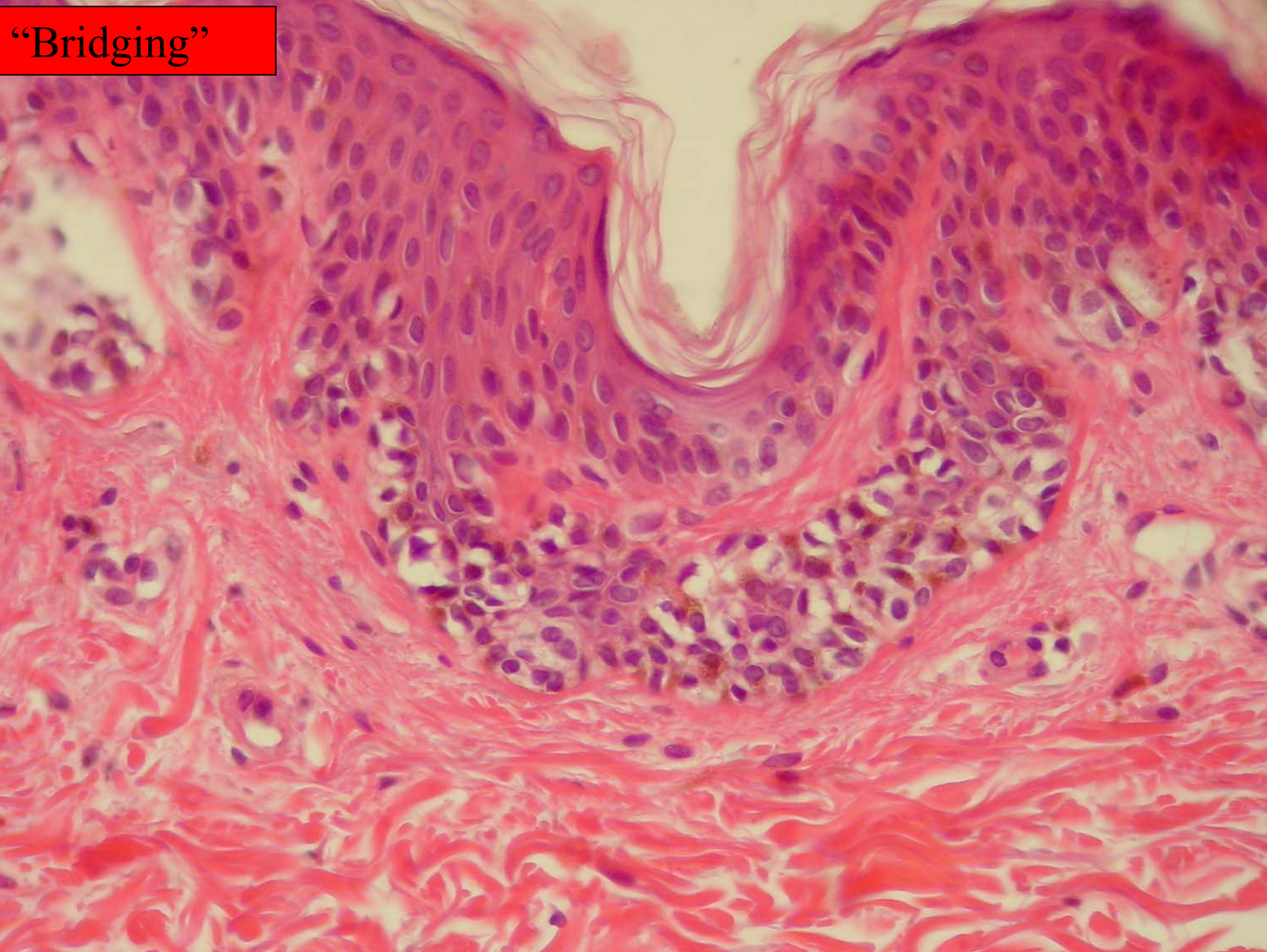





Shouldercomponent ! +/- always
dysplastic


-Individual lentiginous cells, irregularily distributed
-Elongated epidermal ridges
Reactive mononuclear infiltrate
Eosinophilic fibroplasia


Variabel cytological aspect/pleomorphism


“Bridging”

GRADING OF DYSPLASIA:

- No consensus/difficult interindividual reproducibility

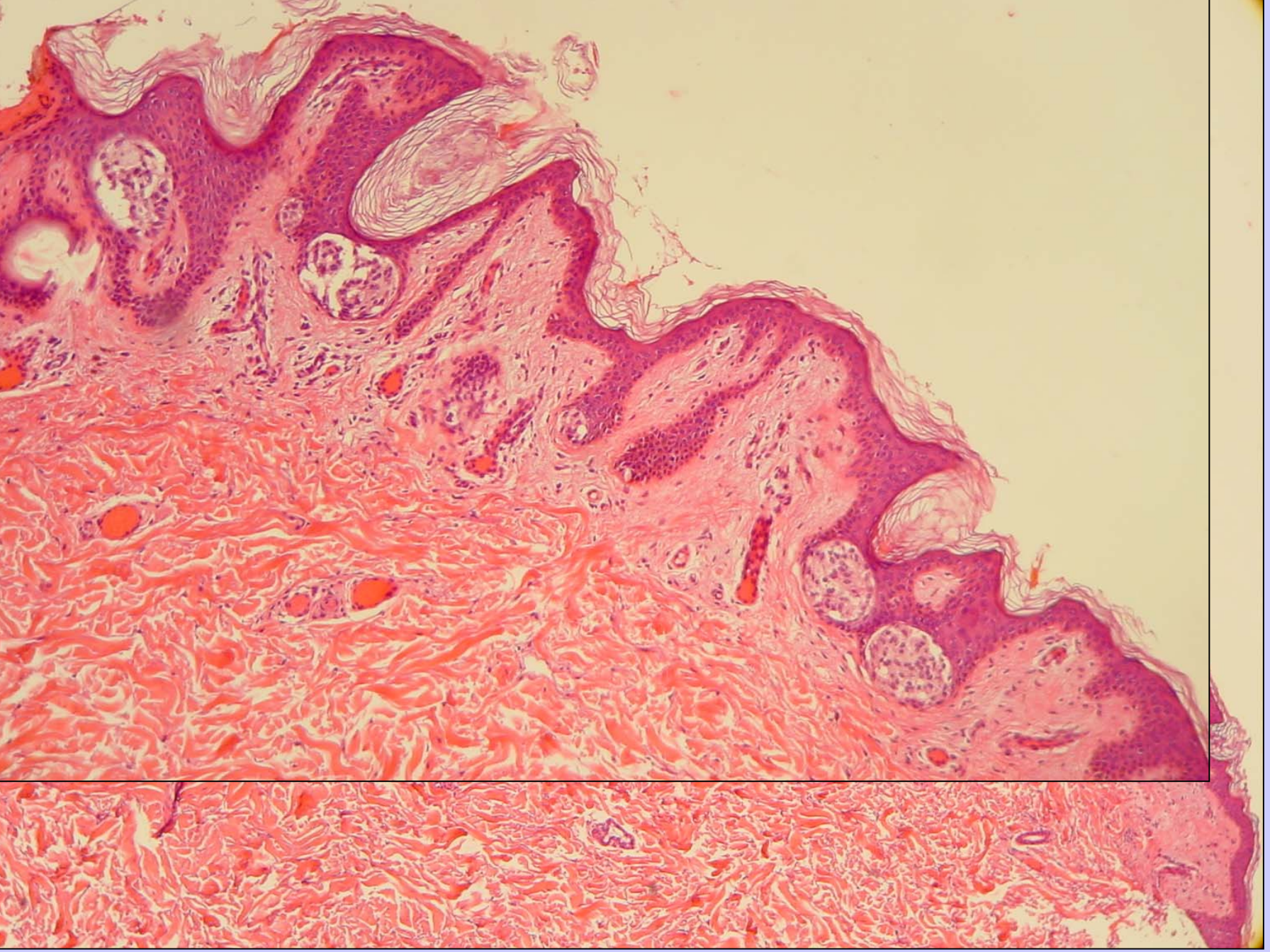
ARCHITECTURE:

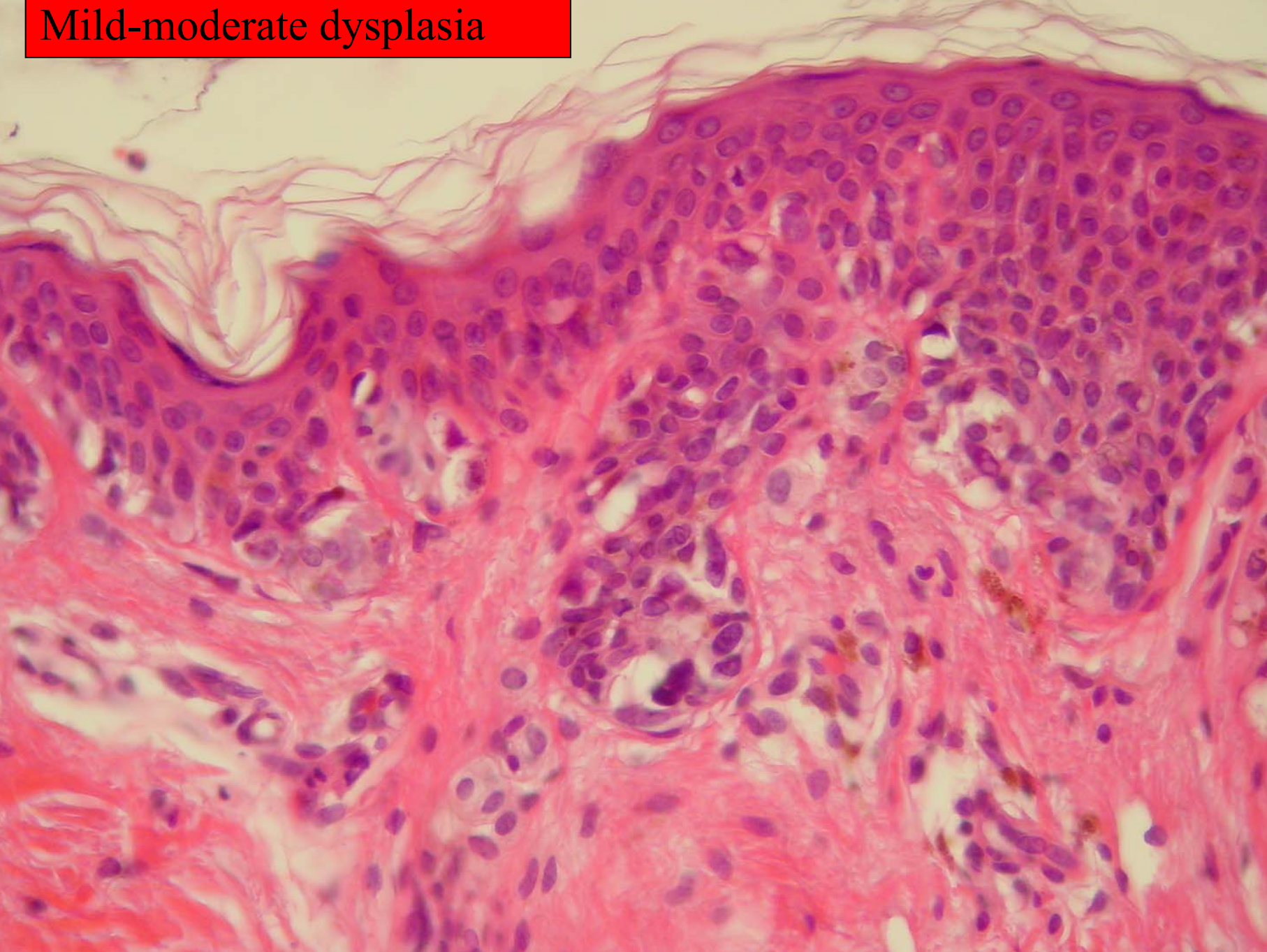
Mild dysplasia

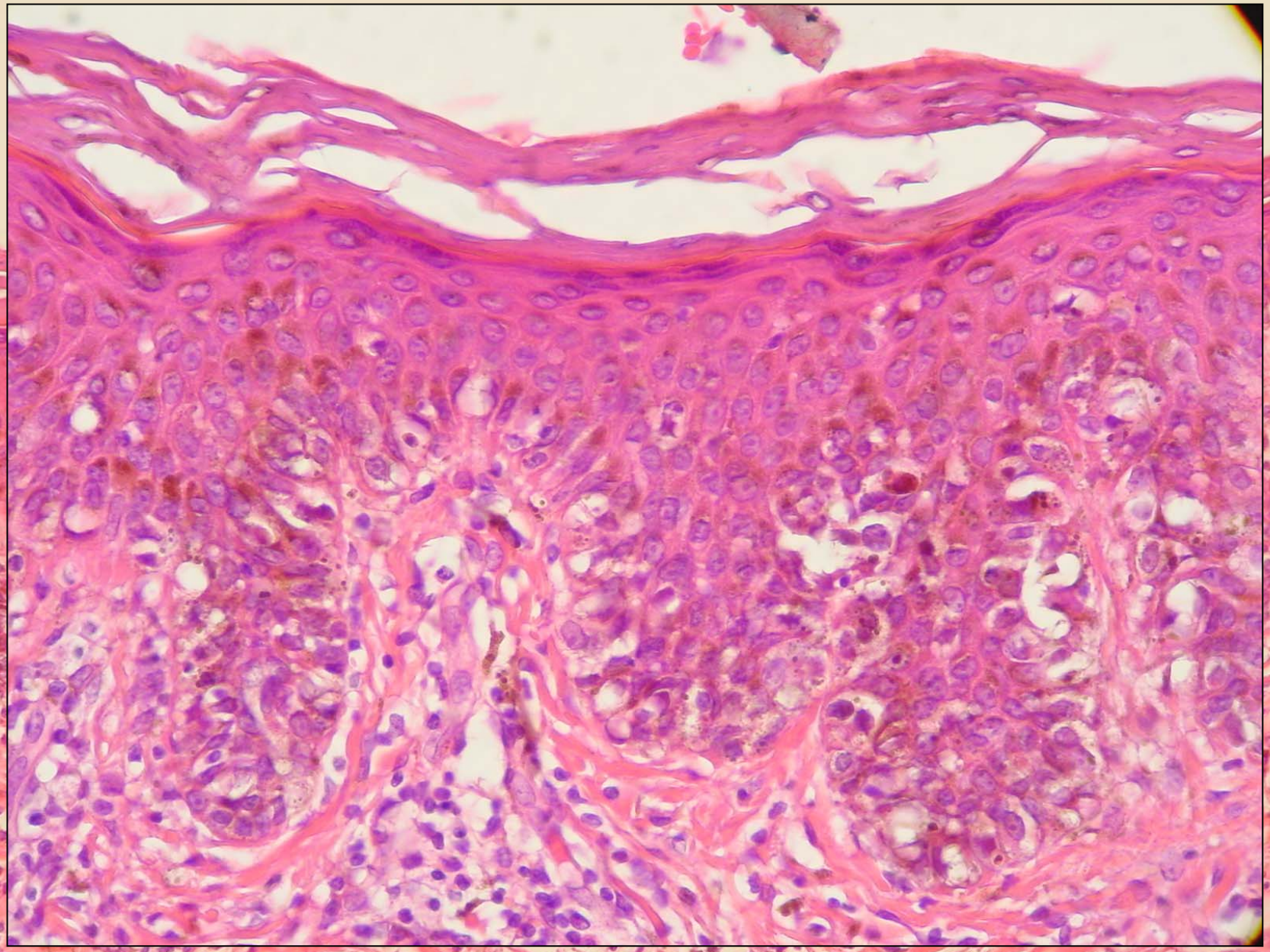
- "clean" aspect at "low power", not "busy"
- shouldercomponent as most prominent hallmark
- individual lentiginous cells and "nests"

CYTOLOGY:

- no prominent atypia or nucleoli/some hyperchromasia
- not to much intercytological variation
- infrequent mitosis




Mild-moderate dysplasia



GRADERING OF DYSPLASIA:

Severe dysplasia

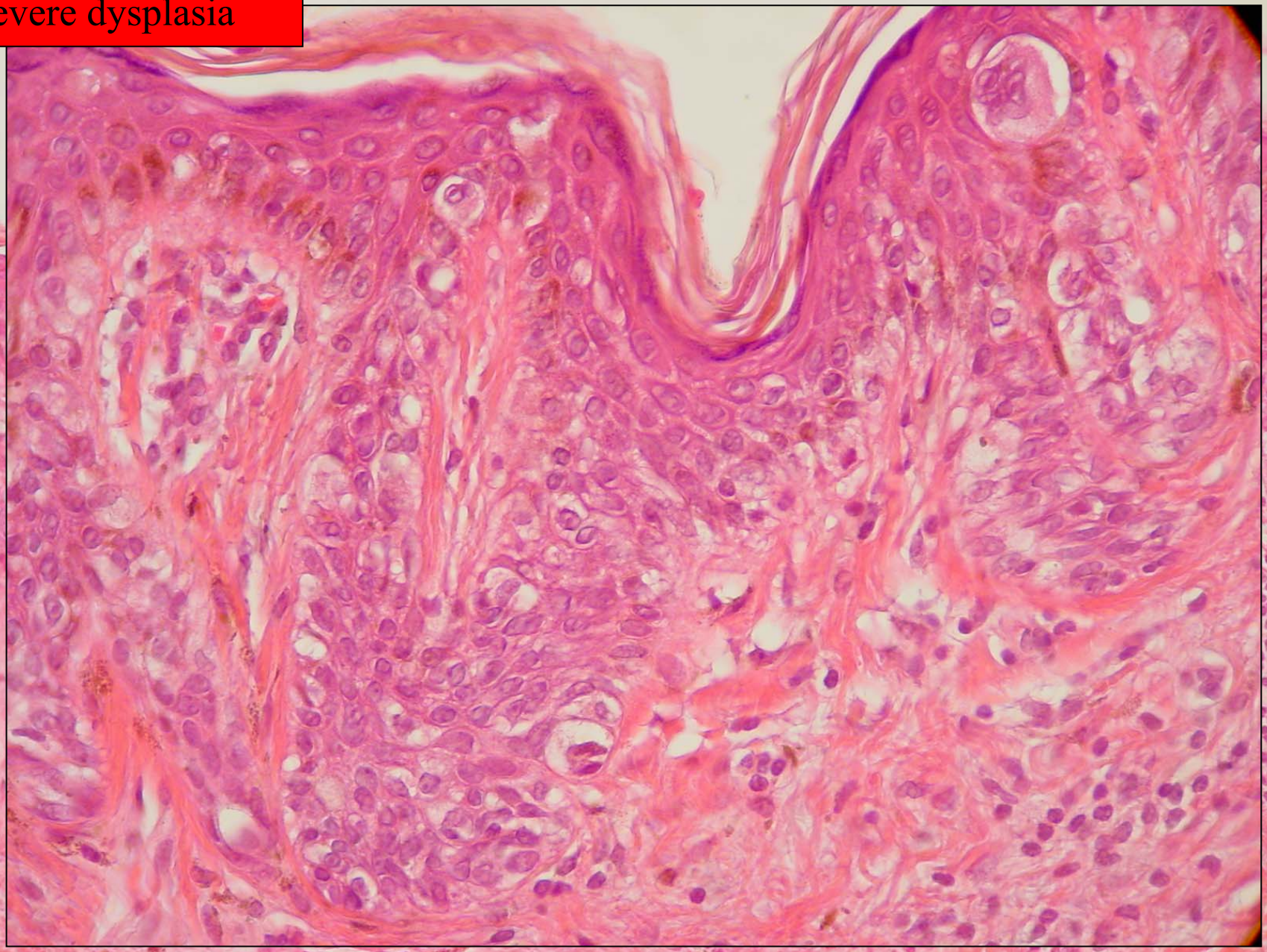
ARCHITECTURE:

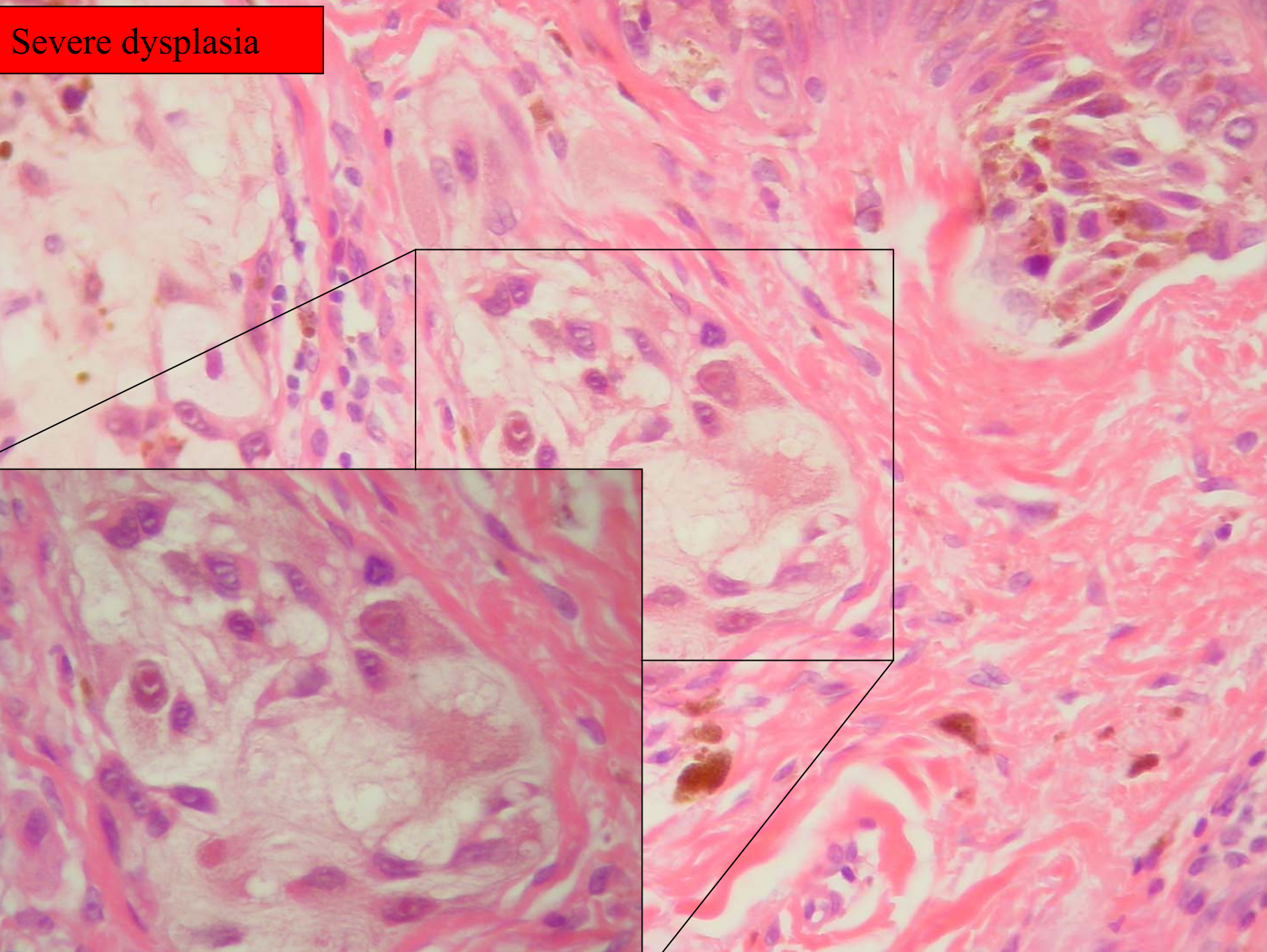
- "busy" ……worrisome at low power
- always shouldercomponent

CYTOLOGY:

- prominent atypia/macronucleoli/hyperchromasia
- pronounced intercytological variability
- predominance of individual lentiginous irregularily distributed individual cells, less "nests"

Severe dysplasia




Severe dysplasia

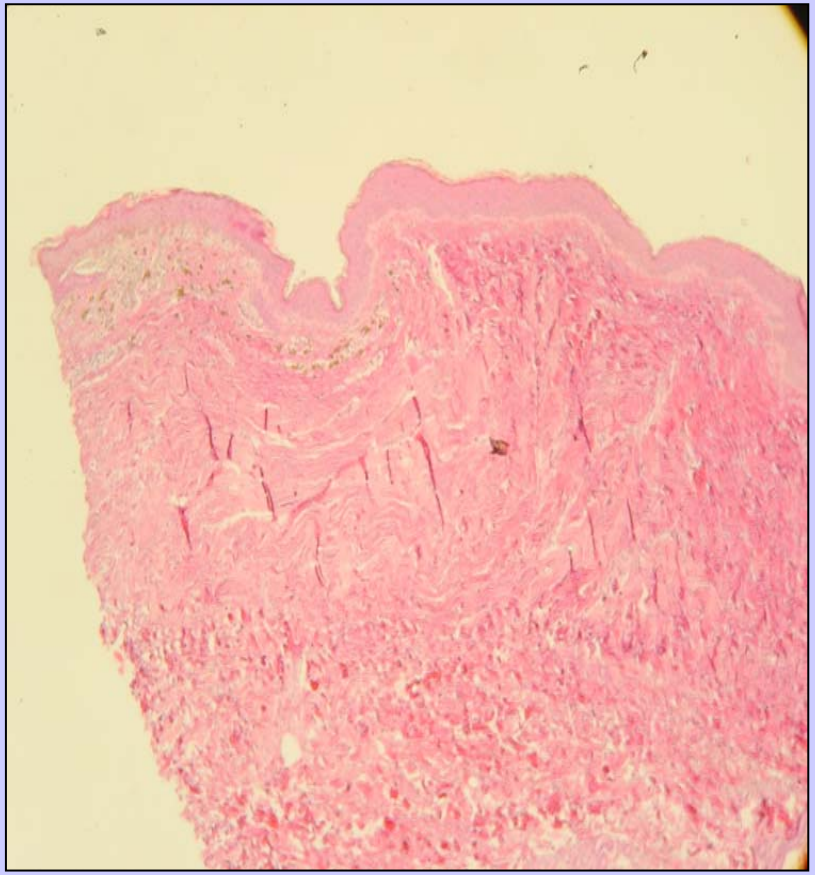
Some remarks with severe dysplastic naevi

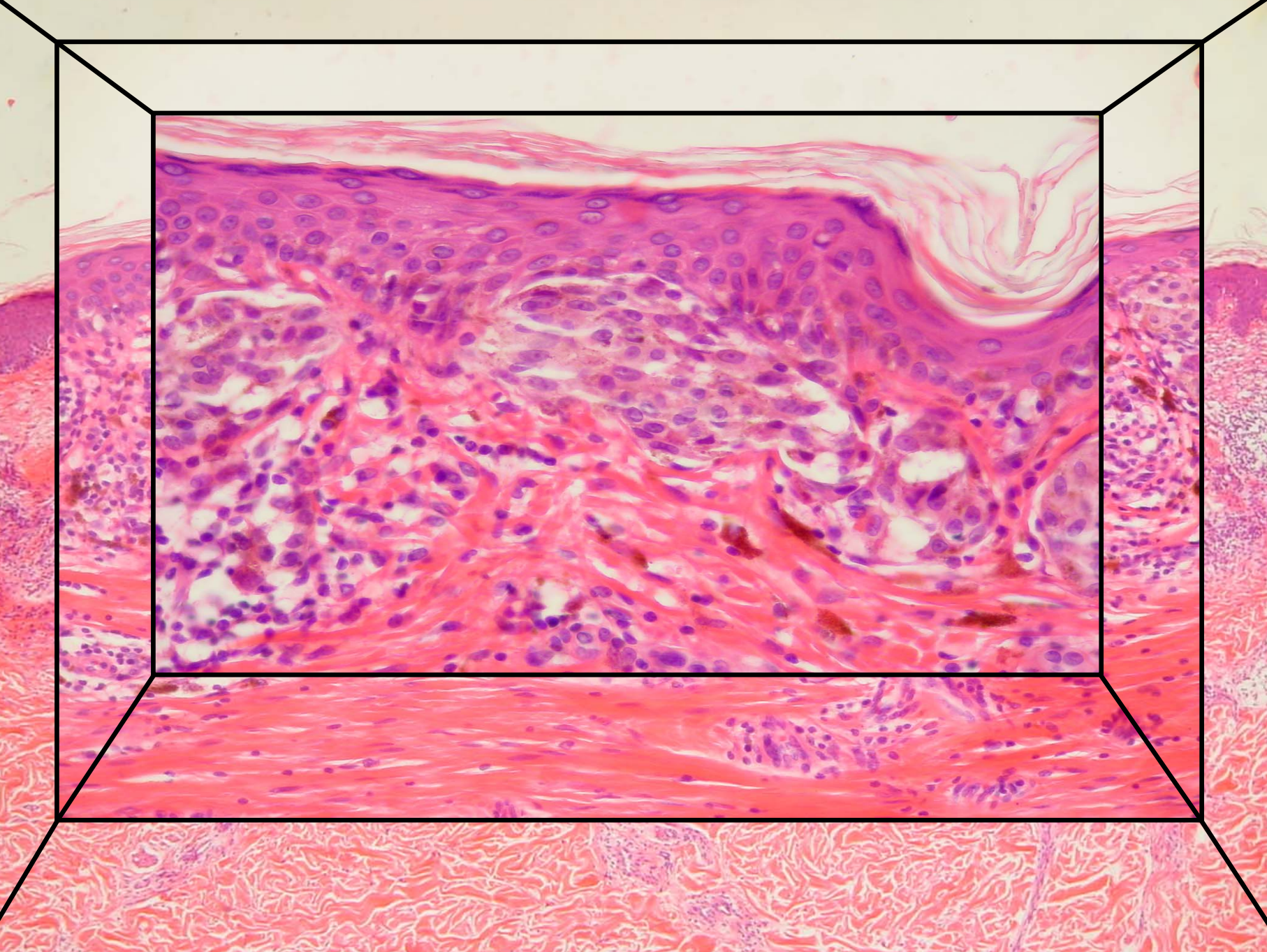
1. Severe dysplasie ≈ melanoma in situ
2. Search for pagetoid invasion
3. Pay attention to the age of the patient

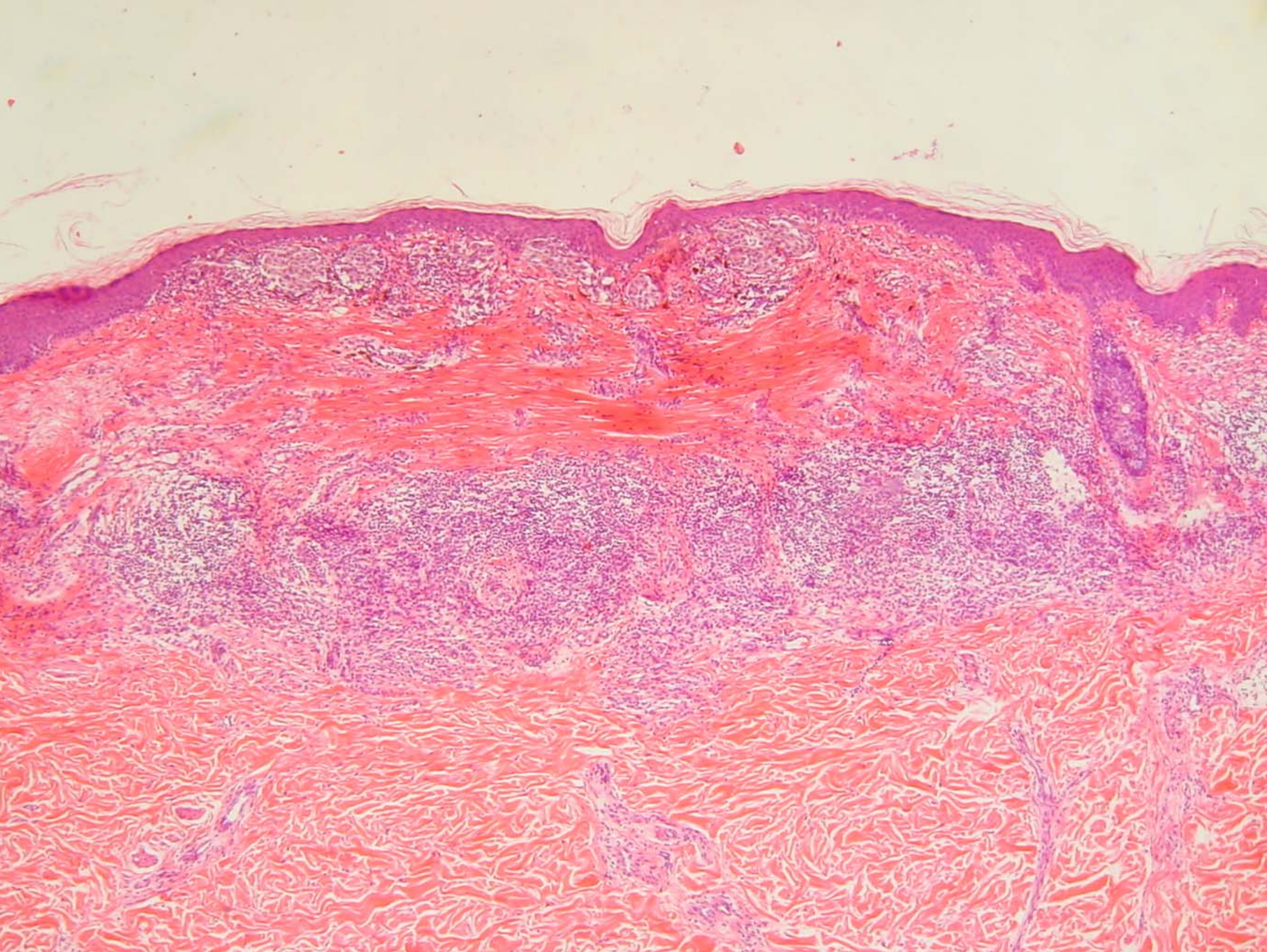
   (life insurance)
4. Prognosis of completely excised severely dysplastic naevus/in situ melanoma/microinvasive SSM is " ≅ "
5. Always do levels of the block

Recurrent naevus

- Usually recurr. after shaving
- **>50% within 6m**
- Usually spotty macular
- ***≤contour of the scar ⇔ Mel***
- ***No epidermal ridges***
- ***Epidermal mc prol. of nests and individual cells, above a dermal scar***

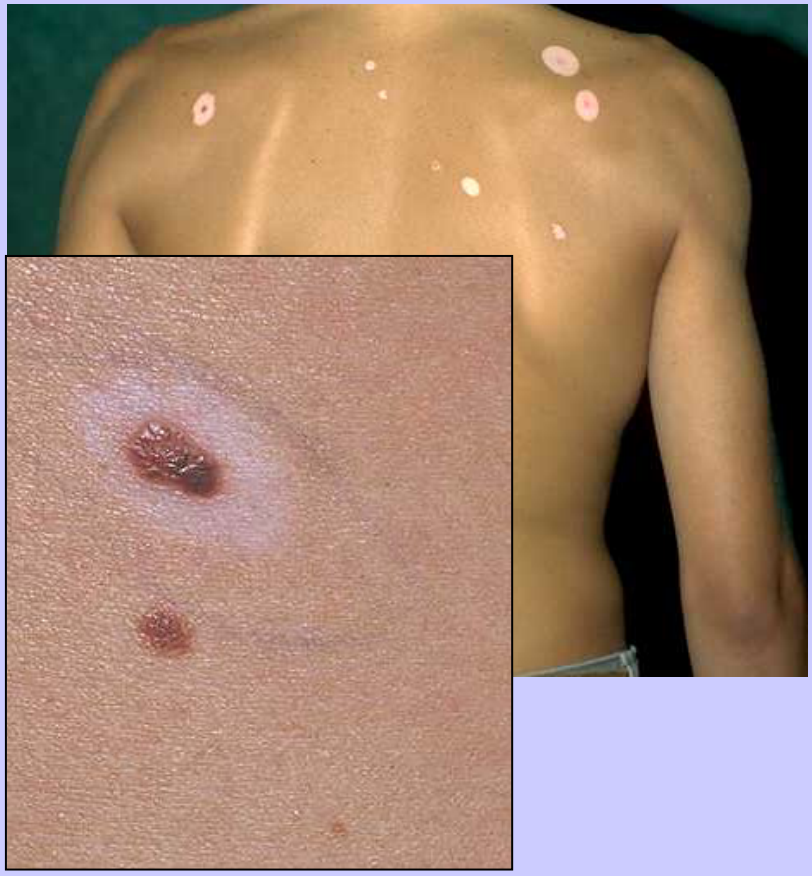




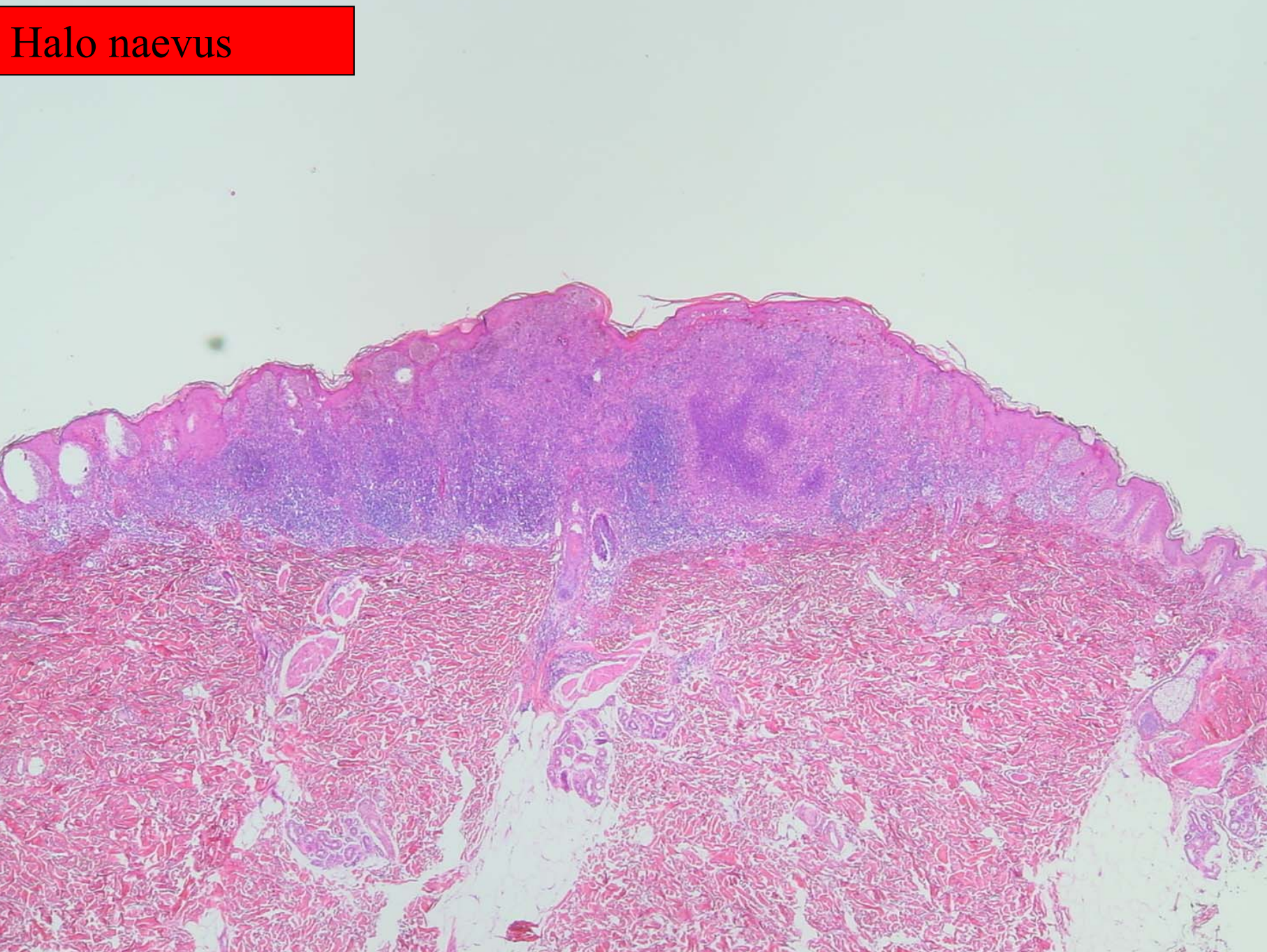


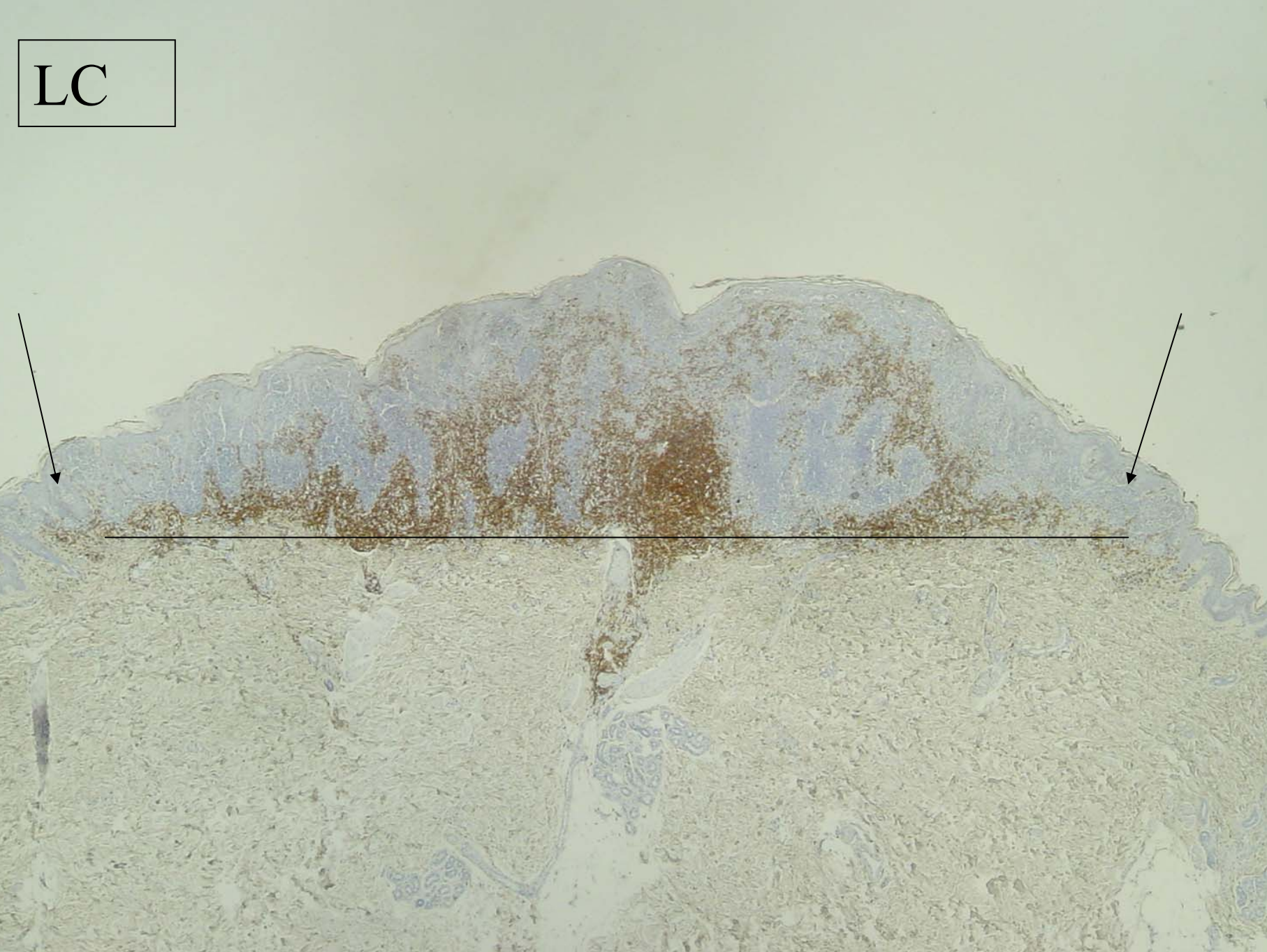
Halo naevus (Suton's naevus)

- Dens mononuclear infiltrate !
- = clinical diagnosis
- Sometimes atypia
- Usually compound
- Usually < 20 y old
- Symmetry / lat. margin

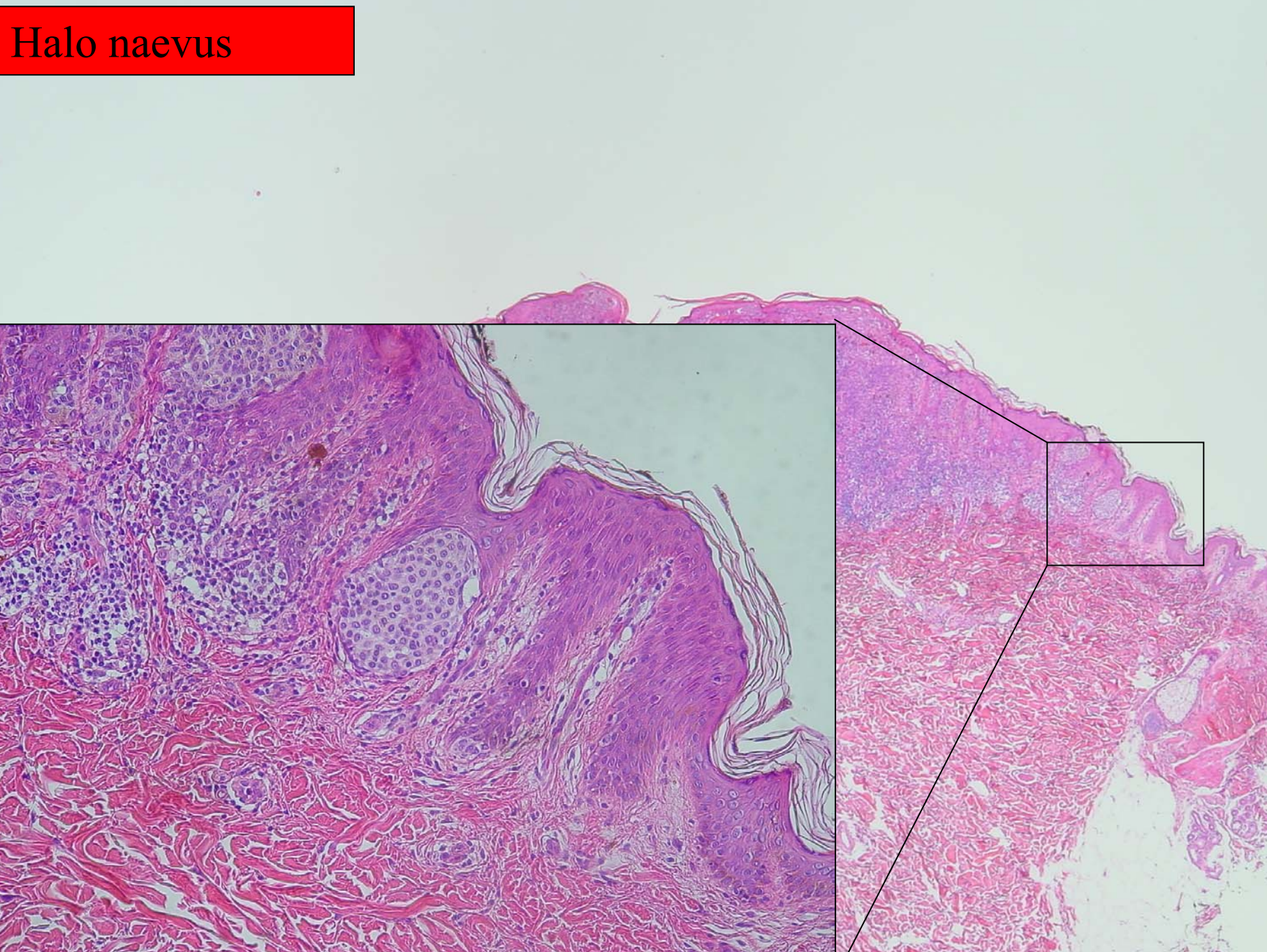


Halo naevus

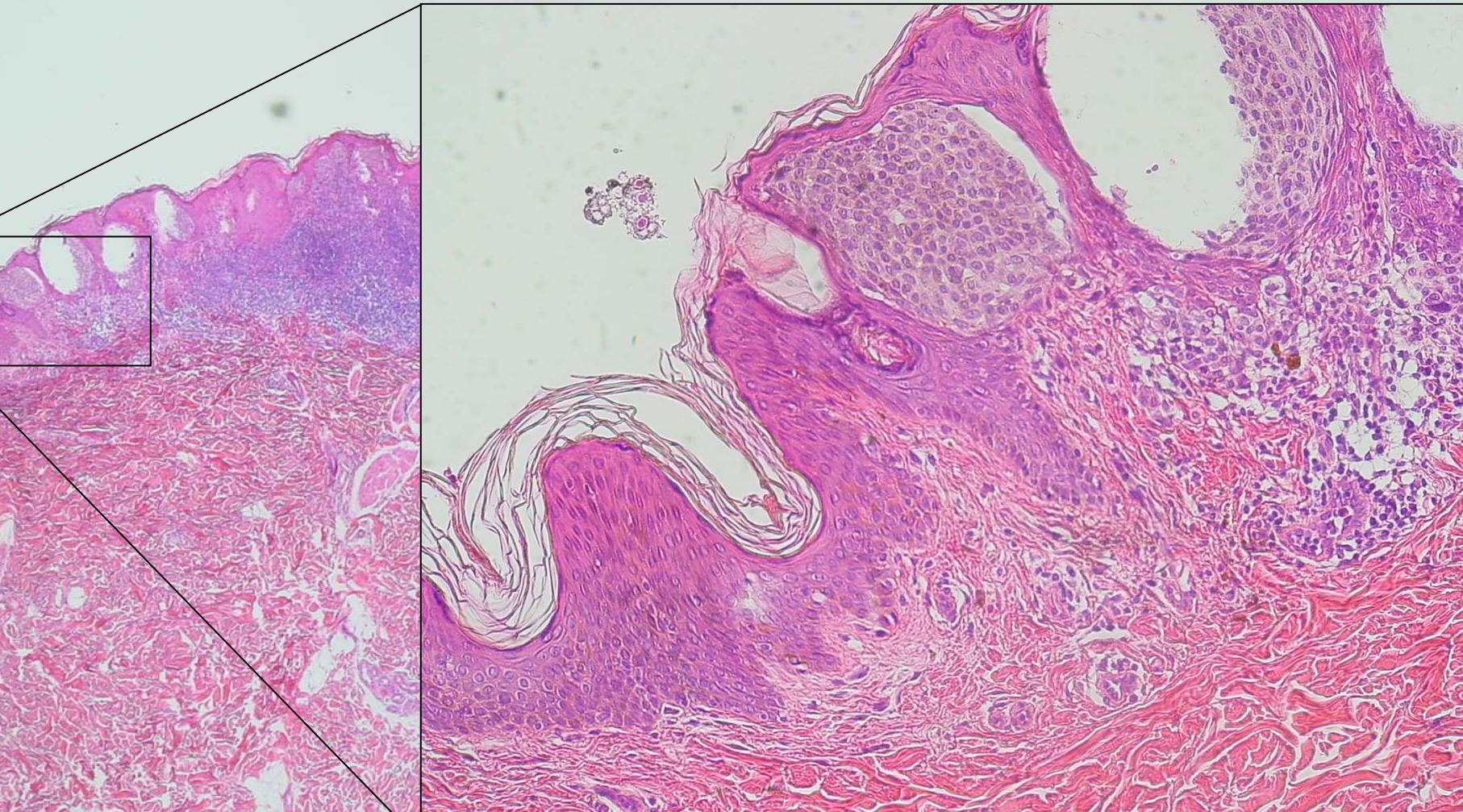



LC

Halo naevus

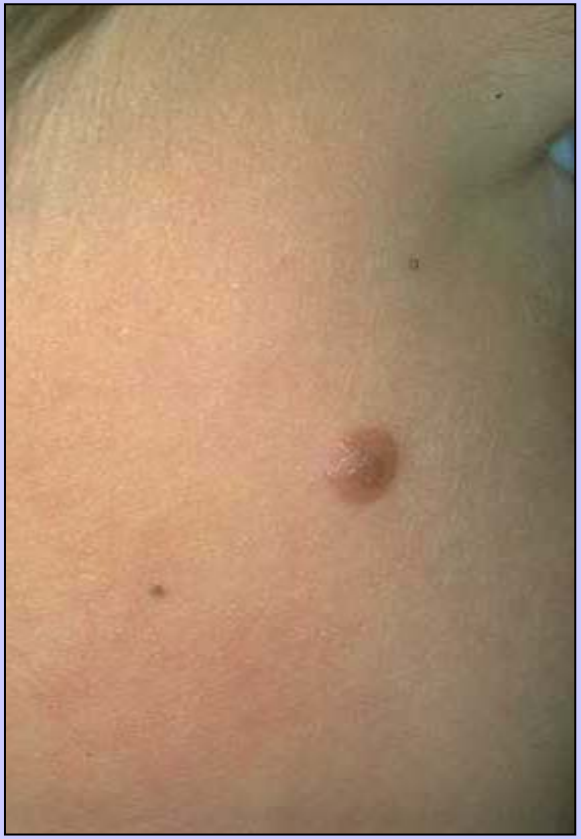


Halo naevus



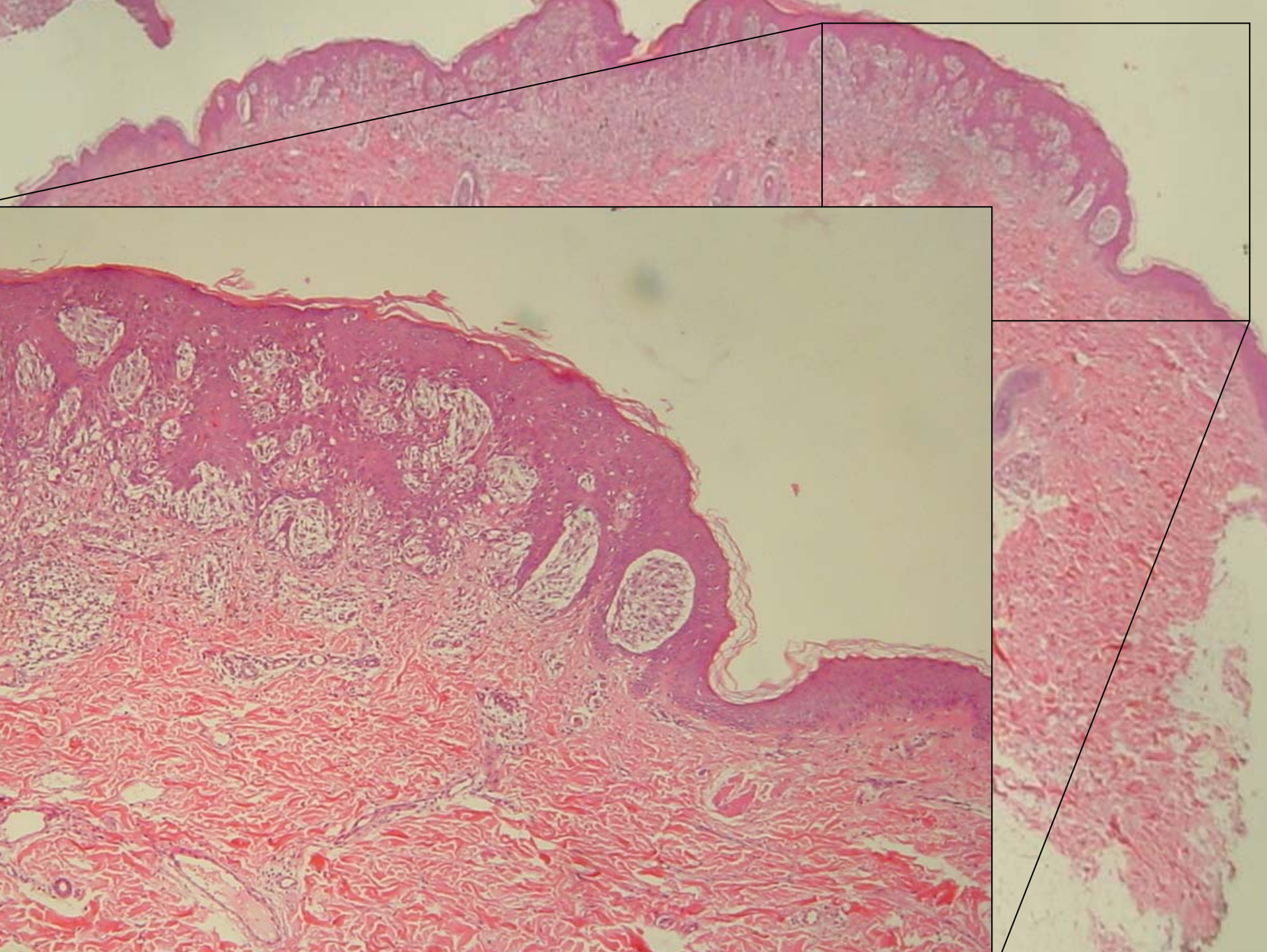
Spitz Naevus: classic

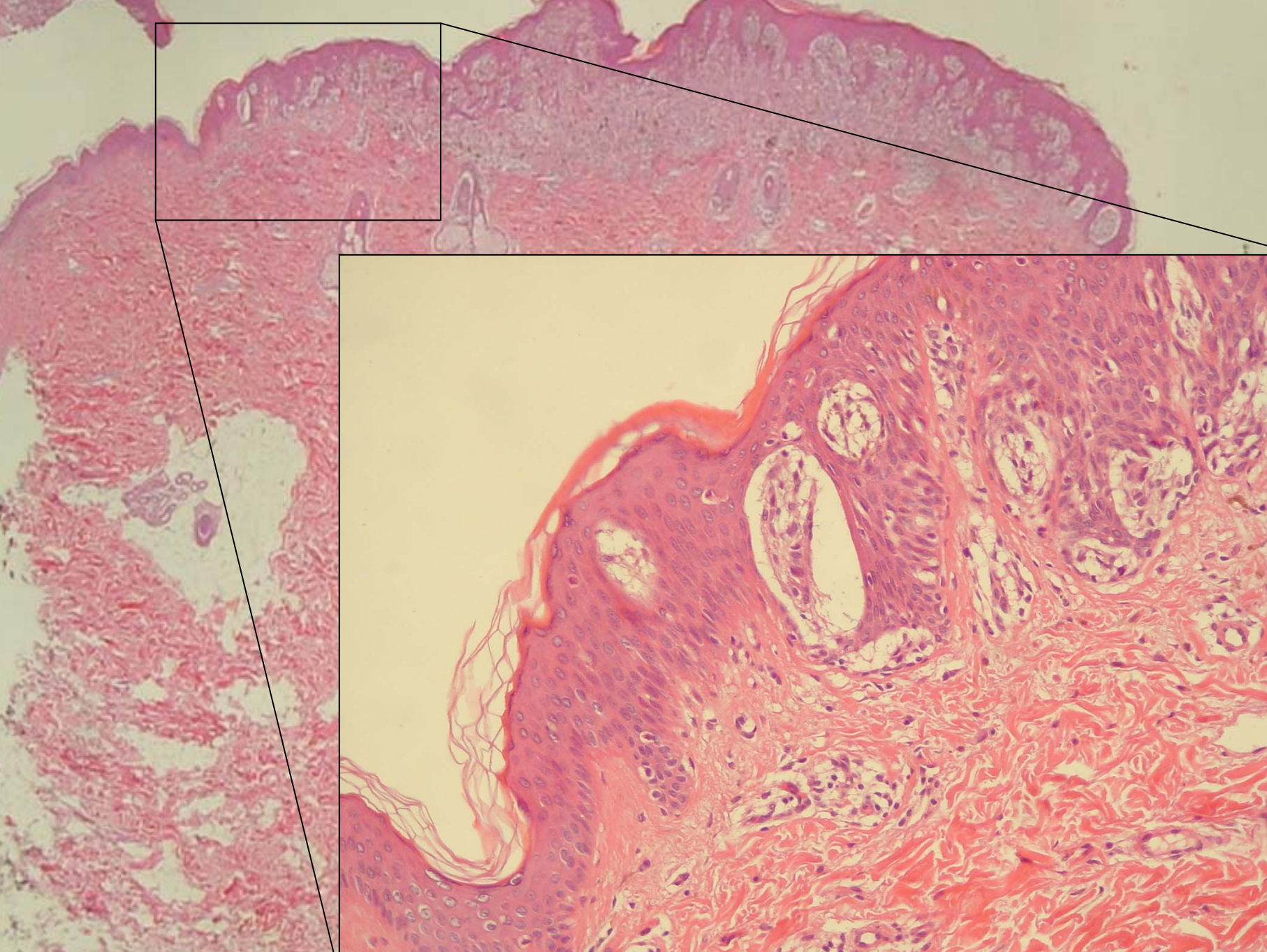
- Syn.: juvenile melanoma
- Childeren en adolesc.
- Usually solitary and <1cm
- Usually asymptomatic
- Growth in months, <1j
- Pink-red – meat red
- Usually lens-shaped
- Face and extremities

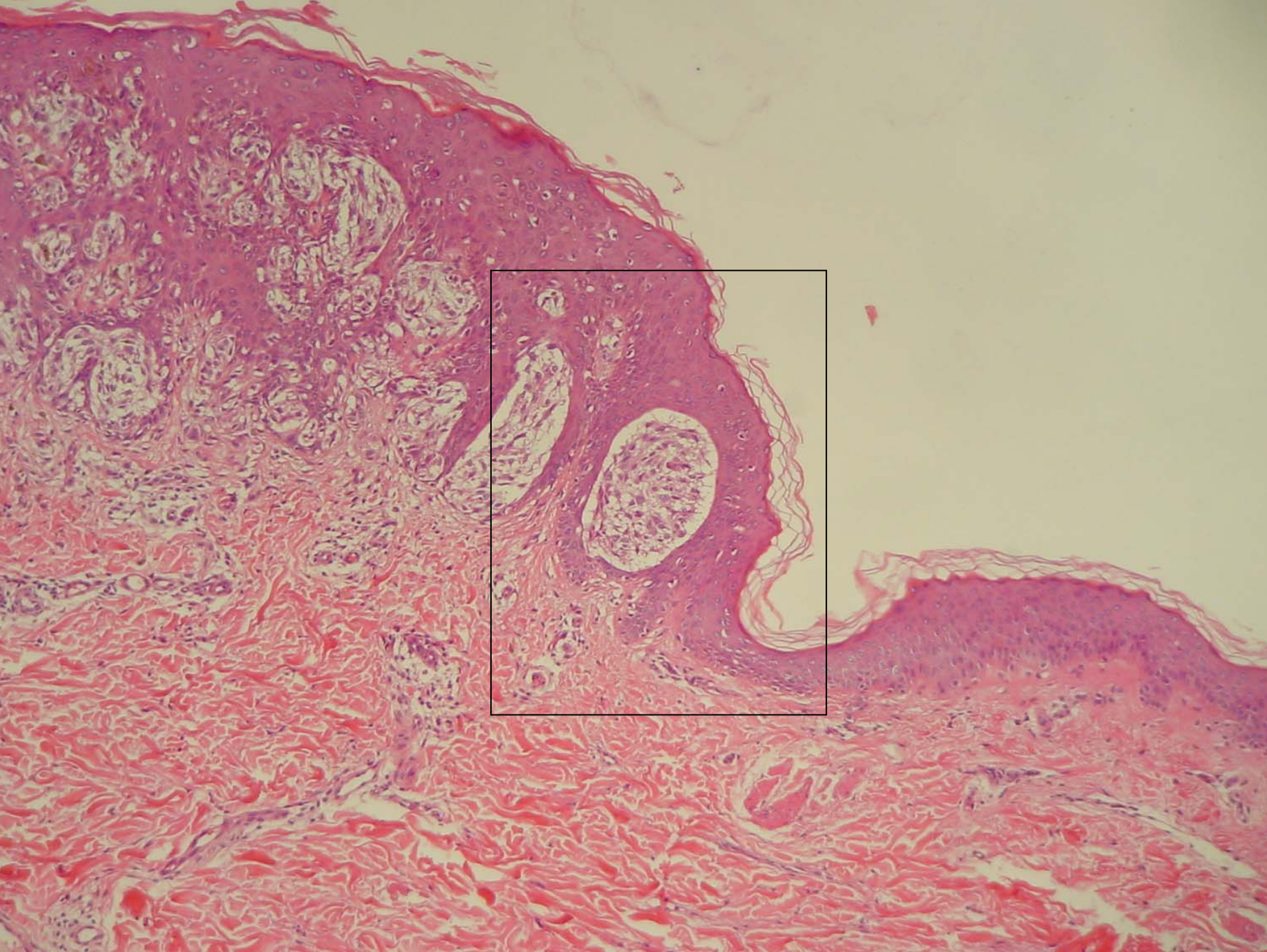


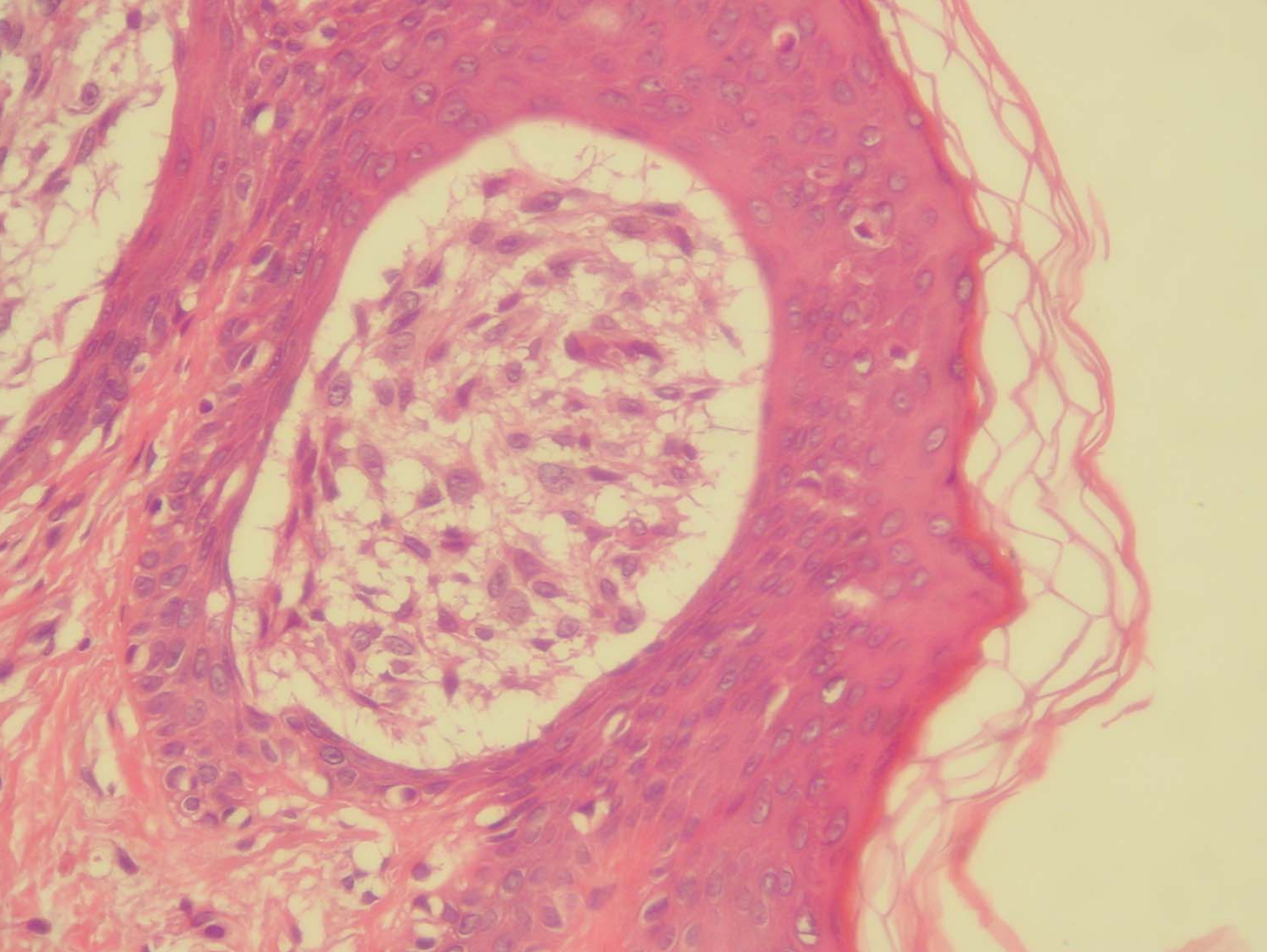
Spitz naevus

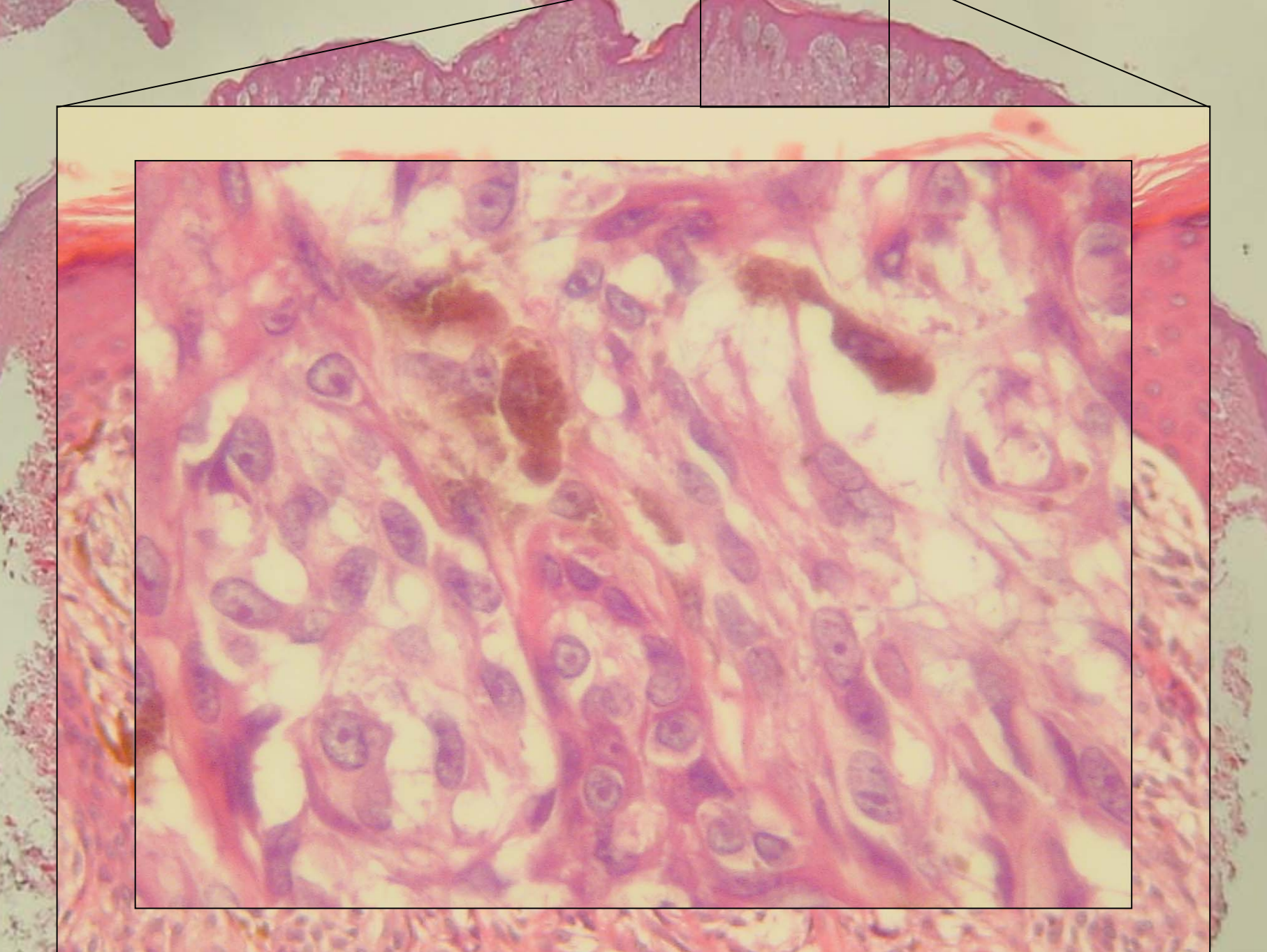
- Large **epitheloïd** en/or **spindle** cells evt + GC
- "**Cytological symmetry**"
- Large junctional nests, "catched" btw. ↓ ep. ridges usually with "**cleft *artefact***"
- "School fish / bananas", ↓ oriëntation
- "**Halo" around (red) macro-nucleolus**
- Kamino bodies, rare pagetoïd cells / elimination cn
- Symmetrical, sharply delineated lateral
- "**Single cell" maturation** in depth, nl. collagen
- Usually **few** inflammatory cells, no necrosis/ulceration
- Few mitosen possible, usually superficial, no atypical
- MIB-1: +/- 3% pos ↔ melanoma: 14-16% pos

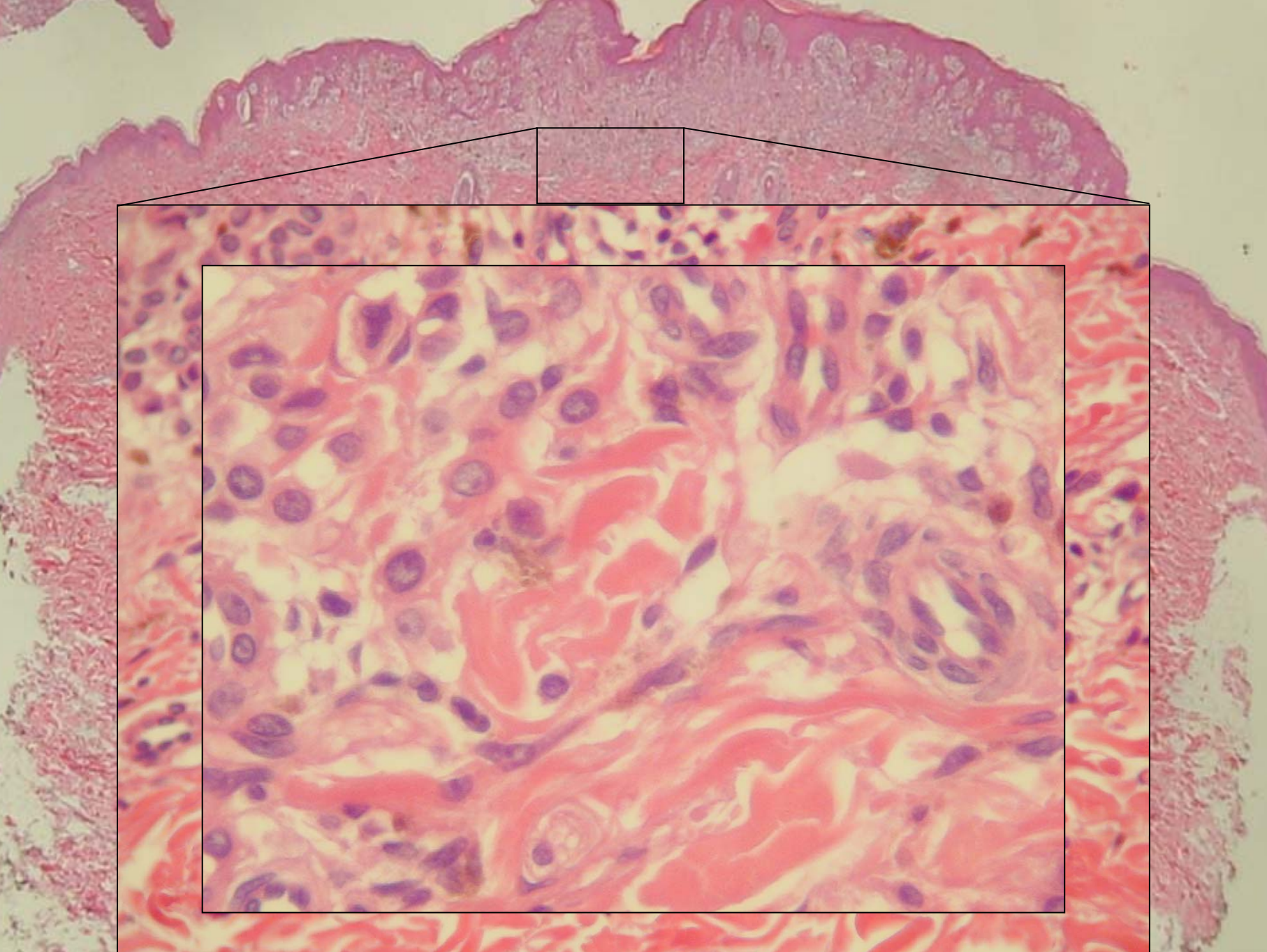


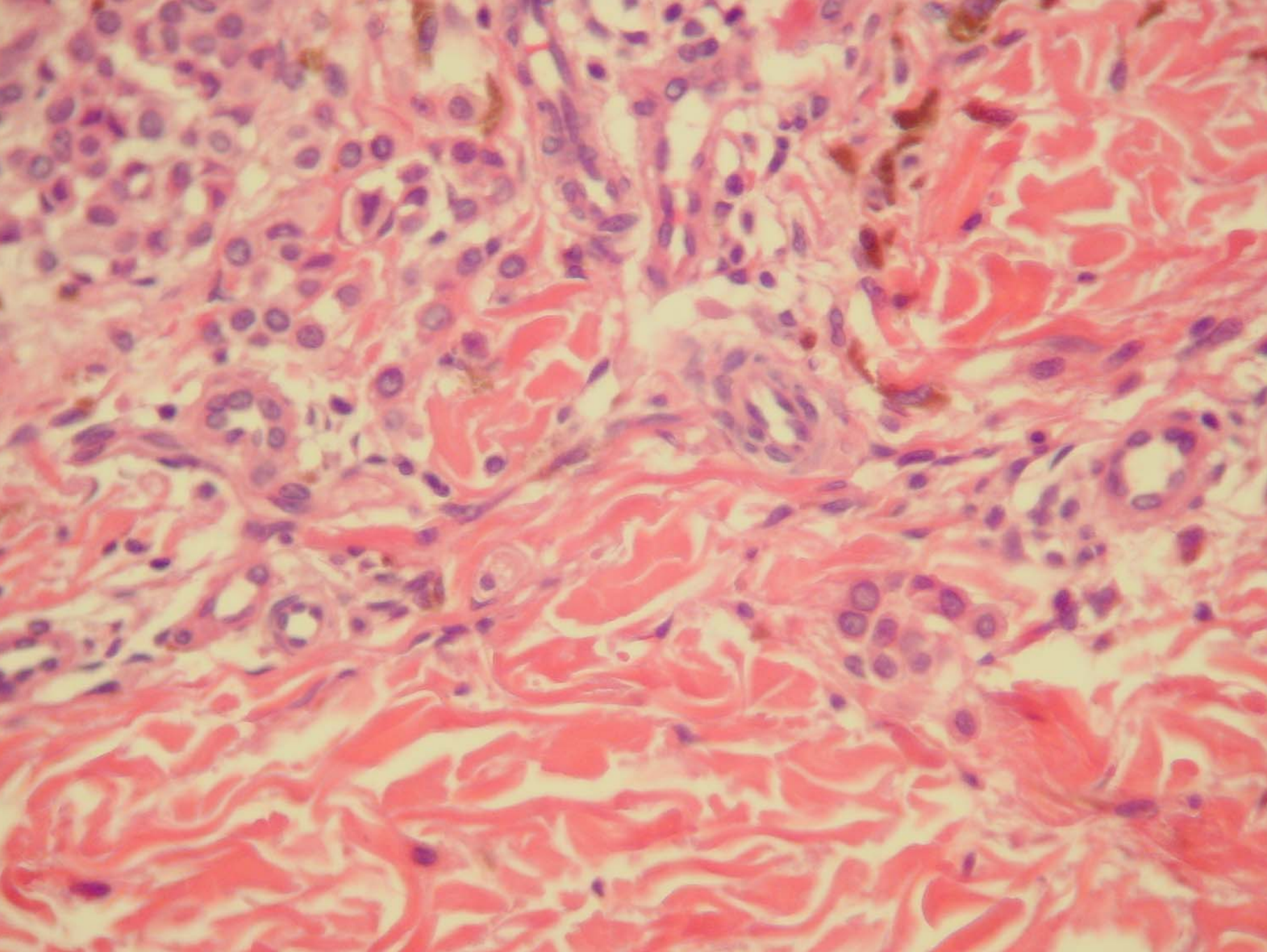


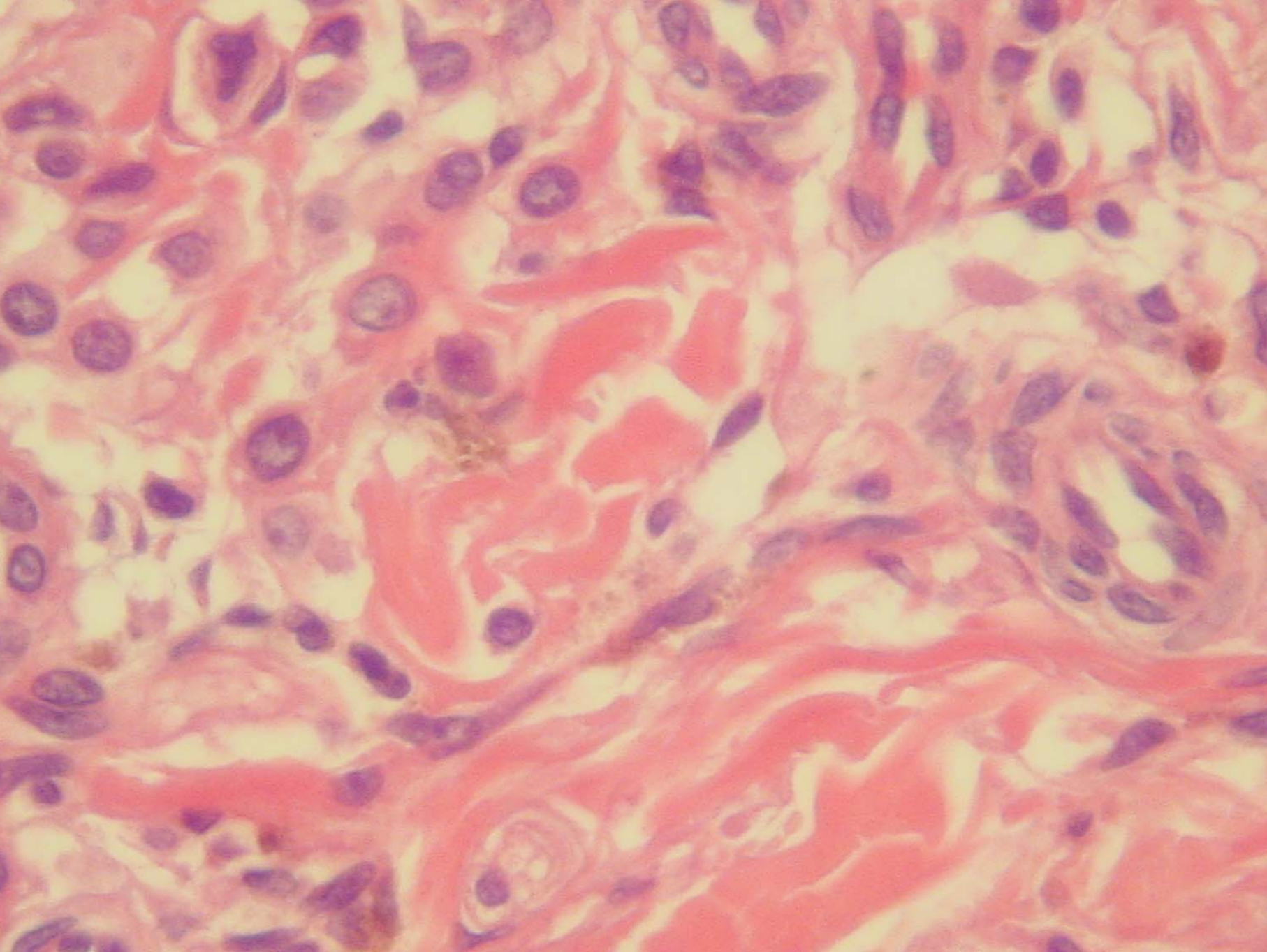






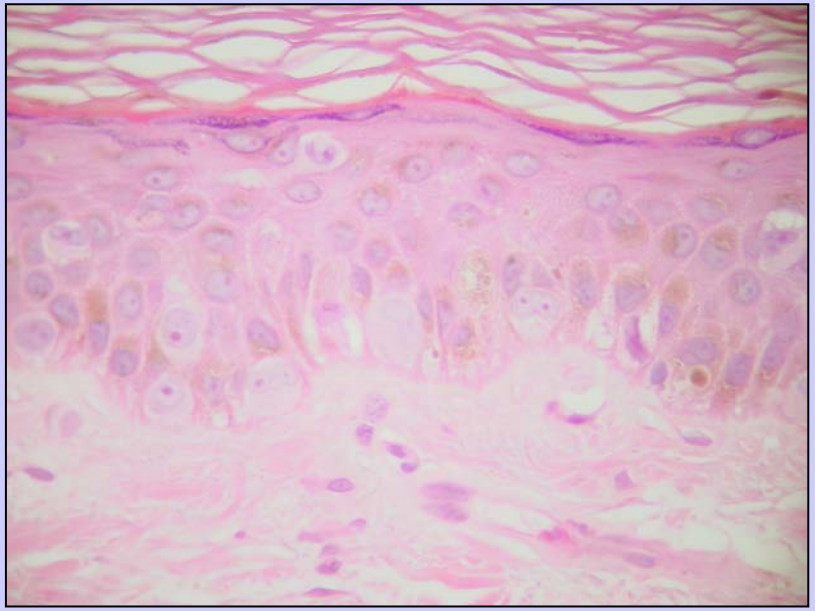




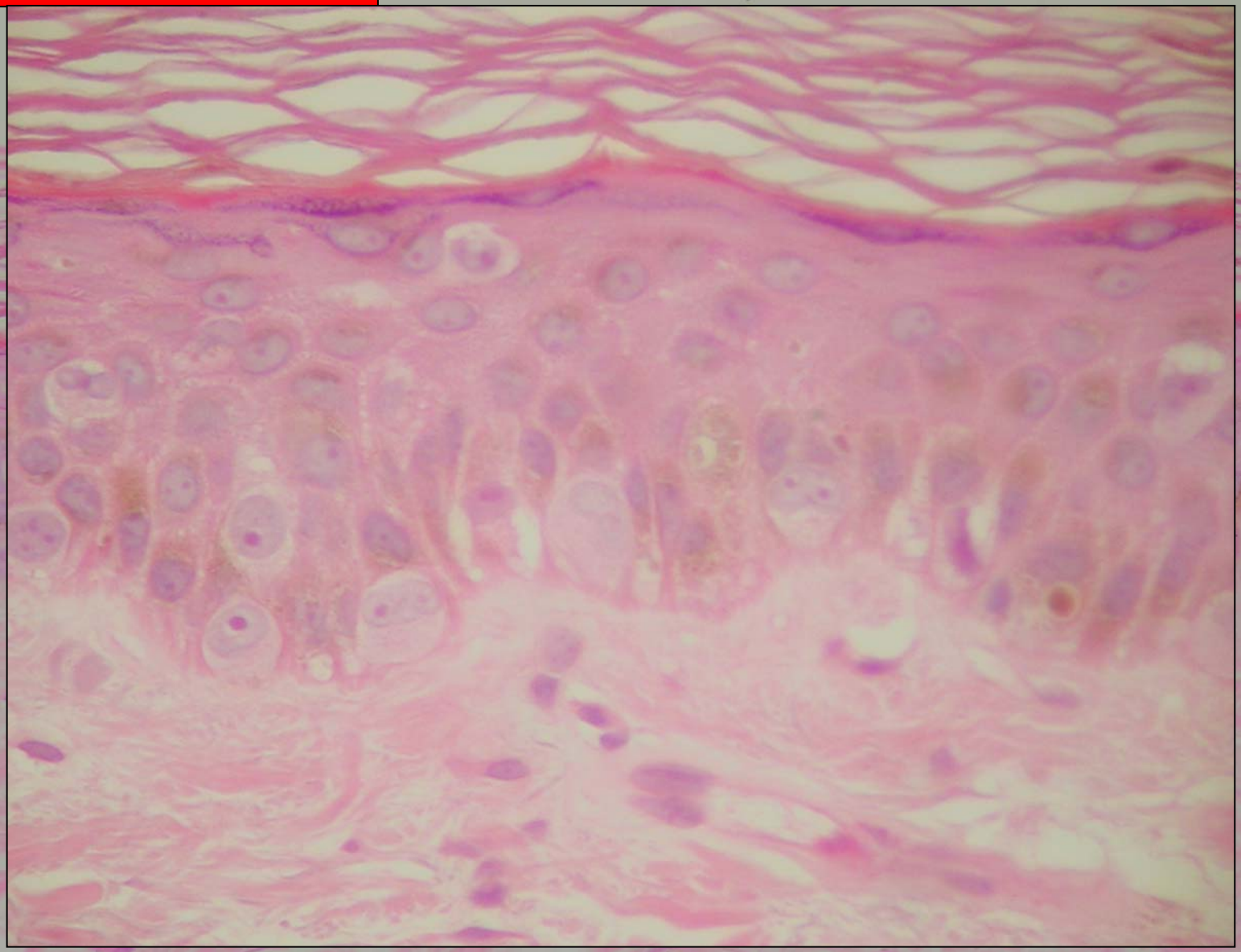


Spitz Naevus: pagetoïd

- Only epidermal component
- > F, legs
- < 5- 6 mm
- Basal en pagetoïd cells
- Usually epitheloïd cells

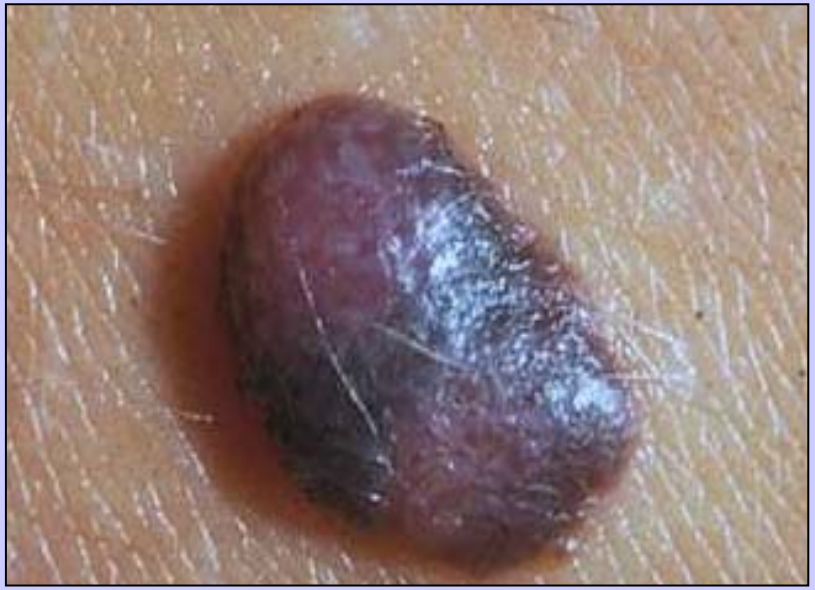


Spitz naevus: pagetoïd

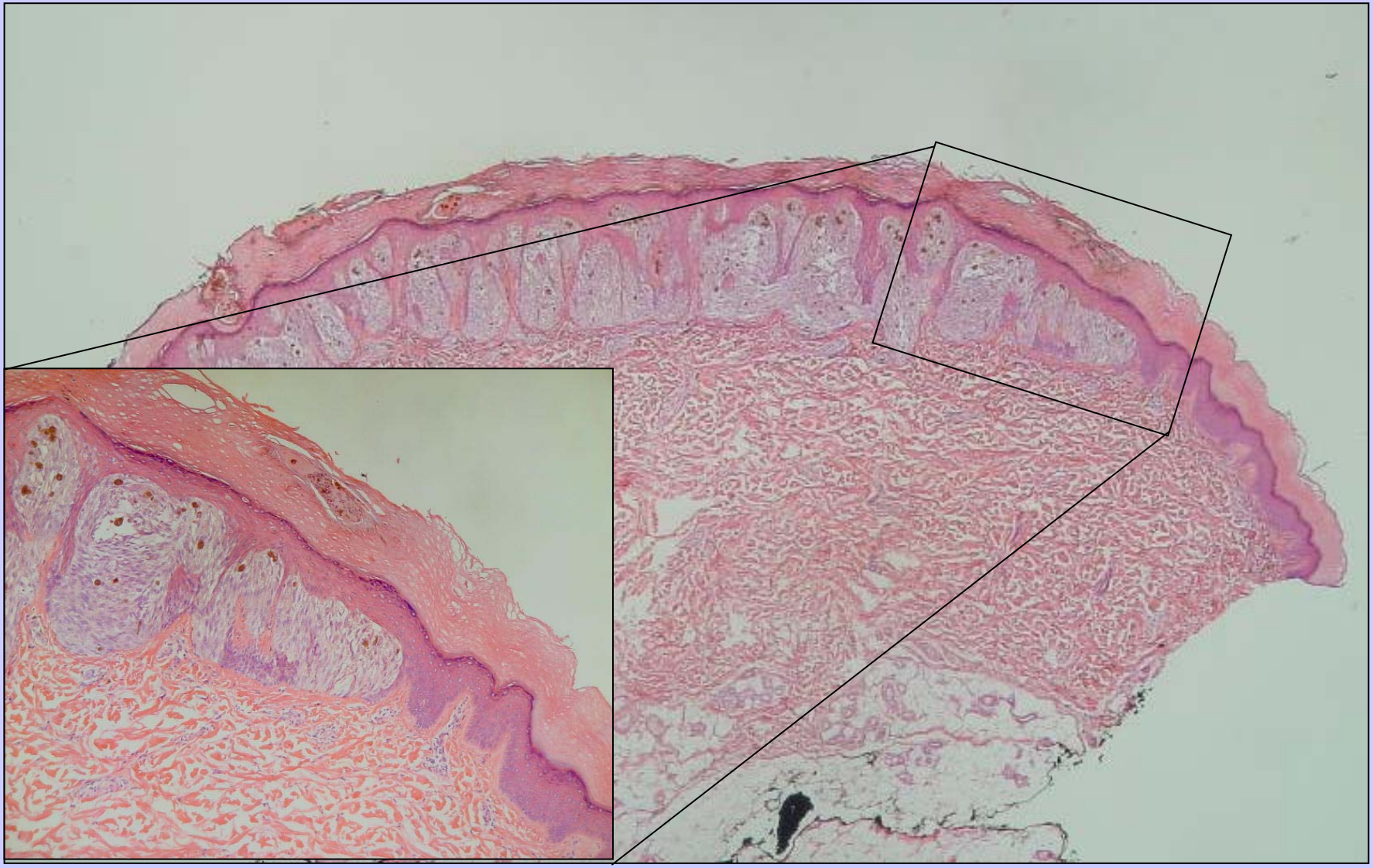


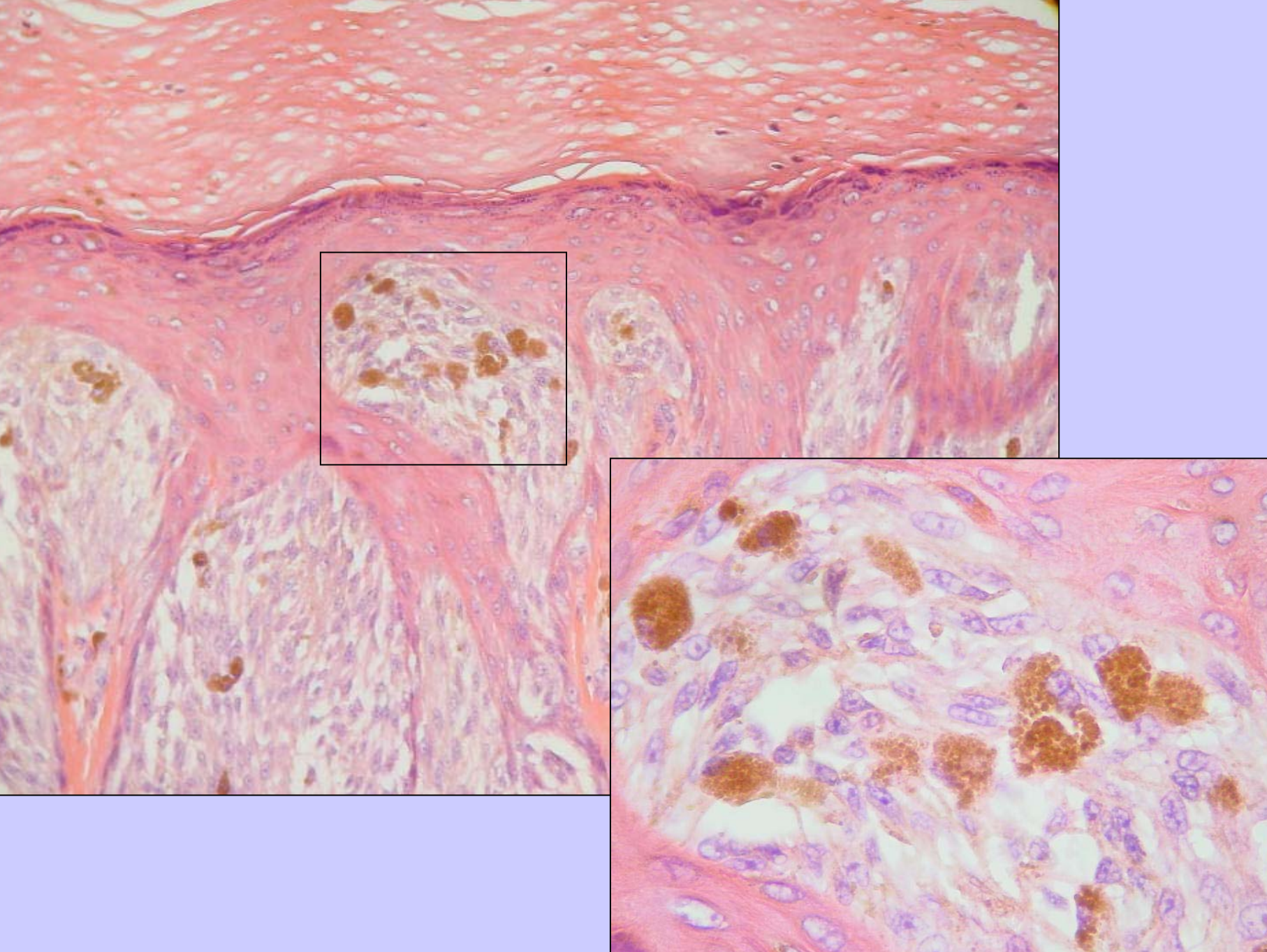
Reed Naevus

- Syn: **pigm**. spindle cell naevus of Reed
- Joung, F>M, < 6mm
- Usually rapid growth
- Pred. legs, esp. thigh
- Symmetrical
- Pigm. large superficial nests with spindle cells
- Transepidermal elimination

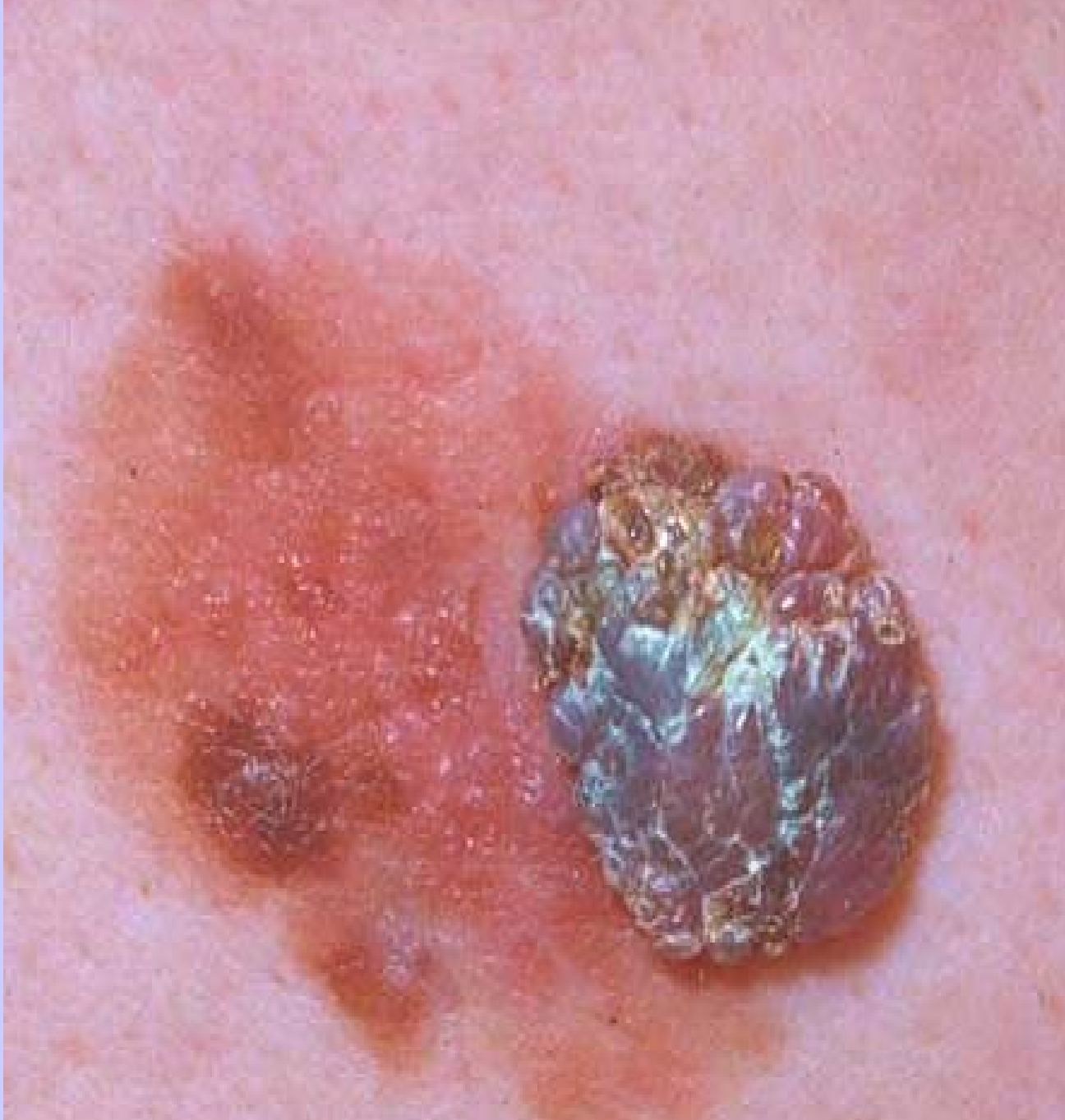


Reed Naevus





MELANOMA

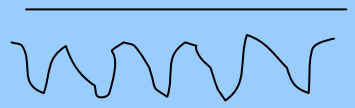


MELANOMA: GENERAL HALLMARCS

FIRST: important distinction:

Dysplastic naevi

ACANTHOSIS



- usually non sun exposed areas: no atrophy
- "younger" persons (30-40 y)
- Terminology: DN/ISM/SSM(rad/vert)

Lentigo Maligna

ATROPHY / ELASTOID DEG.

- atrophic sun exposed skin/face
- older people (+60-70 y)
- Terminology: Lent. Mal.(in situ) / LMM (invasive)

MELANOMA

Lentigo Maligna (in situ)

Lentigo Maligna Melanoma (invasive)

Superficial Spreading Melanoma

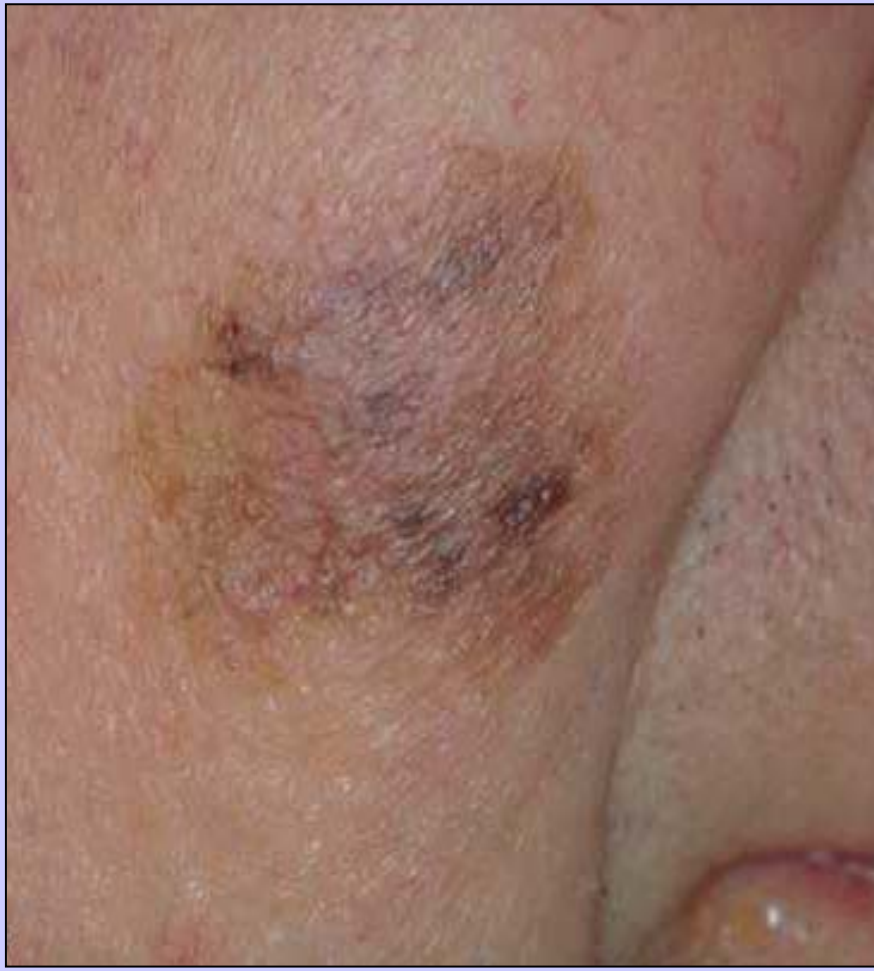
- In situ (SSM, clark I)
- invasive radial growthphase
- invasive vertical growthphase

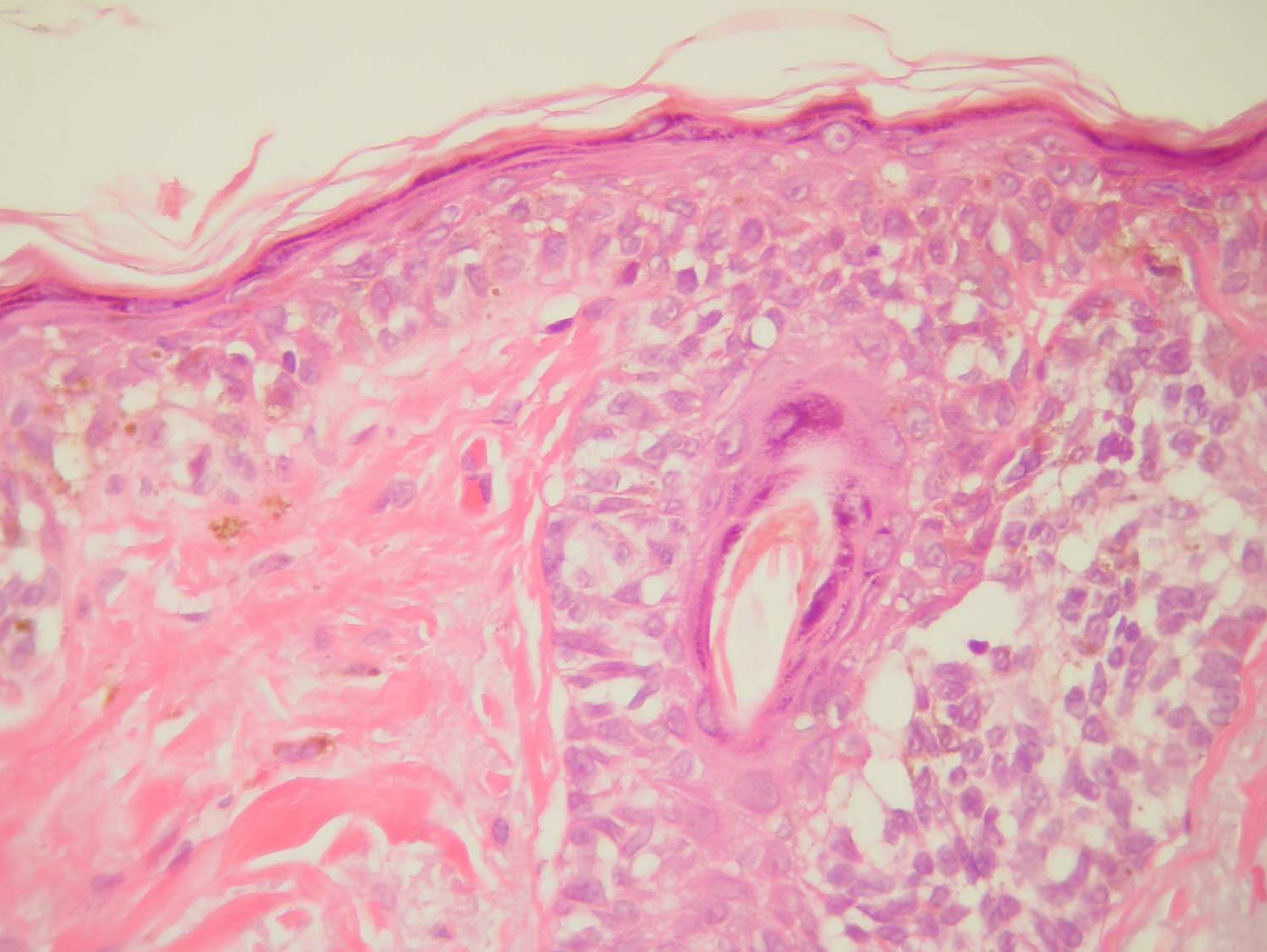
Other

- acral lentiginous
- nodular
- mucosal
- balloon cell M
- Rhabdoïd M
- naevoïd
- spitsoïd
- desmoplastic
- signet ring
- Small cell M

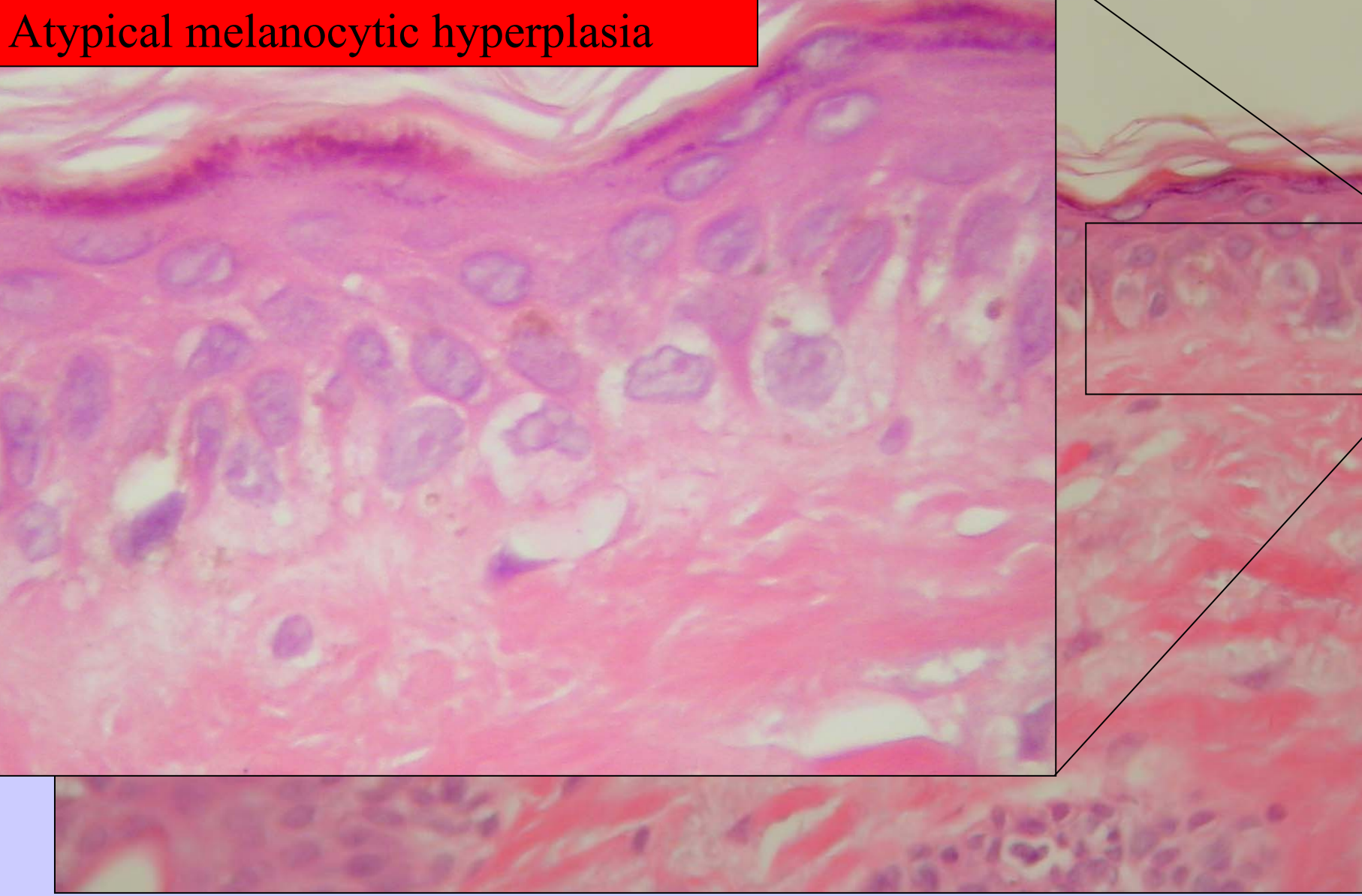
Lentigo Maligna

- Older persons (+60 - 70 y)
- Sunexposed skin
- Usually >1cm (slow growing)
- +/- always atrophic skin
- Elastoïd degeneration
- Lentiginous -variabel- but always atypical melanocytes
- infundibular “downgrowth”
- Always do levels





Atypical melanocytic hyperplasia



MELANOMA

Lentigo Maligna (in situ)

Lentigo Maligna Melanoma (invasive)

Superficial Spreading Melanoma

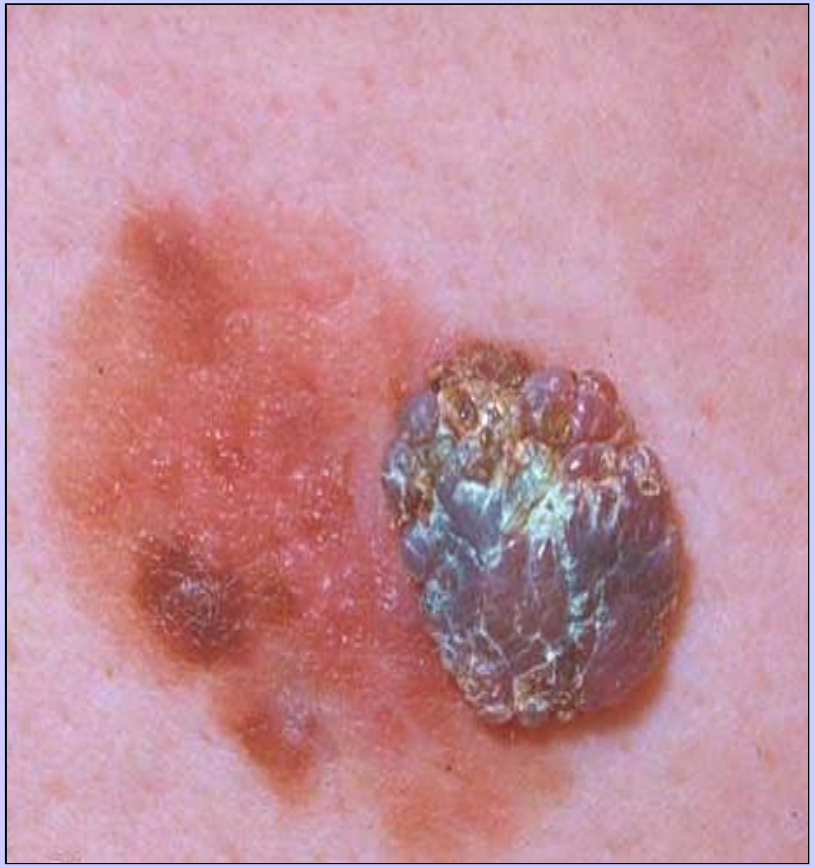
- In situ (SSM, clark I)
- invasive radial growthphase
- invasive vertical growthphase

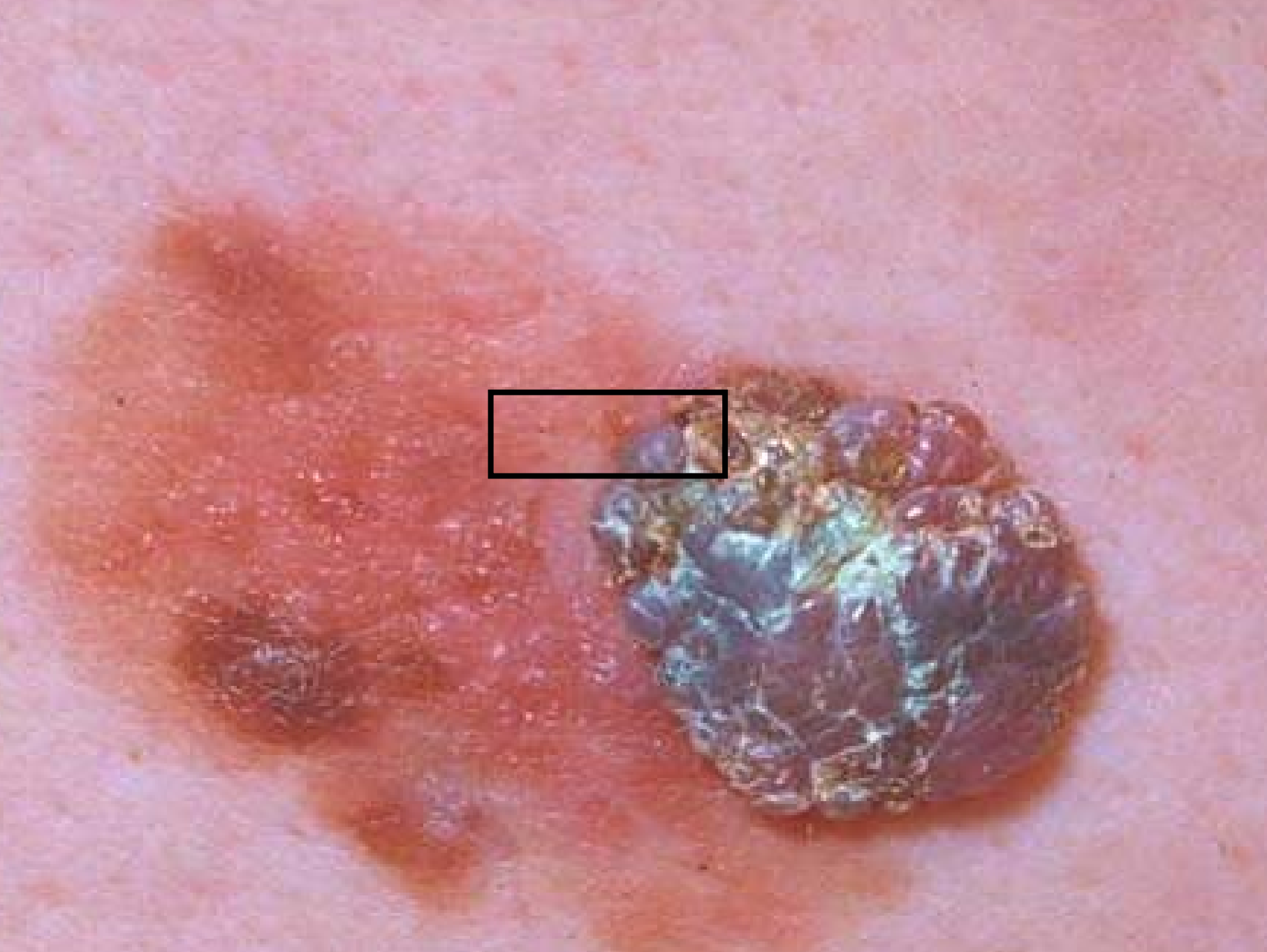
Other

- acral lentiginous
- nodular
- mucosal
- balloon cell M
- Rhabdoïd M
- naevoïd
- spitsoïd
- desmoplastic
- signet ring
- Small cell M

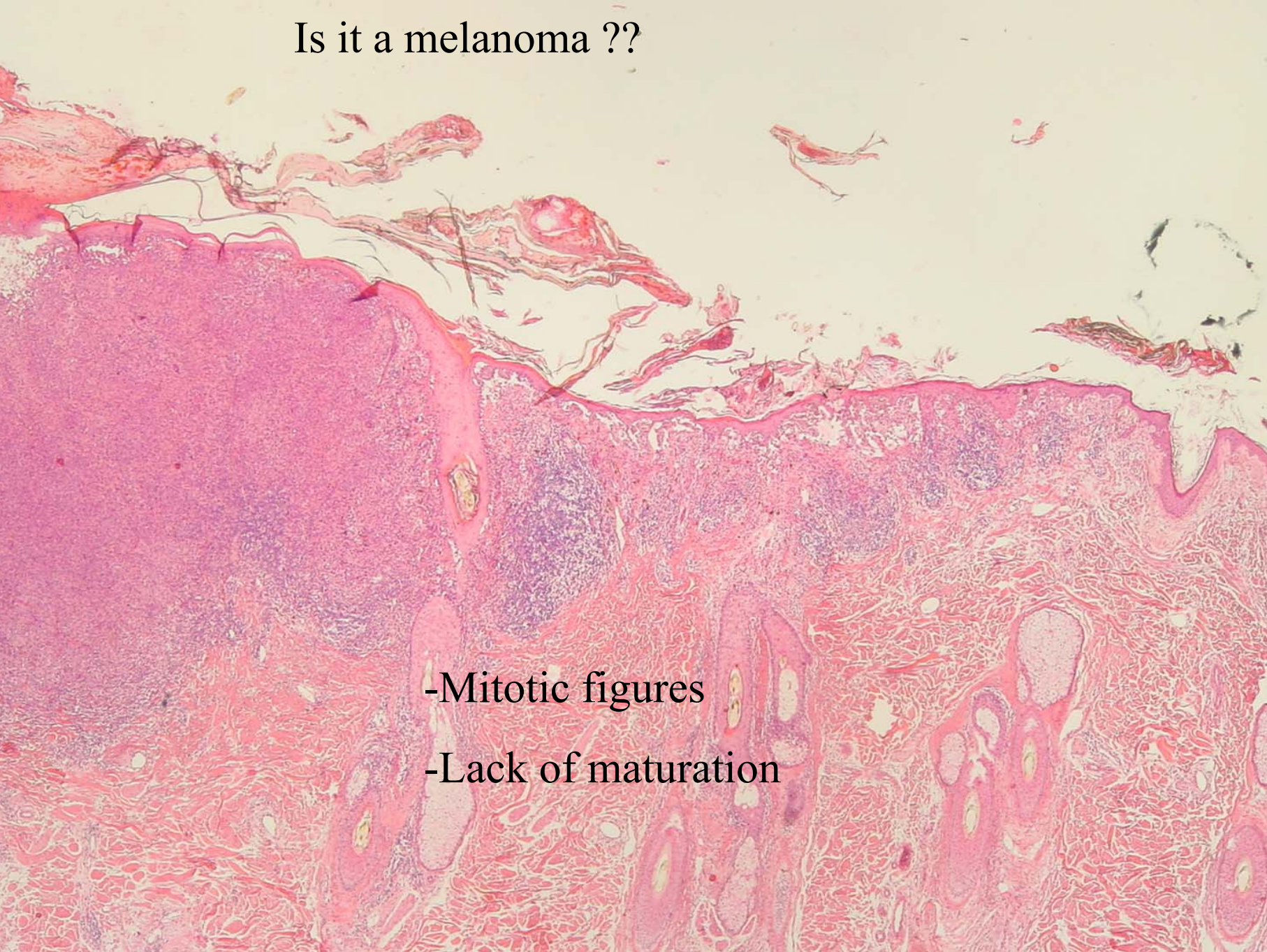
Superficial Spreading Melanoma

- M: most √on back
- F: most √ on legs
- Pagetoïd spread of individual cells / cellnests
- ABCDE rule



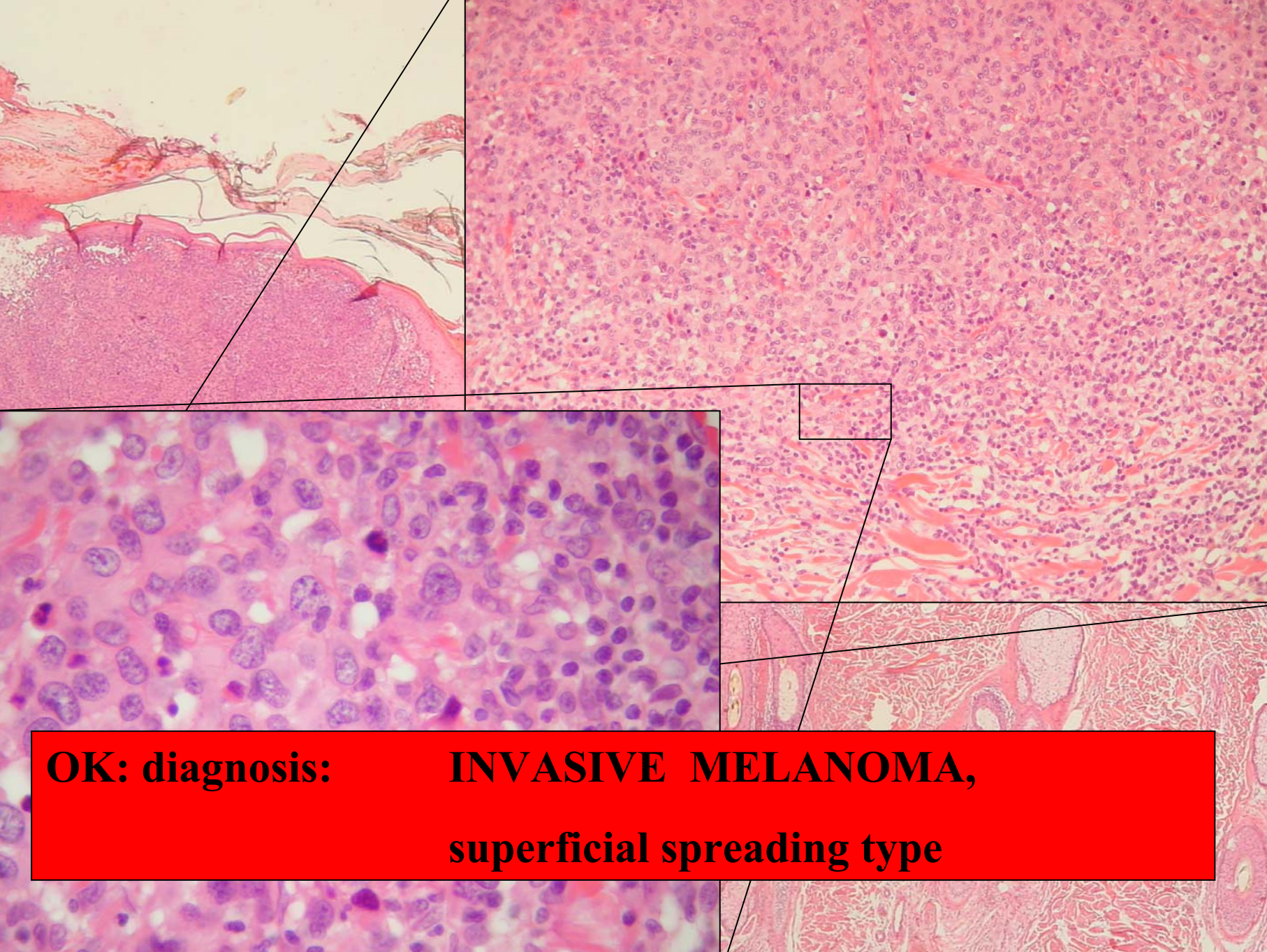


Is it a melanoma ??



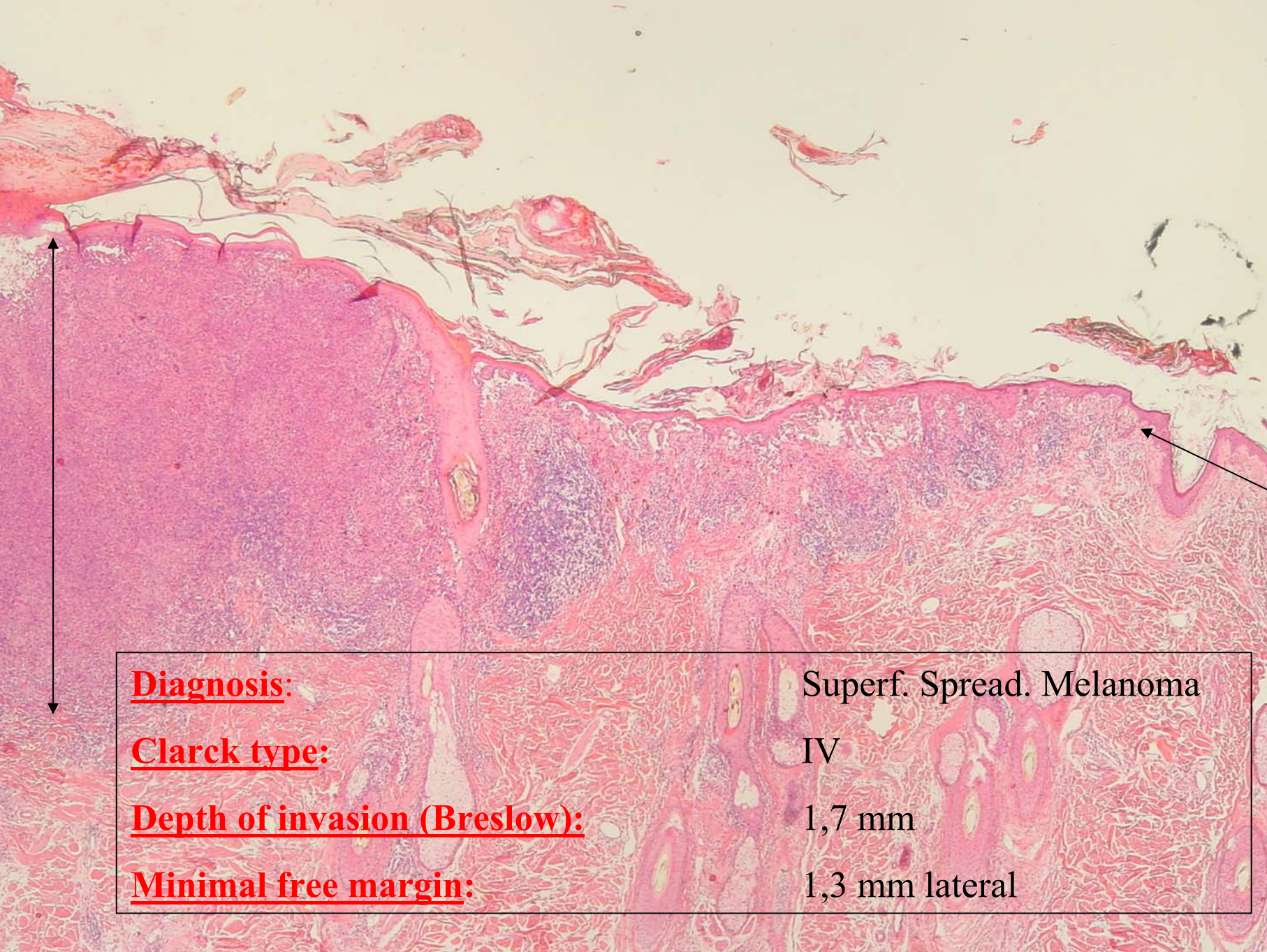
-Mitotic figures

-Lack of maturation



OK: diagnosis: INVASIVE MELANOMA,

superficial spreading type



Diagnosis:	Superf. Spread. Melanoma
Clarck type:	IV
Depth of invasion (Breslow):	1,7 mm
Minimal free margin:	1,3 mm lateral

In General :			5 y survival
Clarck:	**I**:	= in situ	100%
(1967)	**II**:	invasion papillary dermis	98%
	III:	filling up of papillary dermis	83%
	IV:	invasion reticular dermis	76%
	V:	invasion subcutaneous fat	<15%

ABOUT TERMINOLOGY:

Invasive Melanoma:

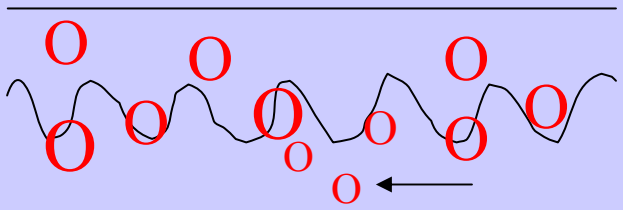
- invasive radial growth phase
- invasive vertical growth phase

SUPERFICIAL SPREADING *(MALIGNANT)* MELANOMA

- SUPERFICIAL SPREADING MELANOMA IN SITU (**Clark I**)
- INVASIVE SUPERFICIAL SPREADING MELANOMA

invasive radial growthphase

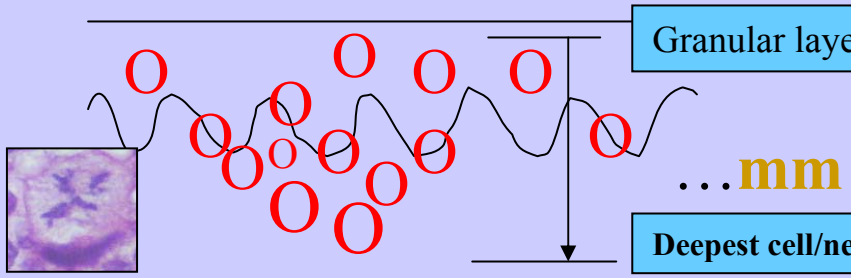
Always Clarck II



→ do levels !!

Good prognosis

invasive vertical growth phase



Prognosis depends on depth of invasion

(Breslow) + prognostic F

Diameter largest nest at the junction > de… inv. Rad Gph

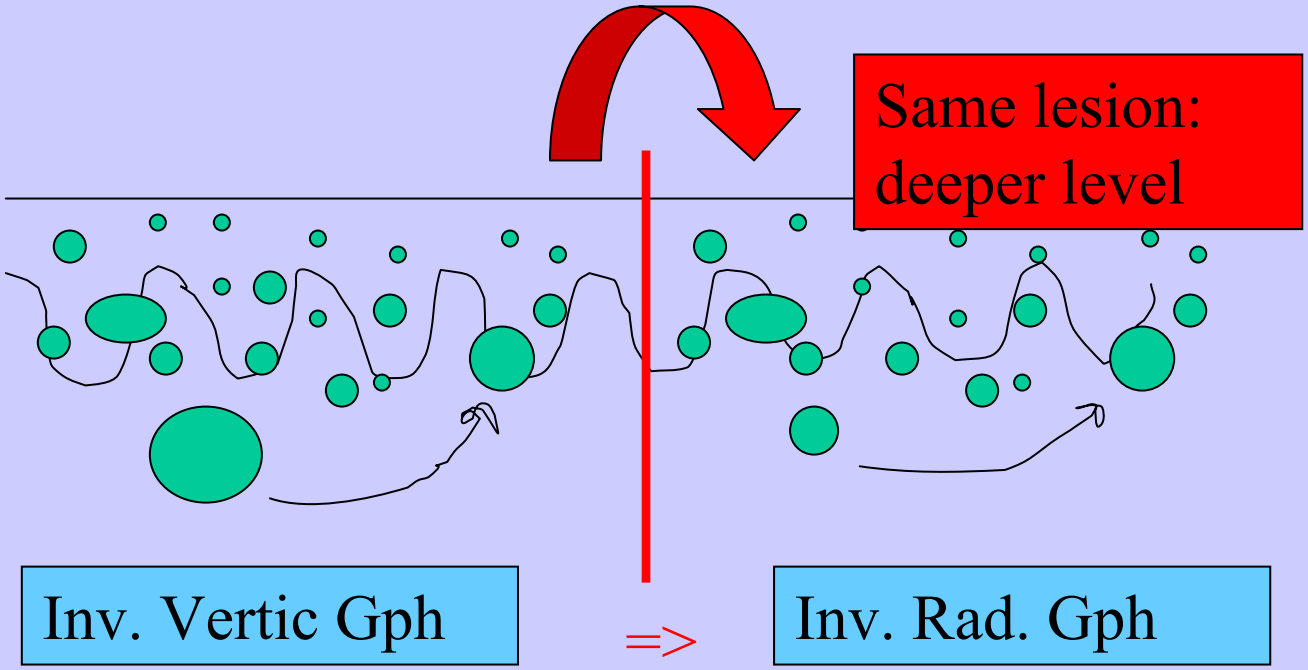
Diameter largest nest at … => inv. Vert GF

…e dermal component => inv. Vert GF

FORGET IT !!

DD/ - invasive radial growth phase

- invasive vertical growth phase



PROGNOSTIC FACTORS

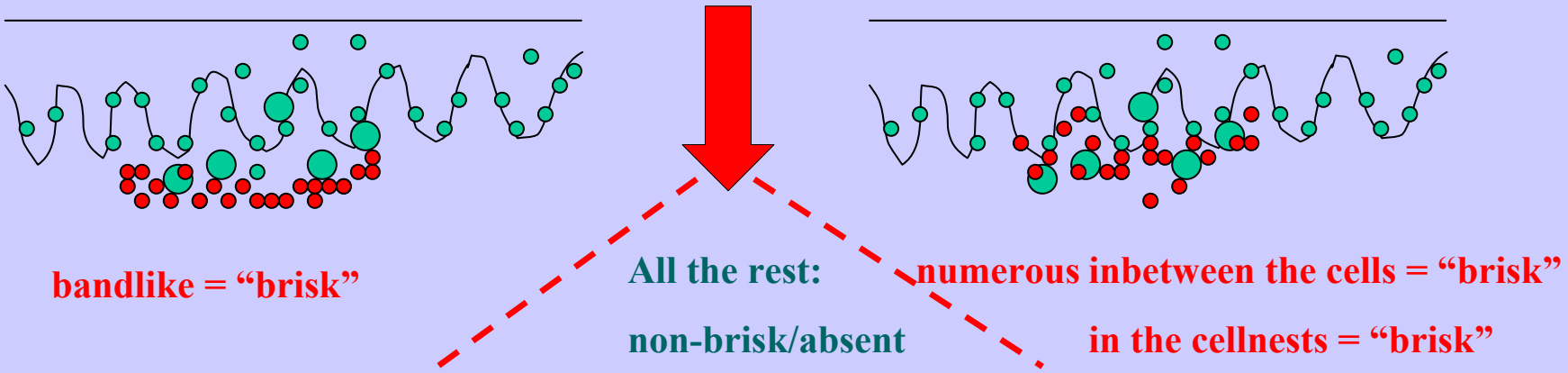
Prognostic factors:

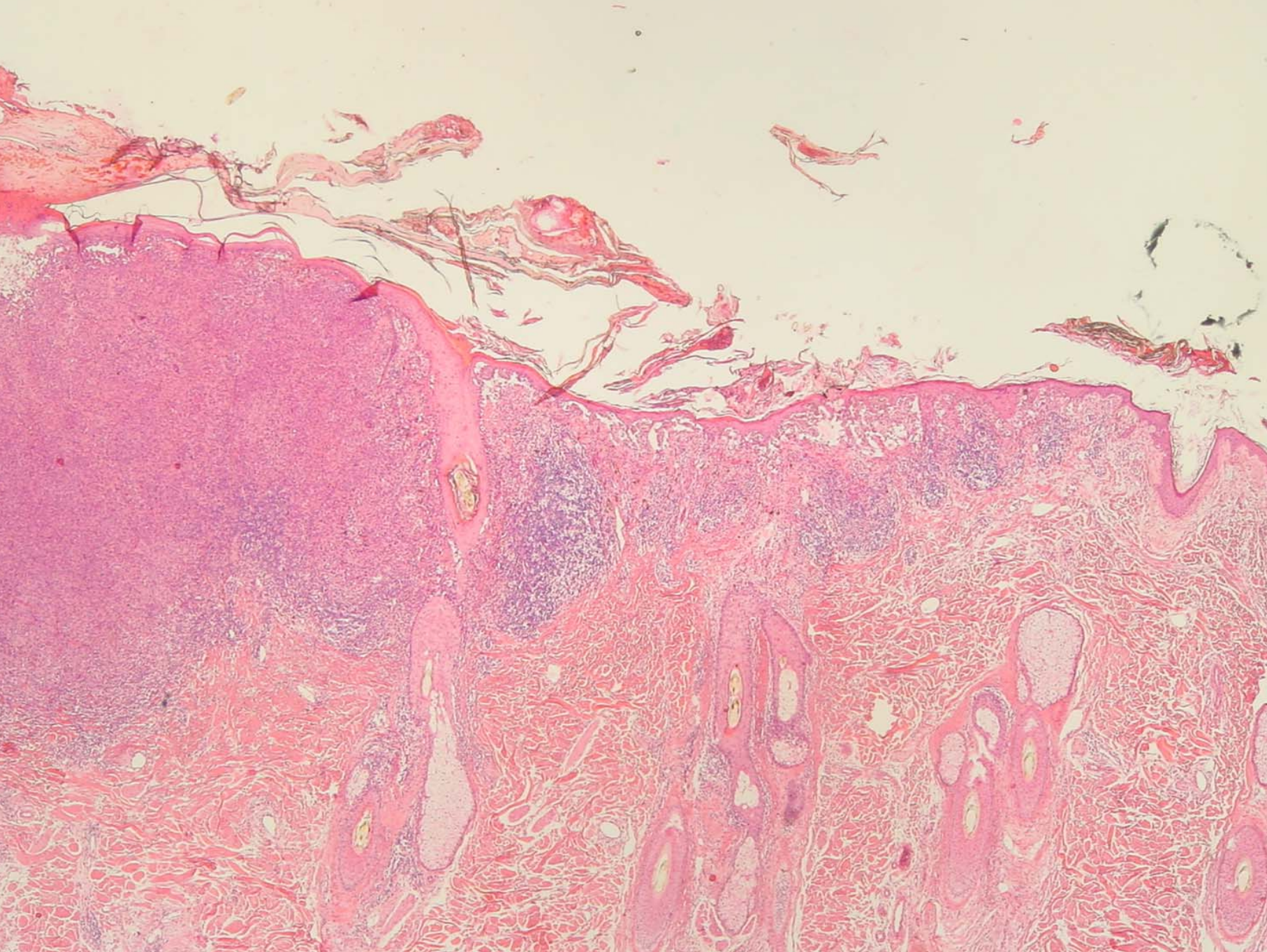
- **ulceration**:	present/not present
- **# mitoses**:	…./mm² (= 6 HPF)
- **celtype**:	spindle / epitheloïd / mixed
- **TIL**	brisk / non brisk / absent
- **Regression**:	present / not present
- **Vascular invasion**:	present / not present
- **Perineural invasion**:	present / not present
- **Sattelite nodules**:	present / not present

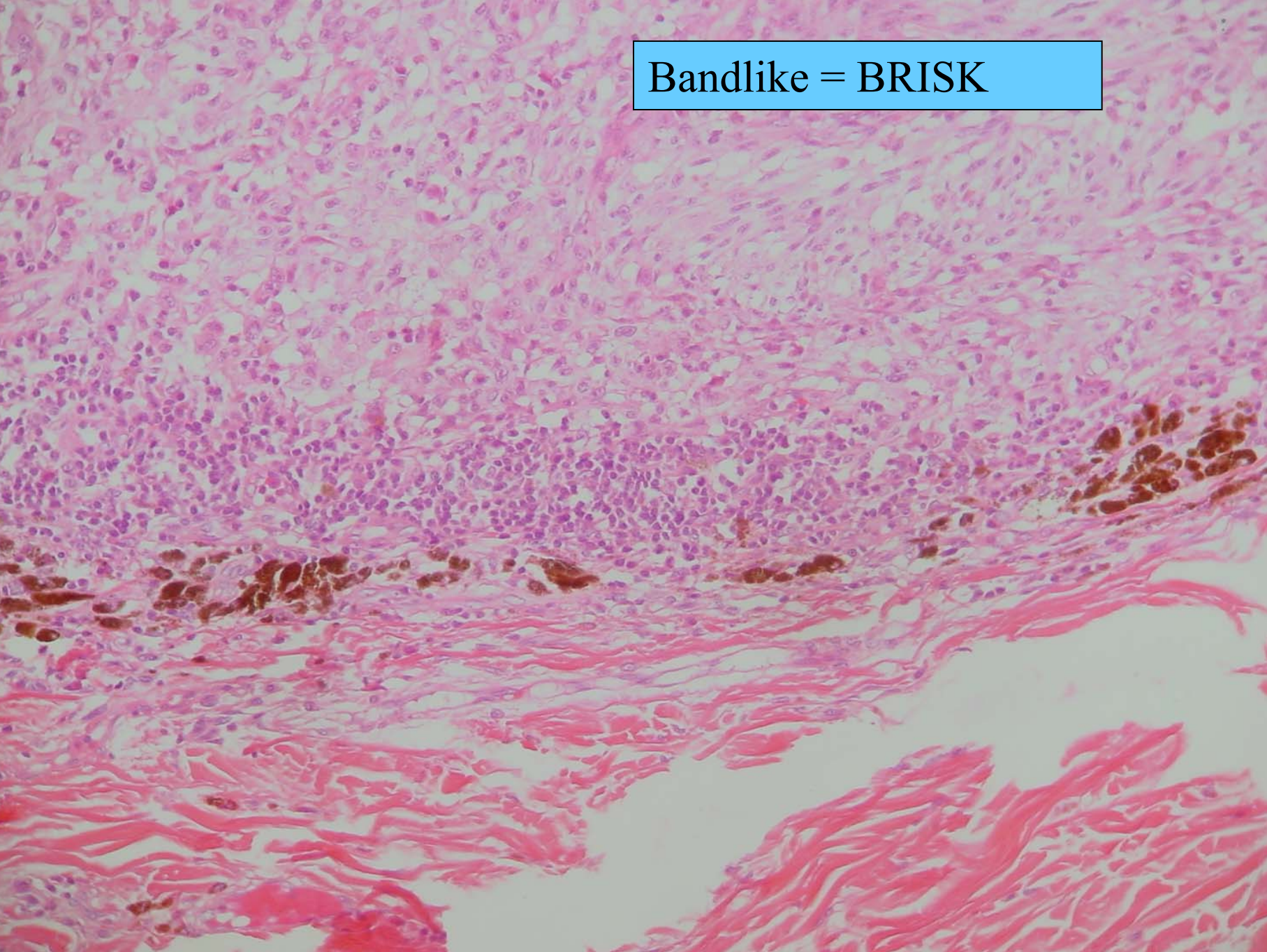
TIL: TUMOR INFILTRATING LYMPHOCYTES

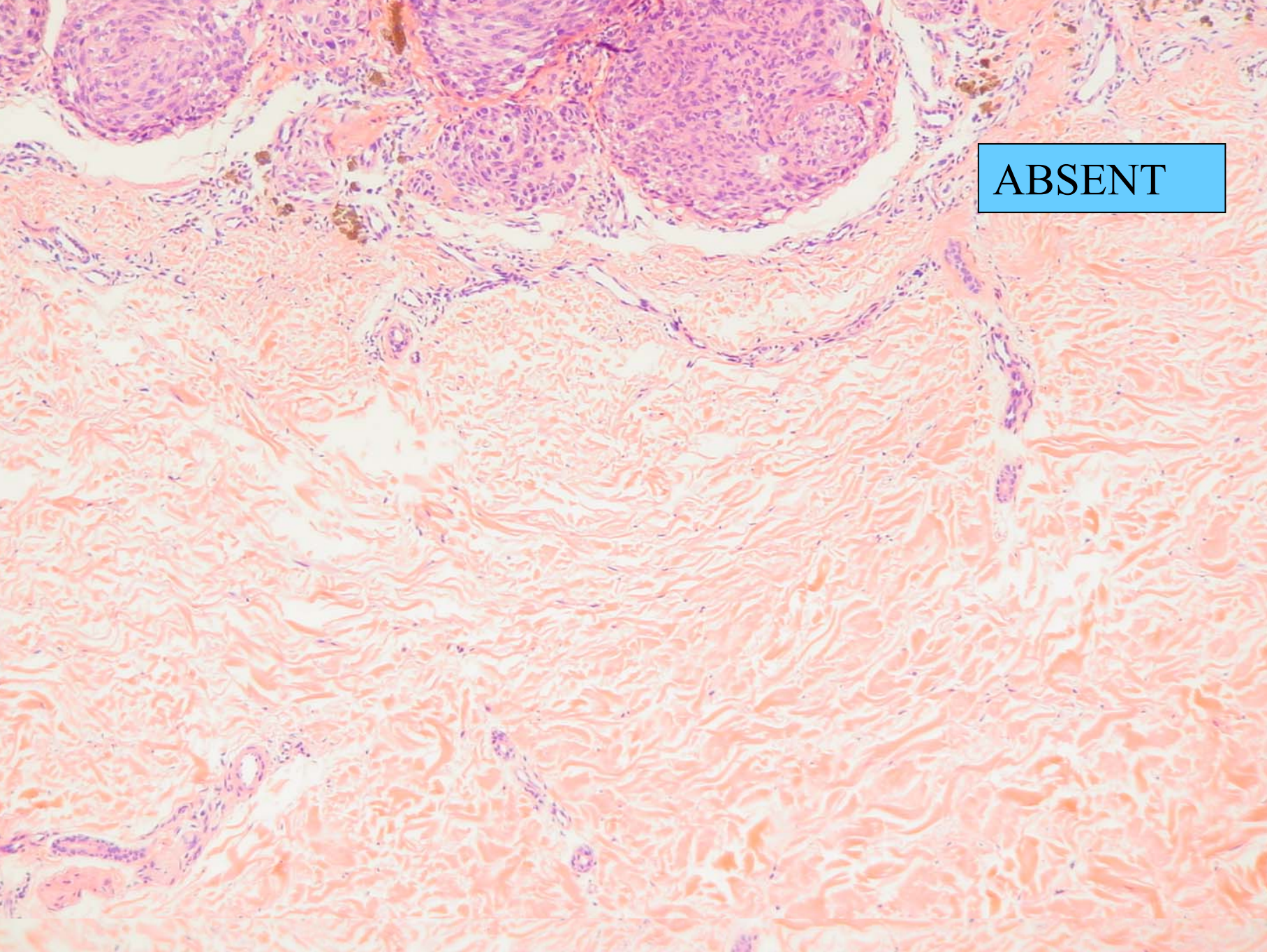
TIL (+): brisk / non-brisk / absent

! Is there "**contact**" btw. host and melanoma?






Bandlike = BRISK

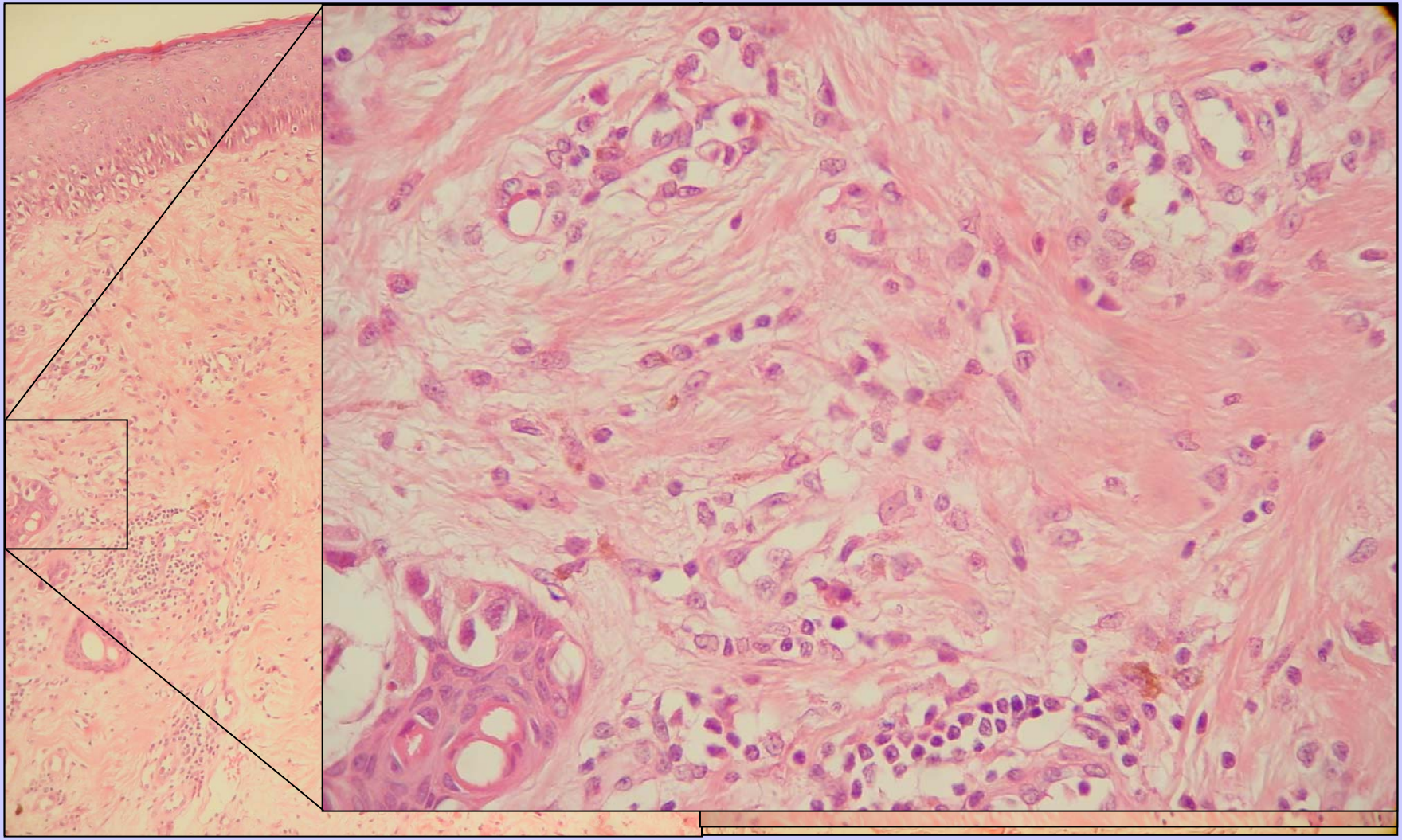

ABSENT

PROGNOSTIC FACTORS

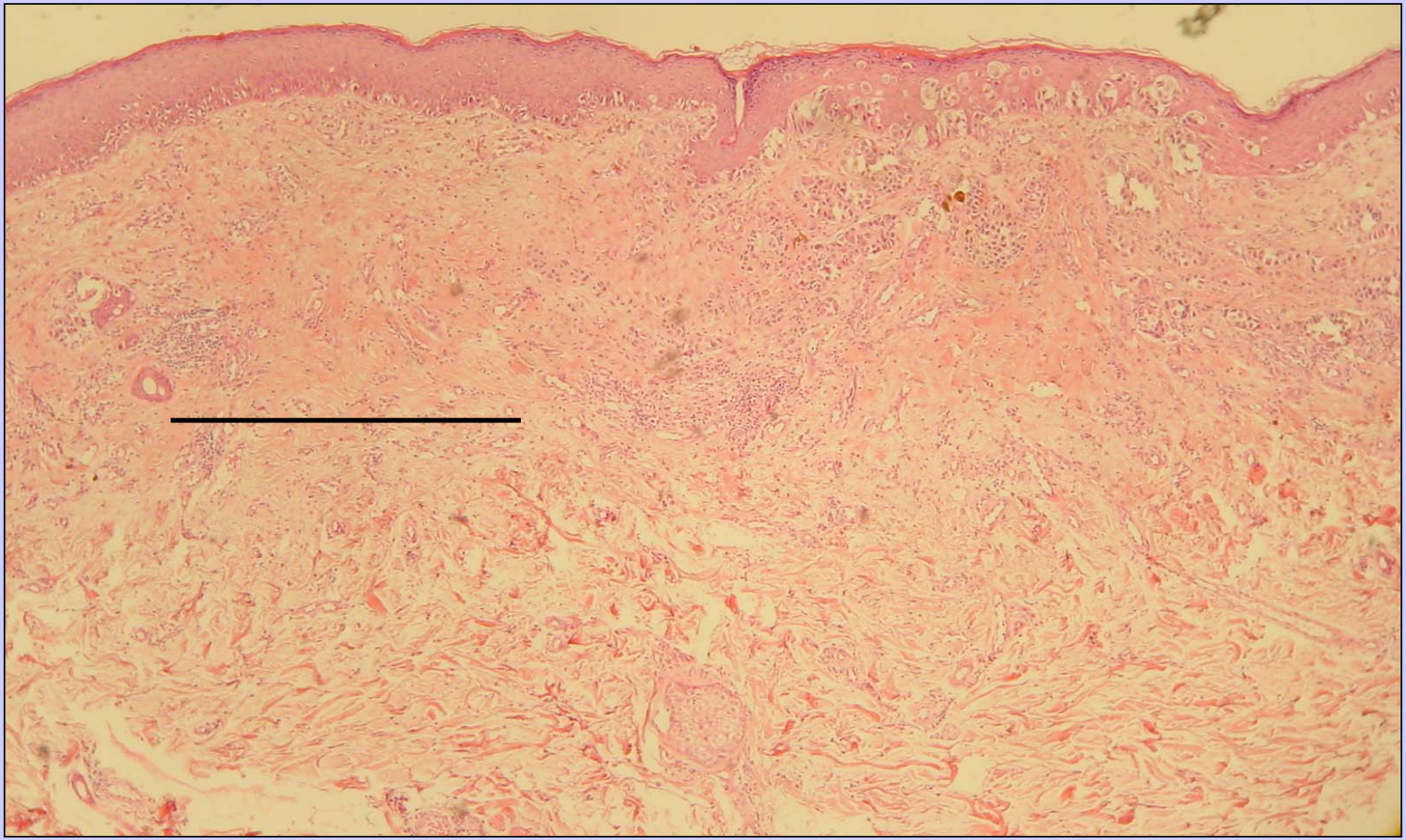
Prognostic factors:

- **ulceration**:	present/not present
- **# mitoses**:	…./mm² (= 6 HPF)
- **celtype**:	spindle / epitheloïd / mixed
- **TIL**	brisk / non brisk / absent
- **Regression**:	present / not present
- **Vascular invasion**:	present / not present
- **Perineural invasion**:	present / not present
- **Sattelietnoduli**:	present / not present

Regression



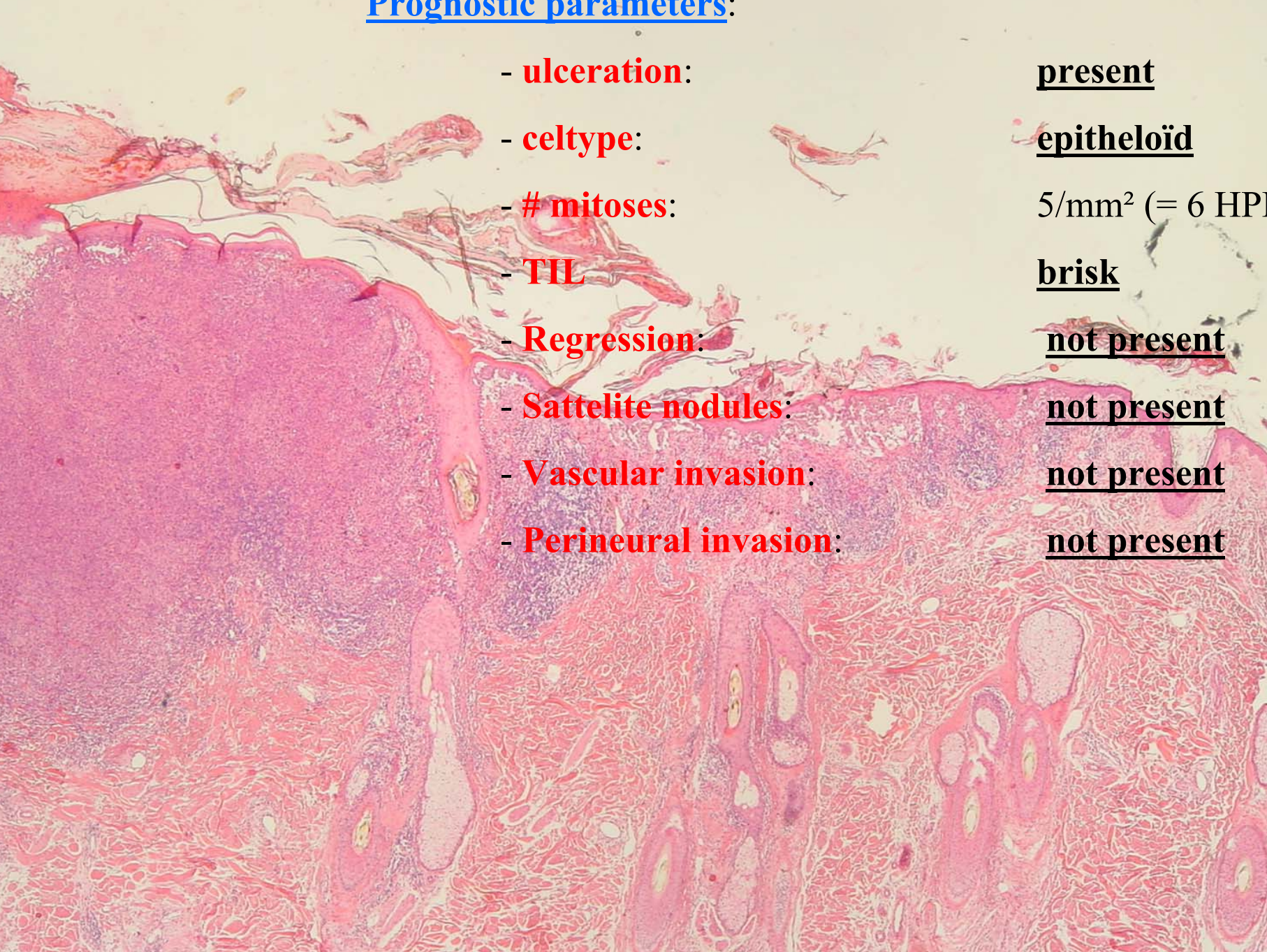
Regression



Some remarks:

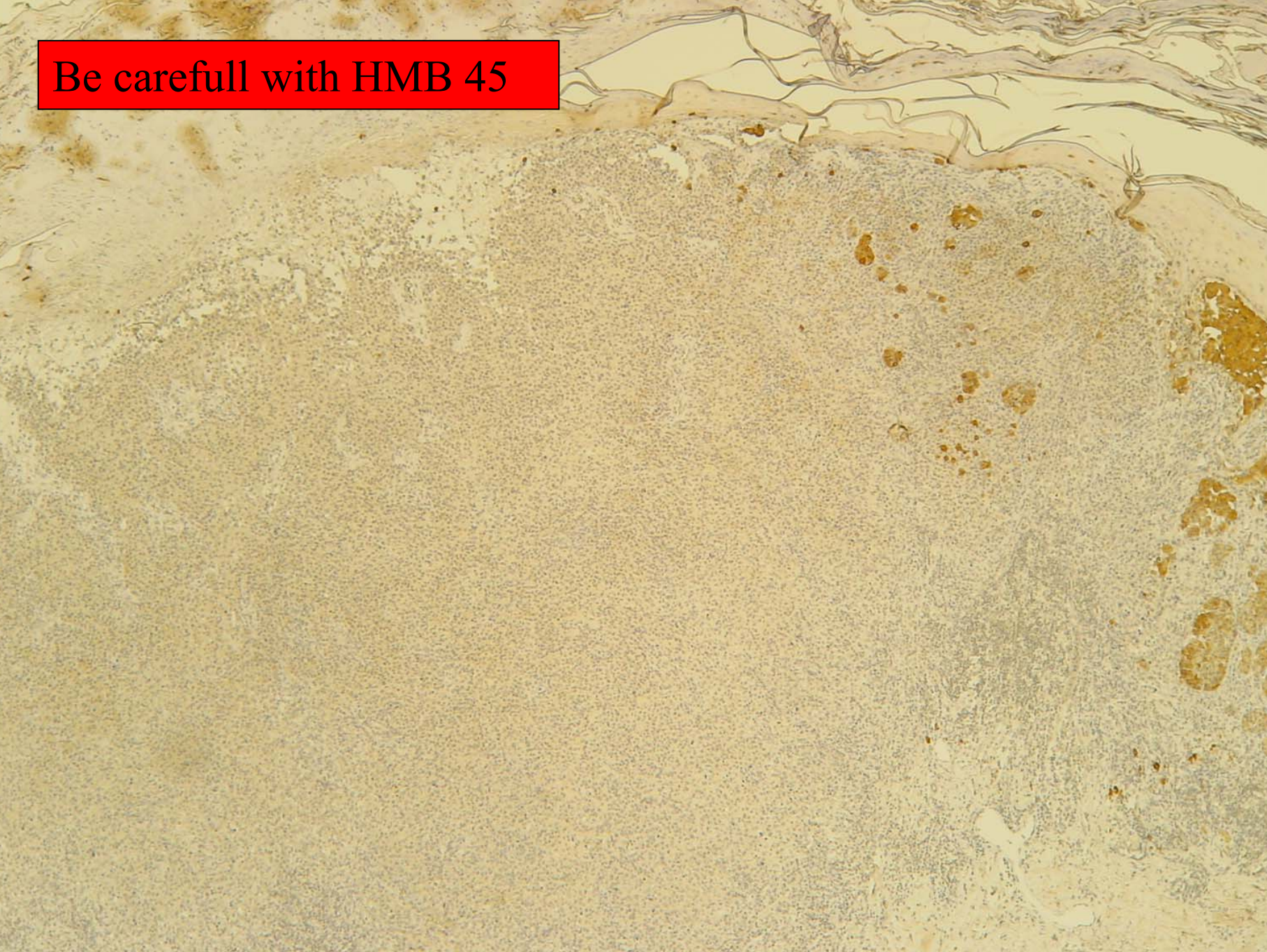
Regression (-):

- usually older people
- longer existing lesion
- considered as a negative factor
- "actually a good factor"
- Hist:
  - * fibrosis
  - * increased vascularity
  - * perpendicular vessels
  - * scarring
  - * "empty" pale area with melanophages



Prognostic parameters:

- **ulceration**: **present**
- **celtype**: **epitheloïd**
- **# mitoses**: 5/mm² (= 6 HP
- **TIL**: **brisk**
- **Regression**: **not present**
- **Sattelite nodules**: **not present**
- **Vascular invasion**: **not present**
- **Perineural invasion**: **not present**


Be carefull with HMB 45

PROTOCOL

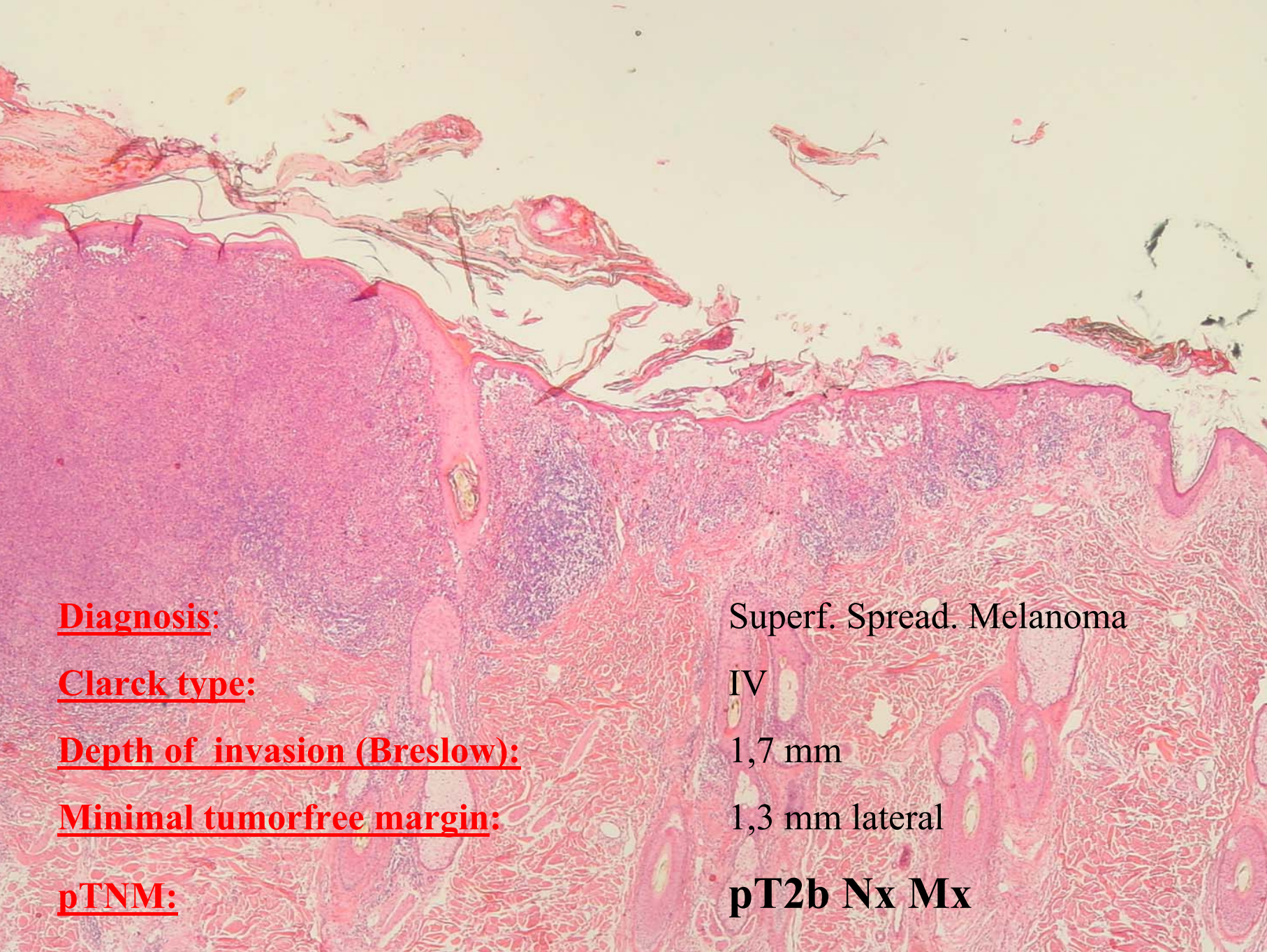
Diagnose:	Superf. Spread. Melanoma
Clarck type:	I/II/III/IV
Depth od invasion (Breslow):	…mm
Minimal tumorfree margin:	…mm, lateral (scoulder)
pTNM:	pT…. N…. M….

Prognostic parameters:

- **ulceration**:	**present**
- **celtype**:	**epitheloïd**
- **# mitoses**:	5/mm² (= 6 HPF)
- **TIL**	**brisk**
- **Regression**:	**not present**
- **Sattelite nodules**:	**not present**
- **Vascular invasion**:	**not present**
- **Perineural invasion**:	**not present**

pTNM classification (AJCC)

T classification	Depth	Ulceration status
Tis		
T1	≤ 1.0 mm	a. without ulceration en ≤ IV
		b. with ulceration en ≥ IV
T2	1.1–2.0 mm	a. without ulceration
		b. with ulceration
T3	2.1-4.0 mm	a. without ulceration
		b. with ulceration
T4	≥ 4.0 mm	a. without ulceration
		b. with ulceration
Tx	e.g. curettage, shave biopsy	



Diagnosis: Superf. Spread. Melanoma

Clarck type: IV

Depth of invasion (Breslow): 1,7 mm

Minimal tumorfree margin: 1,3 mm lateral

pTNM: **pT2b Nx Mx**

5 y survival

Negative nodes ⟵ ⟶ Positive nodes

	IA	IB	IIA	IIB	IIC	IIIA	IIIB	IIIC
Ta	**T1** 95%	**T2** 89%	**T3** 79%	**T4** 67%		**N1a/N2a** 67%	**N1b/N2b** 54%	**N3** 28%
Tb		T1 91%	T2 77%	T3 63%	T4 45%		N1a/N2a 52%	N1b/N2b/ N3 24%

Ta = not ulcerated

Tb = ulcerated

Ref. : J Clin Oncol 19:3635-3648, 2001

Some golden rules:

Be carefull with a diagnosis of melanoma if:

- no inflammation at all / no host respons

- < 20 y (unless familial/Xeroderma pigmentosum)

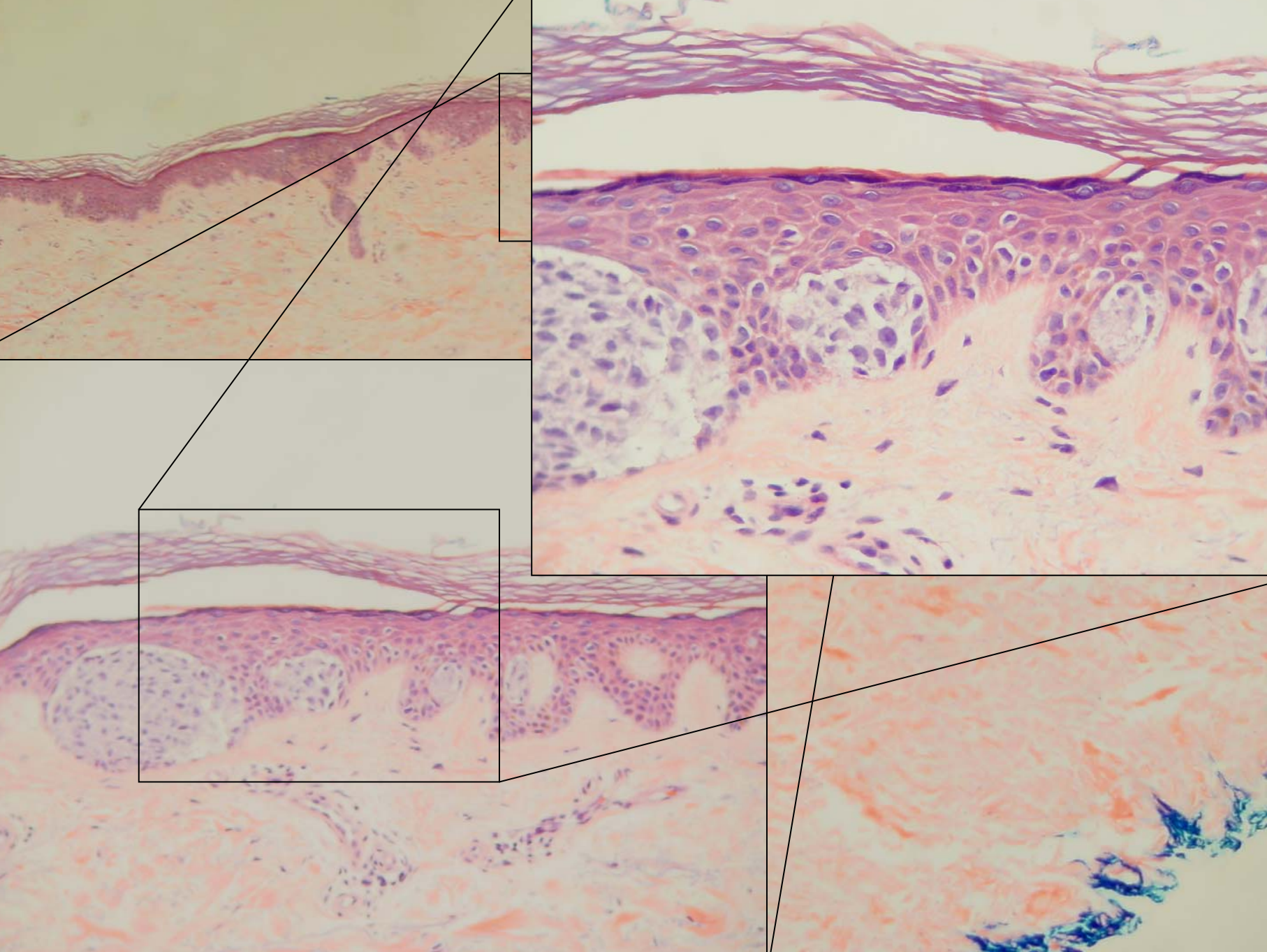
- lesion smaller than 0.7cm

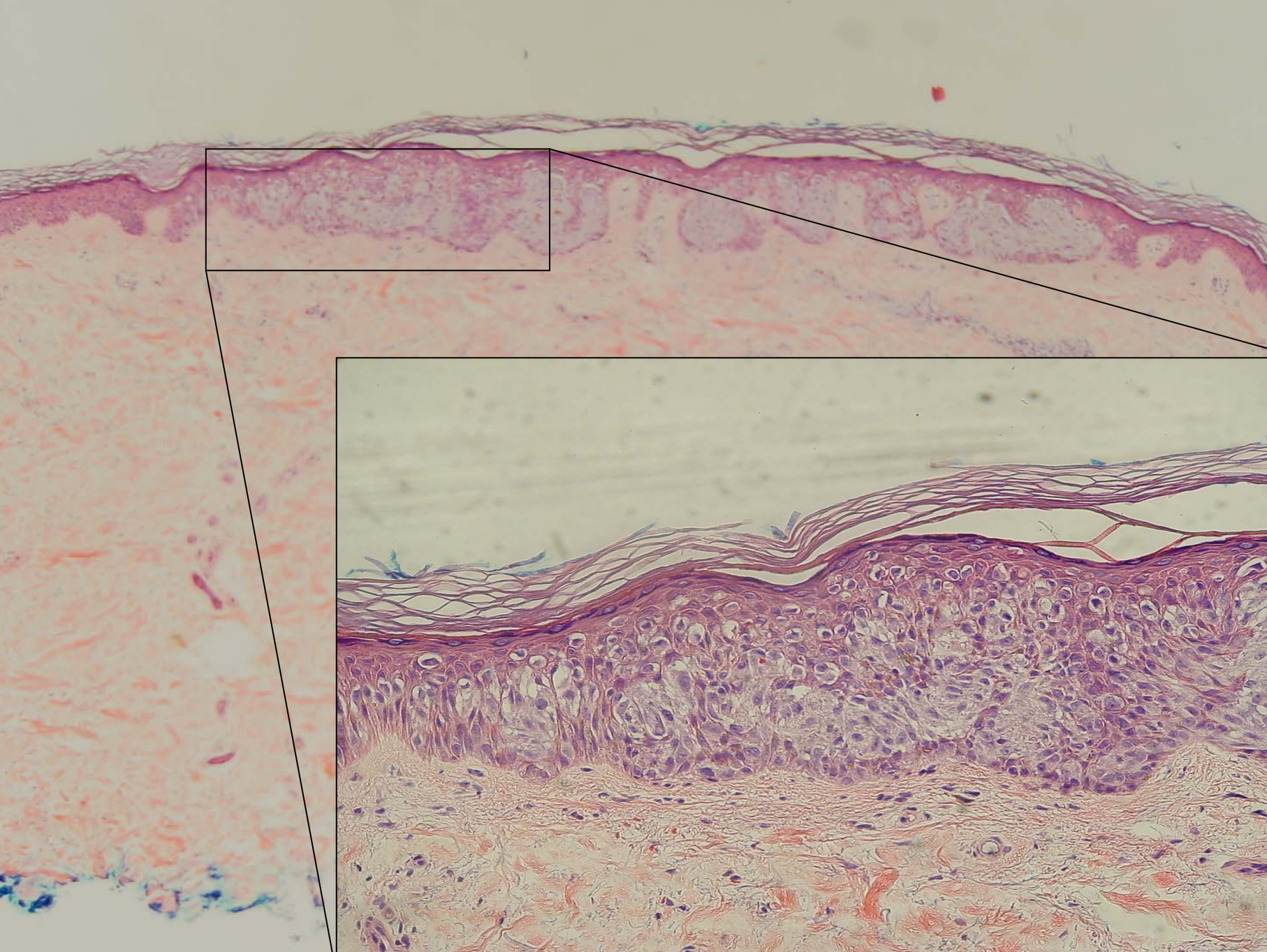
- clinical information of a “banal naevus”….”surprised clinician”

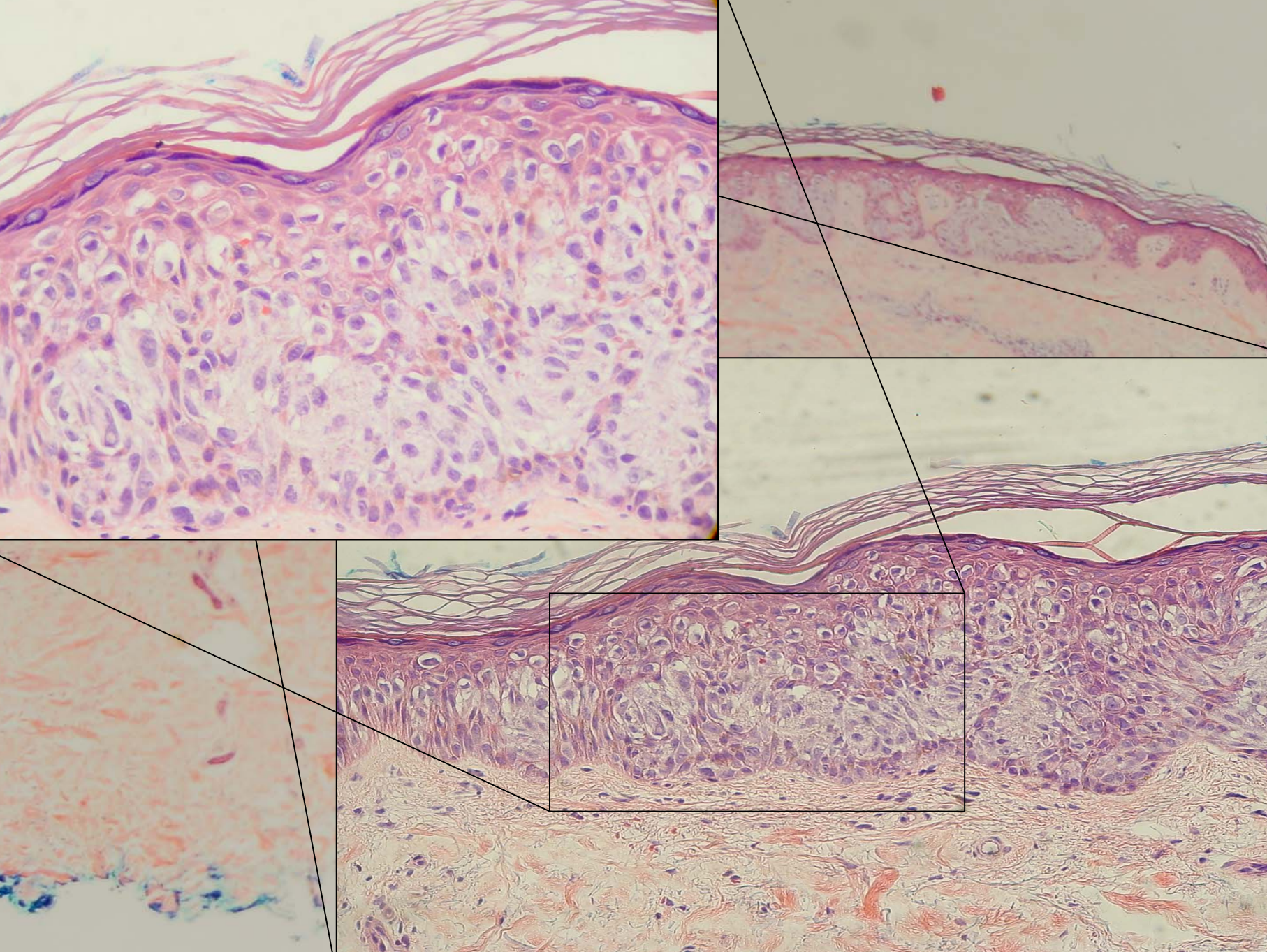
Junctional activitity in a person older than 45-60y: almost always a sign of dysplasia or more: do levels !!

Papillomatous lesion in a person older than 50-60y: think of a naevoïd melanoma!!…look for mitoses/shoulder/check junction

Spindle proliferation in the dermis: think of desmoplastic melanoma







Some golden rules:

Be carefull with a diagnosis of melanoma if:

- no inflammation at all / no host respons

- < 20 y (unless Xeroderma pigmentosum)

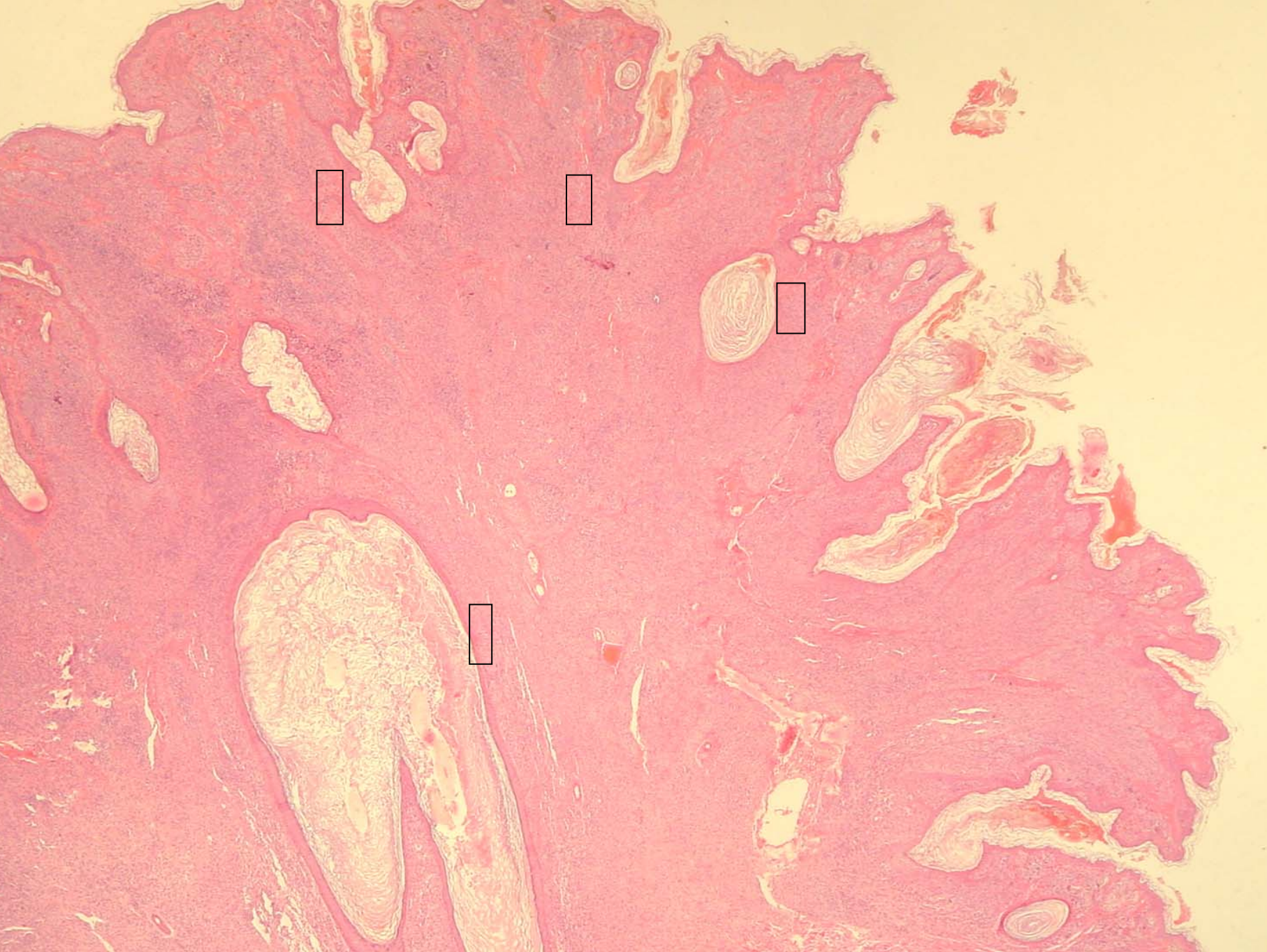
- lesion smaller than 0.7cm

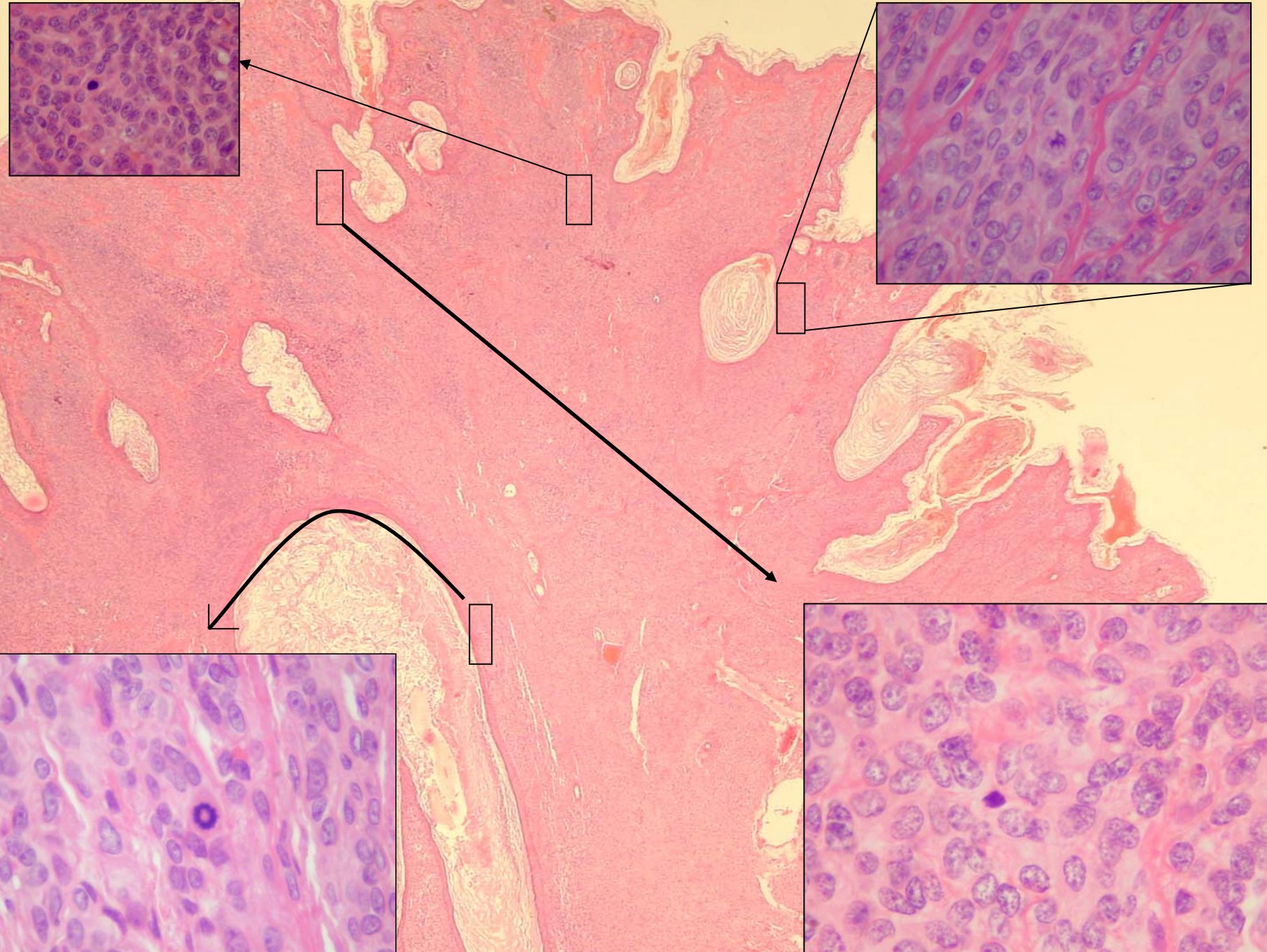
- clinical information of a “banal naevus”….”surprised clinician”

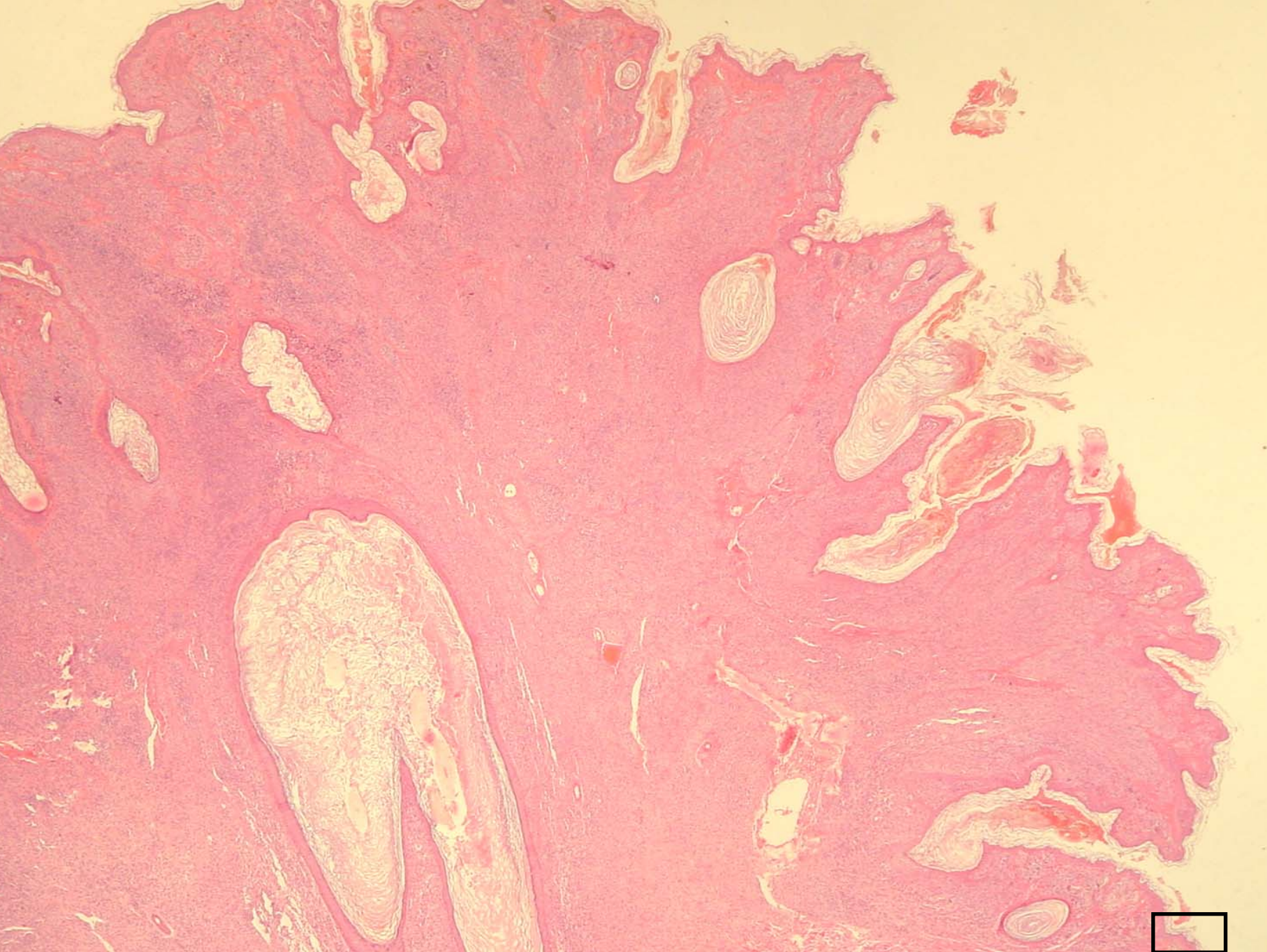
Junctional activitity in a person older than 45-60y: almost always a sign of dysplasia or more: do levels !!

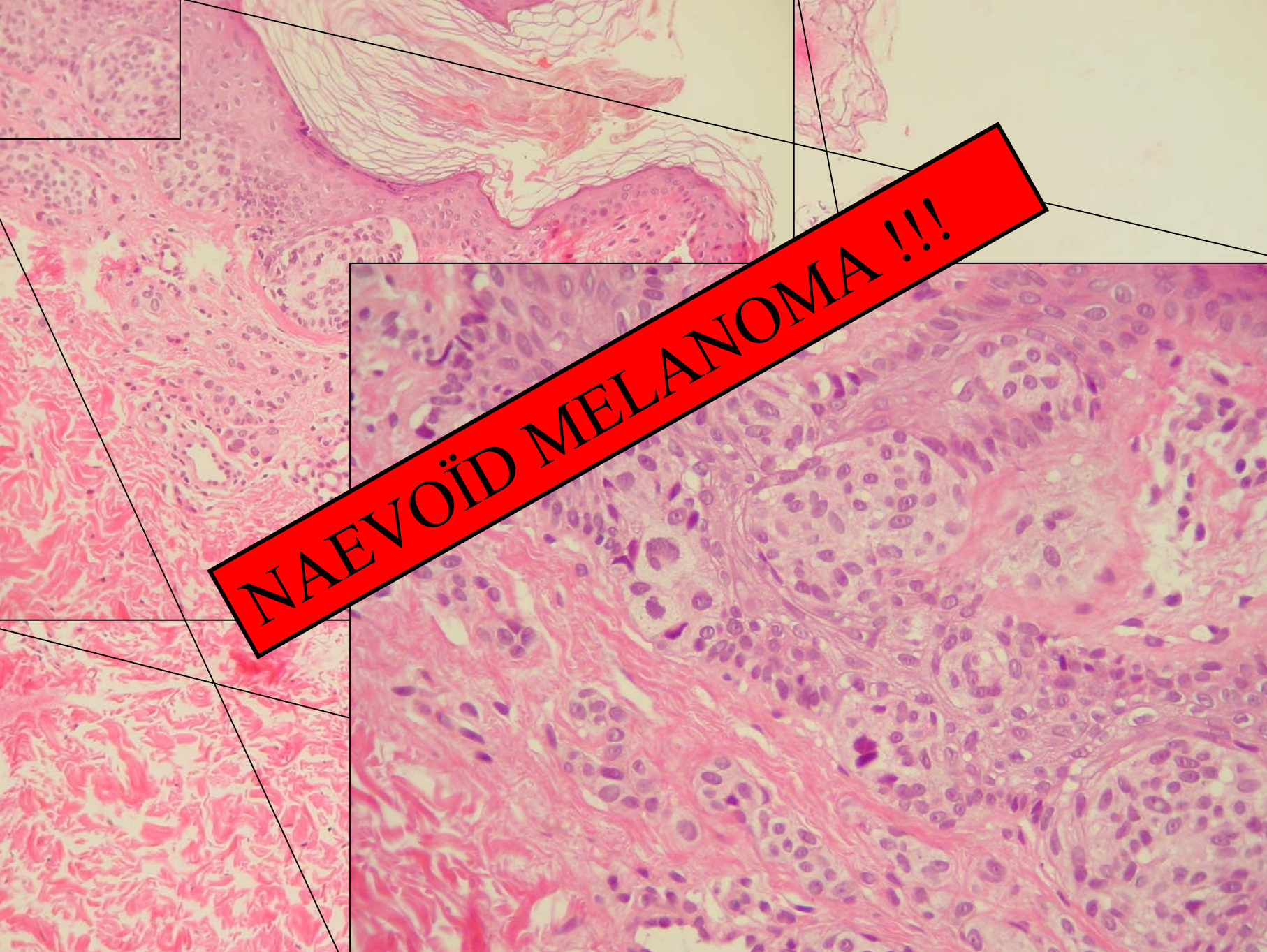
Papillomatous lesion in a person older than 50-60y: think of a naevoïd melanoma!!…look for mitoses/schoulder/check junction

Spindle proliferation in the dermis: think of desmoplastic melanoma








NAEVOÏD MELANOMA !!!

Some golden rules:

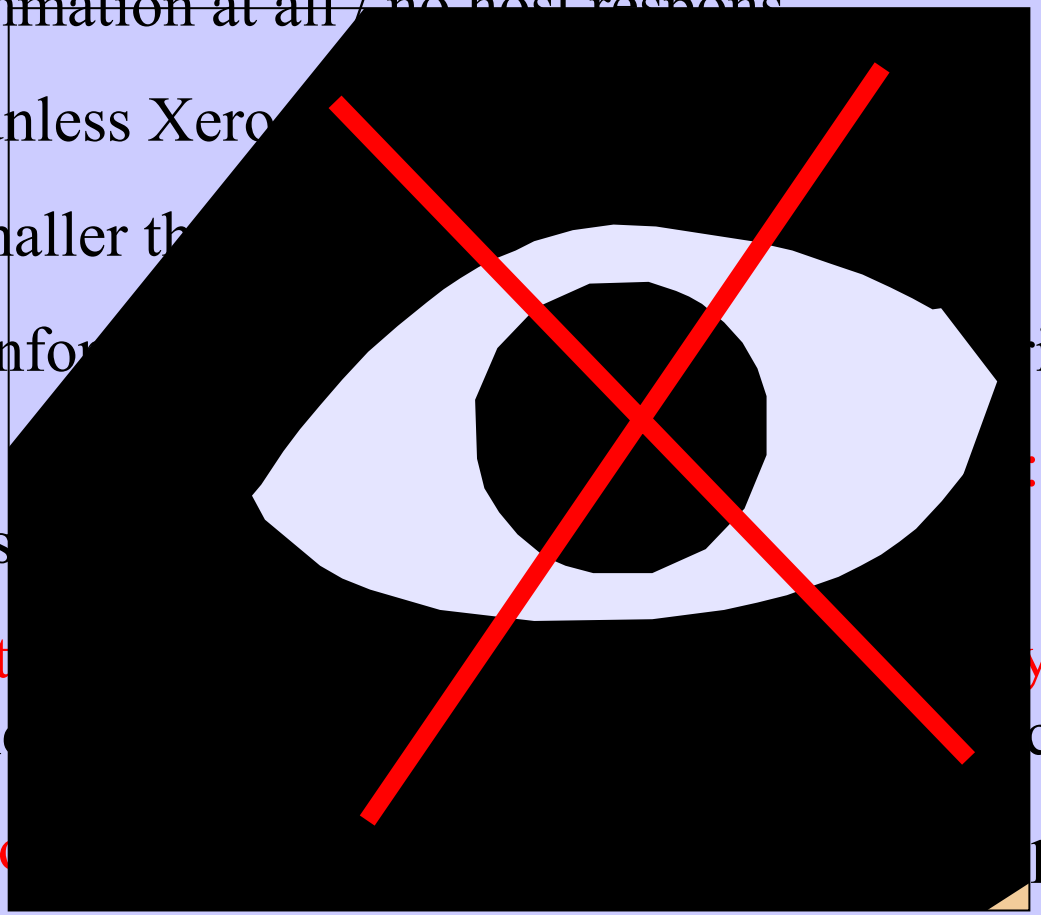
Be carefull with a diagnosis of melanoma if:

- no inflammation at all / no host respons
- < 20 y (unless Xero
- lesion smaller th
- clinical infor ised clinician"

Junctional : almost always a sign of dys

Papillomat y: think of a naevoïd m check junction

Spindle pr plastic melanoma



Thank you very much...