Robert BARAN Cannes
Luc THOMAS Lyon
(France)

HOW TO BEST APPROACH MELANOCYTIC LESIONS IN THE NAIL

Three physical signs are of utmost importance

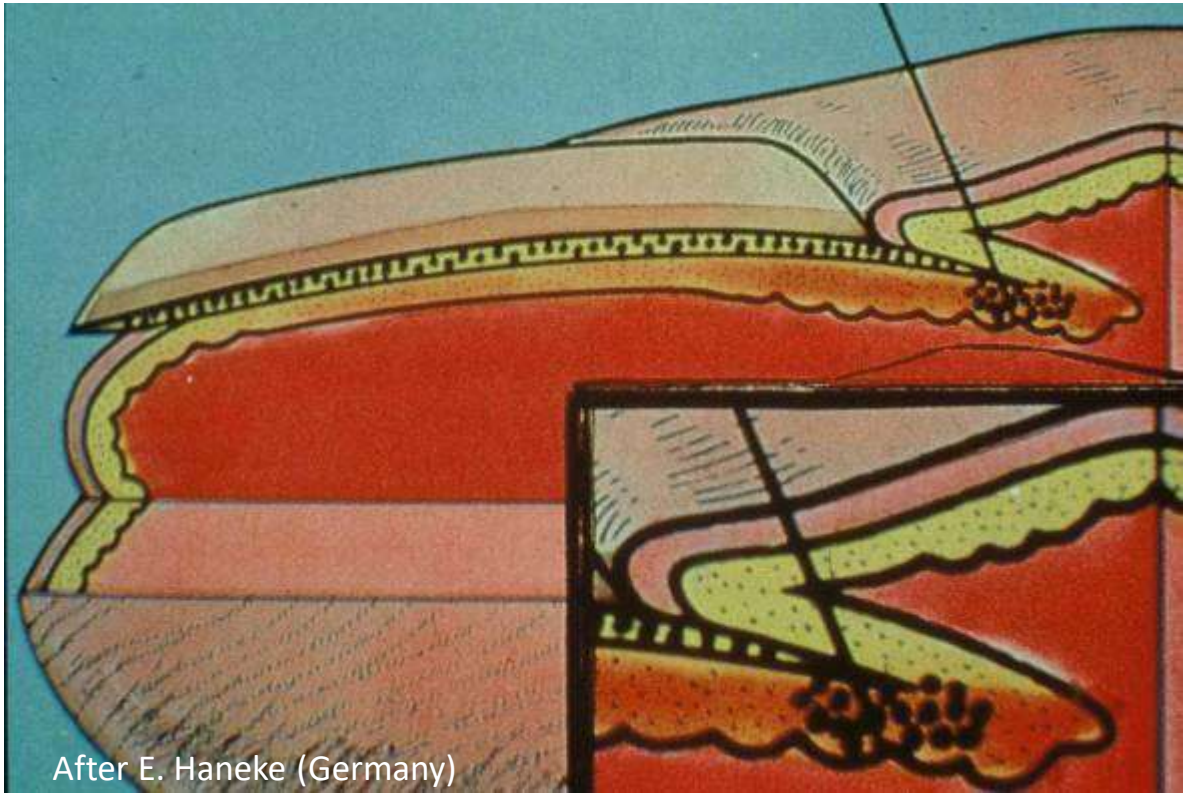
Longitudinal melanonychia

Hutchinson's sign

Non melanoma Hutchinson's sign

Longitudinal melanonychia

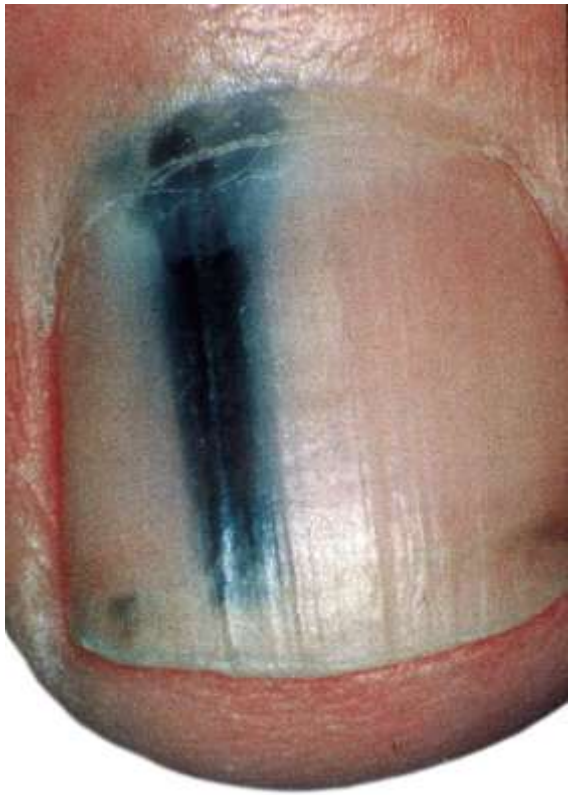
Nest of pigment producing
melanocytes, nevocytes, melanoma cells



Melanonychia develops when the matrix keratinocytes are unable to disintegrate the excess melanin in the matrix. The melanin is transferred into matrix keratinocytes that migrate obliquely upward and distally during NP genesis.

Longitudinal melanonychia

Longitudinal melanonychia



E. Grosshans (France)

P.D. Samman (UK)

The dangers of an error of judgment are twofold

- That the proper treatment of a malignant lesion will be delayed
- That the proper treatment for SM will lead to unnecessary disability if employed for a benign tumor

Hutchinson's sign

When Longitudinal Melanonychia is accompanied by periungual pigmentation, this phenomenon is known as **Hutchinson's sign**, a valuable clue to diagnosis of

↓

Subungual Melanoma

Facing longitudinal melanonychia

Differential diagnosis should include:

- Foreign body
- Splinter hemorrhage
- Fungal infection
- Subungual seborrheic keratosis
- Nonmelanoma Hutchinson’s sign

Differential diagnosis

Foreign body

A. Kopf (USA)

Differential diagnosis

Subungual seborrheic keratosis

Baran R, Perrin C, Linear melanonychia due to subungual keratosis, A report of 2 cases. Br J Dermatol. 1999, 140:730-3

Differential diagnosis

Fungal melanonychia

C. Viguié (France)

Facing Longitudinal Melanonychia

Functional melanonychia is probably more frequent than matrix lentigo and this again more frequent than nevus.

Blue nevi are rare and do not produce a brown streak congenital blue nevus of the nail. It is not known if lentigines and nevi exist in the nail bed but as the nail bed does not produce nail substance it cannot give rise to a brown streak. It is visible as a brown spot under the nail.

Facing Longitudinal Melanonychia

Longitudinal Melanonychia (LM) develops when the matrix keratinocytes are unable to disintegrate the excess melanin in the matrix.

Congenital (present at birth) and **congenital-type** nevi (not visible then, subsequently diagnosed before the age of 5) are rare, but not uncommon.

"Melanocytic nevi usually represent a manifestation of single point mosaicism since they develop from postzygotic mutations. This means that the size of a congenital melanocytic nevus is genetically predetermined (which may be the cause of recurrence in seemingly completely excised matrix nevi). The earlier the postzygotic NRAS mutation occurs, the larger the involved area will be."[1]

1. Happle R. The categories of cutaneous mosaicism: A proposed classification. Am J Med Genet A. 2016; 170A(2)452-9.

Facing Longitudinal Melanonychia

In adults, LM is considered suspicious if:

1- Acquired during adulthood
2- Monodactylic
3- Triangular shaped
4- Multicolored
5- Associated with nail plate erosion
6- Associated with periungual involvement (Hutchinson’s sign)

Facing Longitudinal Melanonychia

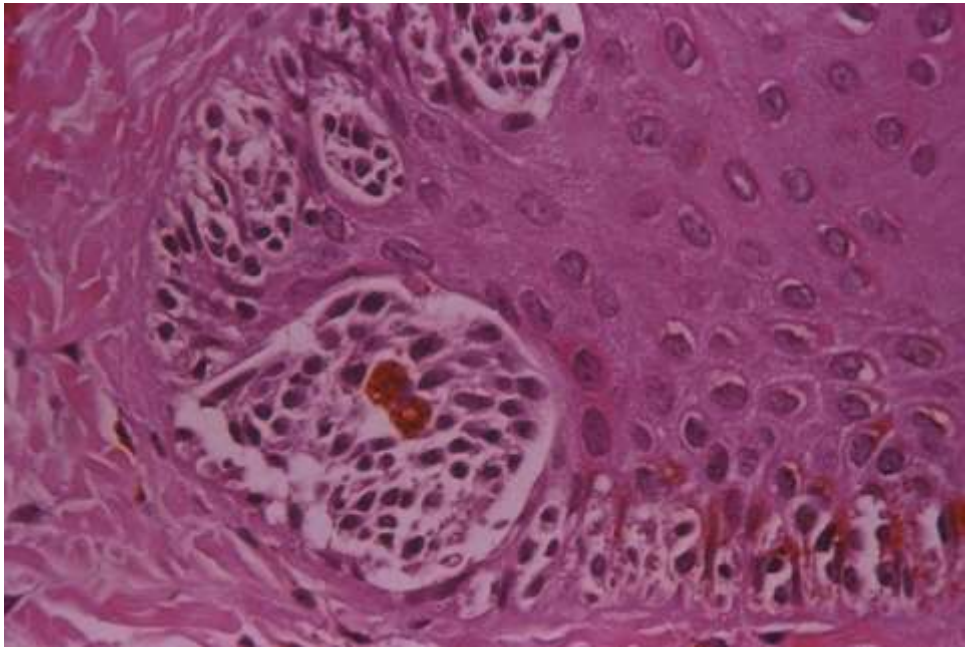
In nail congenital nevi:

- All but one of these criteria are commonly observed (only one case of involvement of two adjacent fingers with a medium-sized congenital nevus involving the hand of a 2 y.o. patient).
- In addition, congenital nevi of the nail unit share much more dermoscopic features with adult melanoma than with post puberty nevi.
- After several years of follow-up, however, these initially very atypical by adult criteria evaluation, show a marked tendency to evolve towards a more benign appearance.

What is known on this topic in children?

1. The vast majority of the published cases are based on 2 main pathological characteristics: **cellular atypia** and **architectural disorder**, both being very difficult to interpret in children

2. Nail unit melanoma (NUM) in children is extremely rare (certainly less than 10 true cases). Only severe, widespread atypia can be interpreted as melanoma.



R. Ruiz-Maldonado (Mexico)

What is known on this topic in children?

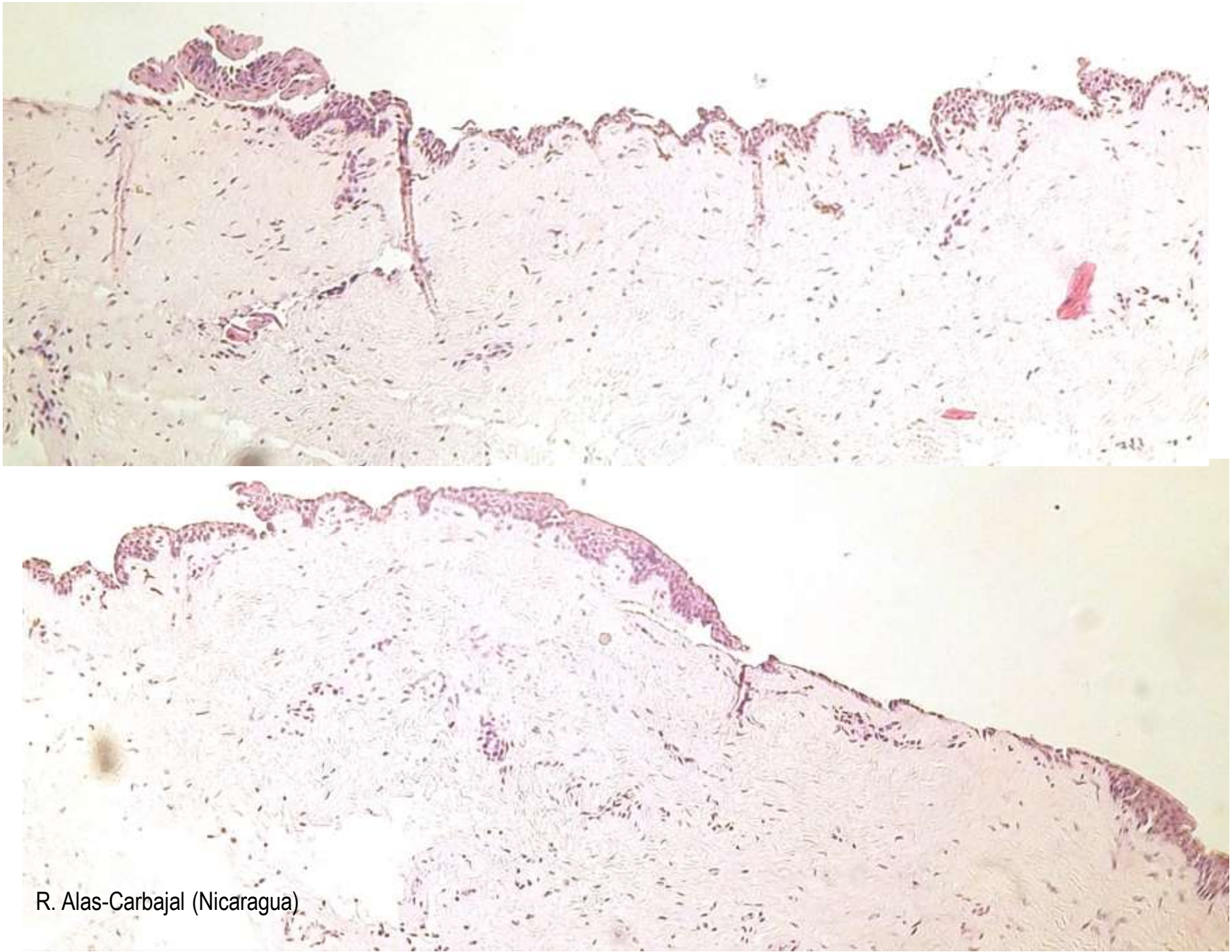
NUM developed from a congenital nevus of the nail
has not been reported, as far, except for Lyall's case without LM

R. Alas-Carbajal (Nicaragua)

D. Lyall (USA)

Consequently, the scarcity of NUM explains our "wait and see" policy about LM, even if biopsy has shown a nevus.

Lyall D. Malignant melanoma in infancy. JAMA 1967; 202-3.



R. Alas-Carbajal (Nicaragua)

What is known on this topic in children?

Melanonychia associated with periungual pigmentation, Hutchinson-like, or a micro Hutchinson's sign has the same significance.

Dr Honng (China)

What is known on this topic in children?

There is a possibility of **fading** and even…

Disappearance of LM in children especially of Asian extraction

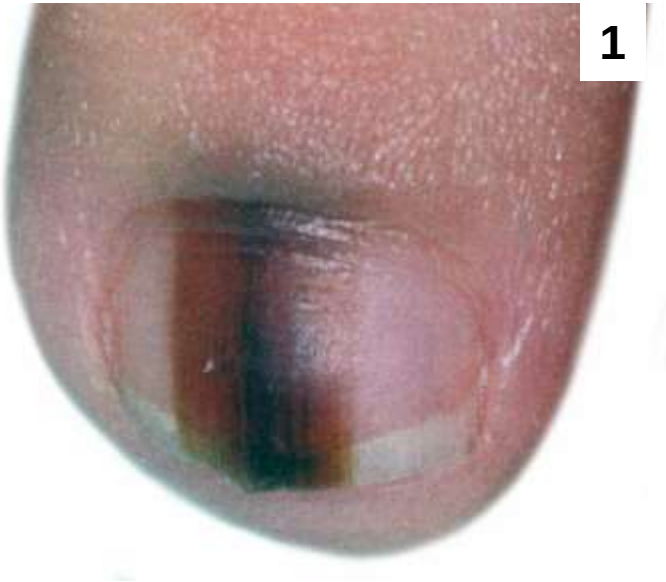
Hoara K. (Japan)

What is known on this topic in children?

This phenomenon may also be observed in Caucasians

What is known on this topic in children?

Are dots an indicator of dermatoscopic sign of regression of LM in children?



Dots distributed along melanotic lines can be a dermoscopic sign of regression of melanonychia in children with LM (P= 0.19 ; odds ratio, 18.0)

Murata Y & Kumano K. Dots and lines: a dermoscopic sign of regression of longitudinal melanonychia in children Cutis 2012; 90:293-6-301

What is known on this topic in children?

Dermoscopy 30 months after initial visit showed sparsely distributed light brown lines and only a few remaining dots.

Murata Y & Kumano K. Dots and lines: a dermoscopic sign of regression of longitudinal melanonychia in children. Cutis 2012; 90: 293-96.

A “Dermoscopic Feature Signature” of Congenital Nail Unit Nevi

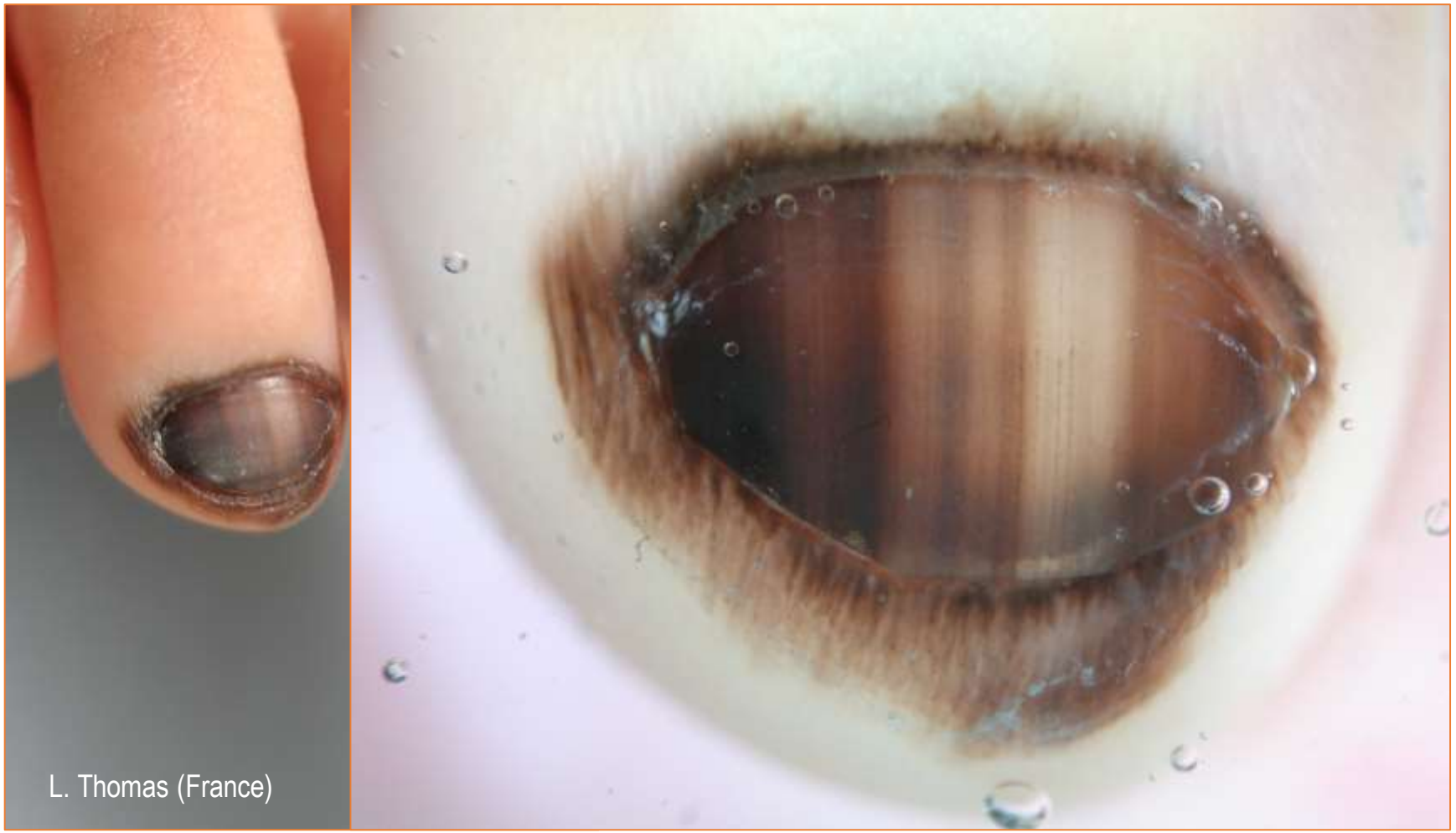
Periungual pigmentation is very common in congenital nail unit nevi.

The dermoscopic features observed in melanoma-associated show some features of acral melanoma that are the parallel ridge pattern of the pigmentation and irregular diffuse pattern of acral pigmentation.

In contrast, in newborn or prepubertal, the periungual pigmentation in nevi, reproduces the benign features of acral skin that are a parallel furrow pattern and a less commonly lattice-like and fibrillar pattern.

The latter can be considered as the “signature feature of congenital nail unit nevi”. (L. Thomas)

Fibrillar pattern, the“Signature Feature of Congenital Nail Unit Nevi”



What about “recent” clinically unapparent lesion?

- Besides the fibrillar pattern, neither the clinical features, nor the dermoscopic observations of congenital nevi are specific. Moreover, the observed features at early stages are mimicking adult melanoma.
- Consequently, repeated spaced observations of the case will be of crucial importance: this will constitute the best management.
- However, because the lesions have not to been biopsied the clinically unapparent lesion cannot probably be considered as the complete resolution of the entire lesion as suggested here.

Tosti A, Baran R, Morelli R et al. Arch. Dermatol. 1994; 130: 1076-7

What about the future of persistent LM in childhood?

A brown band in the nail of a child, present for many years, without alteration, and which all of sudden widens or becomes darker, must raise concern and requires
excisional biopsy with histopathologic examination.
There are, at least, five cases of LM in children that evolved in melanoma during adult age respectively at the age of 17[1(figure)],18[2] (two cases), 27[3] and 32.[4]

R. Nakamura (Brazil)

1. Brito F, Serra AC, Kac B, Bonnatto D, Hurtado J, Nakamura R. JAAD 2013 (April AB 109) (poster 6756)
2. Goettmann-Bonvallot S, André J, Moulonguet I. JEADV 2001; 15 suppl 2: 86-7.
3. Kikuchi I, Inoue S, Sakaguchi E et al. Dermatology 1993; 186:88-93.
4. Mori T, Fukui V. Rinsho Dermatol 1993; 35:808-9

HOW TO PROCEED?

As some melanoma might still evade classical dermoscopy detection, this procedure should always be interpreted with the clinical context of the patient integrated with all clinical information, while histopathologic examination is required in equivocal cases.[1]

1- ABCDEF rule
2- Biopsy, indispensable
3- MATRIX DERMATOSCOPY, reliably differentiates lentigines and nevi from melanoma[2]
4- Intra operative dermatoscopy
5- Reflectance confocal microscopy (RCM)
6-Genetic analyses

1-Hirata SH et al. JAAD 2011; 65:297-303
2-Lallas A. et al. Br J Dermatol 2015; 173:1041-9

HOW TO PROCEED? [1]

ABCDEF rule for nail melanoma

- Make sure of the presence of melanin
- Adults or infants?

A	**Age**	Range 20-90 y.o, peak 5th – 7th decade Race African-American, native American, Asian
B	**Band**	(nail band): pigment (brown-black) Breadth (≥ 3mm) Border: (irregular / blurred)
C	**Change**	Enlarging or darkening; lack of change/response to treatment for nail dystrophy.
D	**Digit** involved	Thumb>hallux>index finger Single digit>multiple digits ; dominant hand
E	**Extension**	Extension of pigment onto surrounding tissues (Hutchinson's S)
F	**Family**	Family or personal history of previous melanoma.

Unfortunately, this ABCDEF rule is of limited value for children

Levit K et al. The ABC rule for clinical detection of subungual melanoma. JAAD 200. 42/269-74
Ruben B. Pigmented lesions of the nail unit. Semin Cutan Med Surg 2015; 34:101-8

HOW TO PROCEED? [2a]

Dermatoscopy, inescapable!

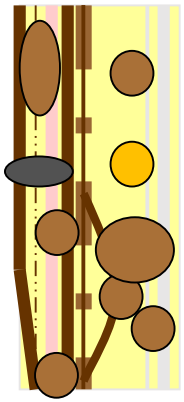
Non melanocytic

Lines regular

Lines regular and globules

Benign Patterns

Malignant pattern



Lines irregular
& irregular globules

L. Thomas (Lyon)

- Ronger S, Touzet S, Nigeron C, et al.Dermoscopic examination of nail pigmentation,Arch Dermatol 2002; 138: 1327-33.
- Hirata SH, Yamada S, Enokihara MY et al. Patterns of nail matrix and bed of LM by intraoperative dermatoscopy. JAAD 2011; 65: 297-303.

HOW TO PROCEED? [2b]

Hirata et al[1]. has validated four distinct patterns for **intraoperative** dermatoscopy of the nail matrix:

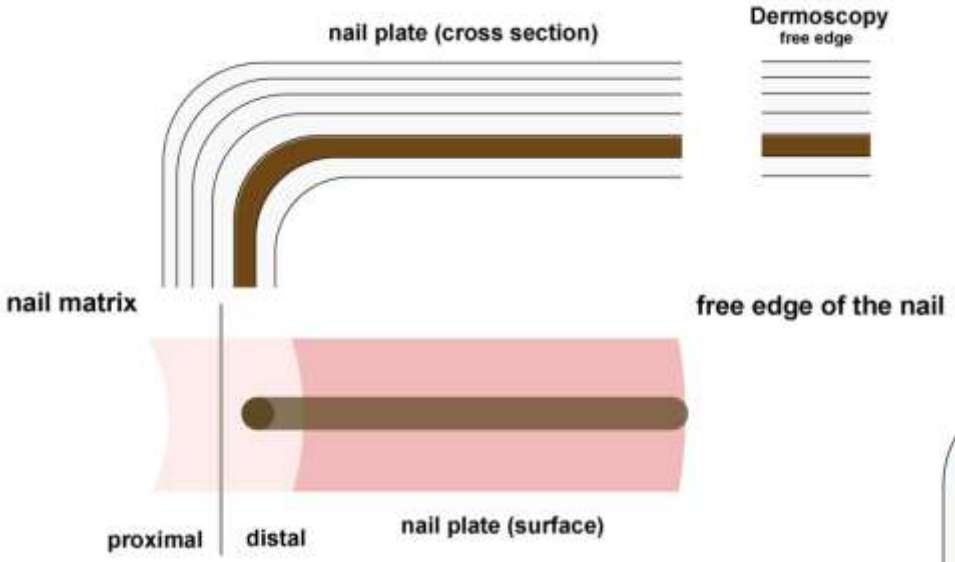
1, regular gray pattern (hyper melanosis)
2, regular brown pattern (benign melanocytic hyperplasia)
3, regular brown pattern with globules or blotch (melanocytic nevi)
4, irregular pattern (melanoma)

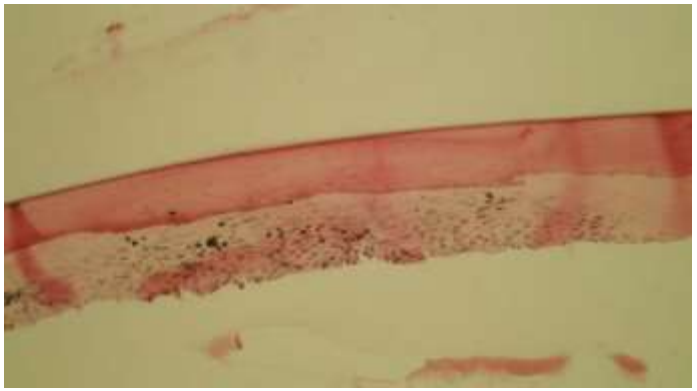
Consequently, direct matrix dermatoscopy reliably differentiates lentigines and nevi from melanoma.
Immediate ex-vivo dermatoscopy[2] of the nail matrix biopsy specimen is helpful in the diagnosis of melanocytic neoplasm.

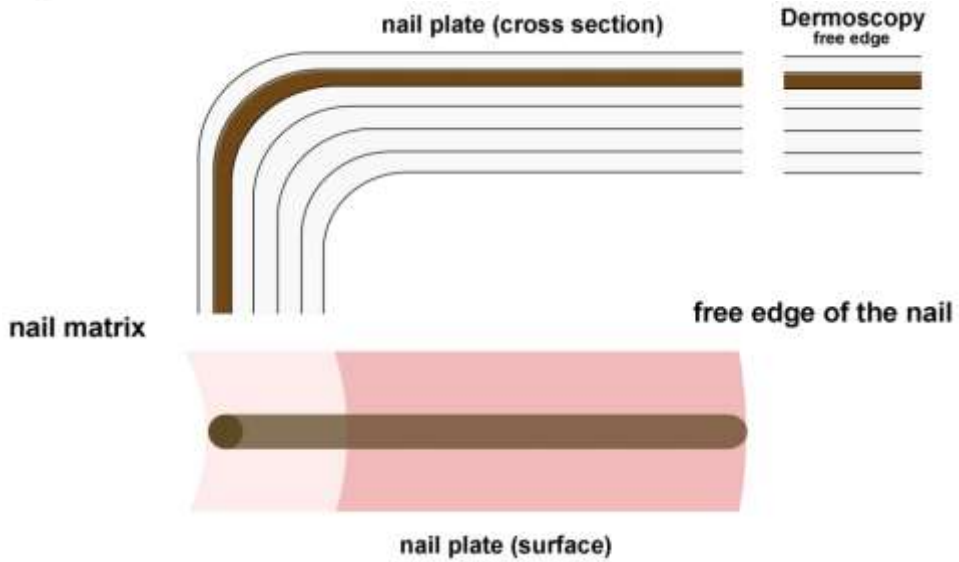
1. Hirata SH, Yamada S, Enokihara MY et al. Patterns of nail matrix and bed of LM by intraoperative dermatoscopy. JAAD 2011; 65: 297-303.
2. Pinto-Gouveia M, Coutinho R, Vieir R et al. JEADV 2016 30; 363-4.

HOW TO PROCEED? [2c]

2. Dermoscopy of the free edge, very useful







Braun RP, Baran R, Saurat JH, Thomas L. J Am Acad Dermatol 2006; 512-3

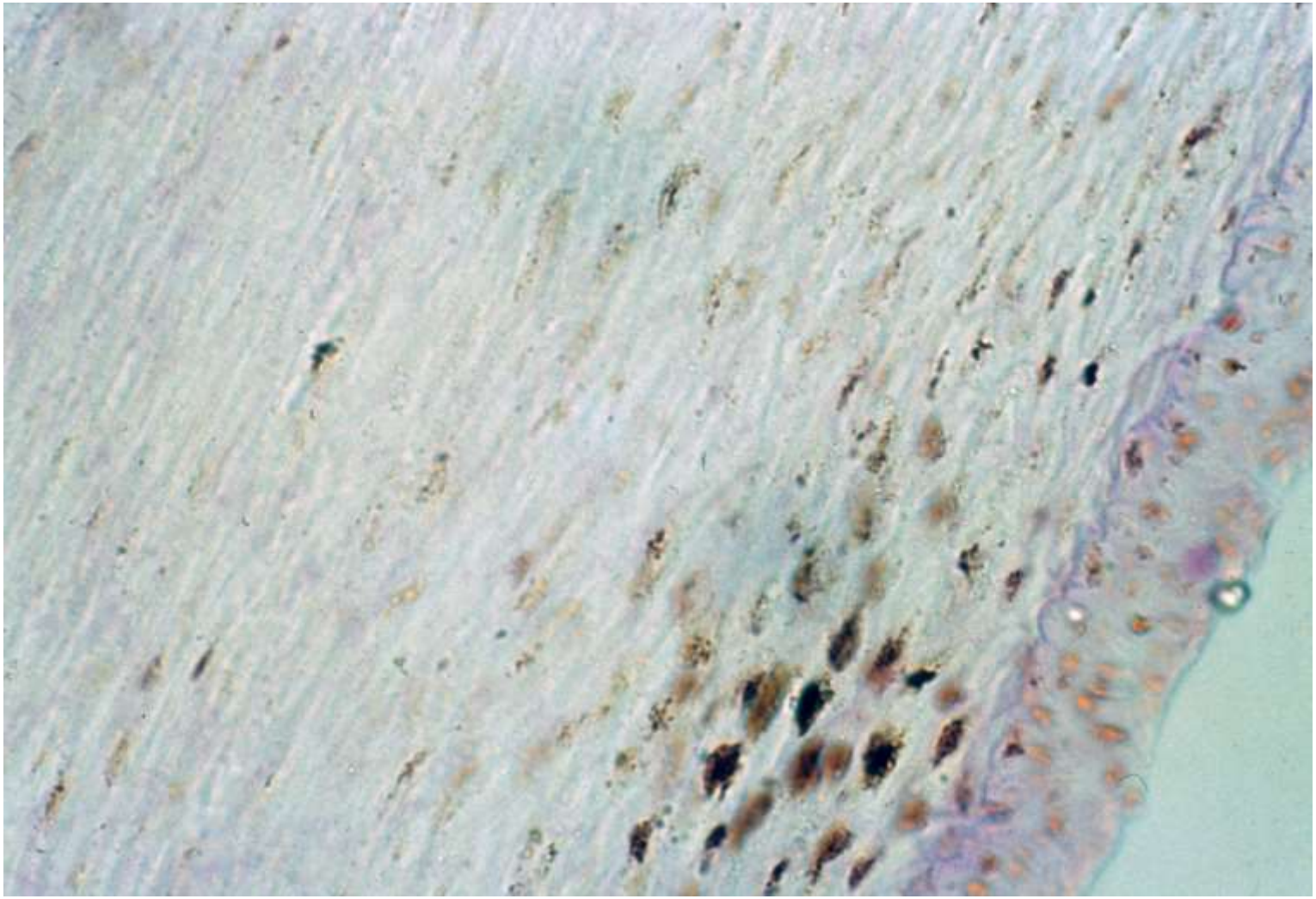
HOW TO PROCEED? [2d]

Examination of the free edge of the NP can help determine whether the origin of the pigmentation originates from the proximal or the distal nail matrix . If a doubt exists, Fontana-Masson stain of a clipping of the free edge is easily performed.

Braun RP, Baran R, Saurat JH, Thomas L. J Am Acad Dermatol 2006; 512-3

HOW TO PROCEED? [2e]

Free edge Fontana-Masson stain of LM

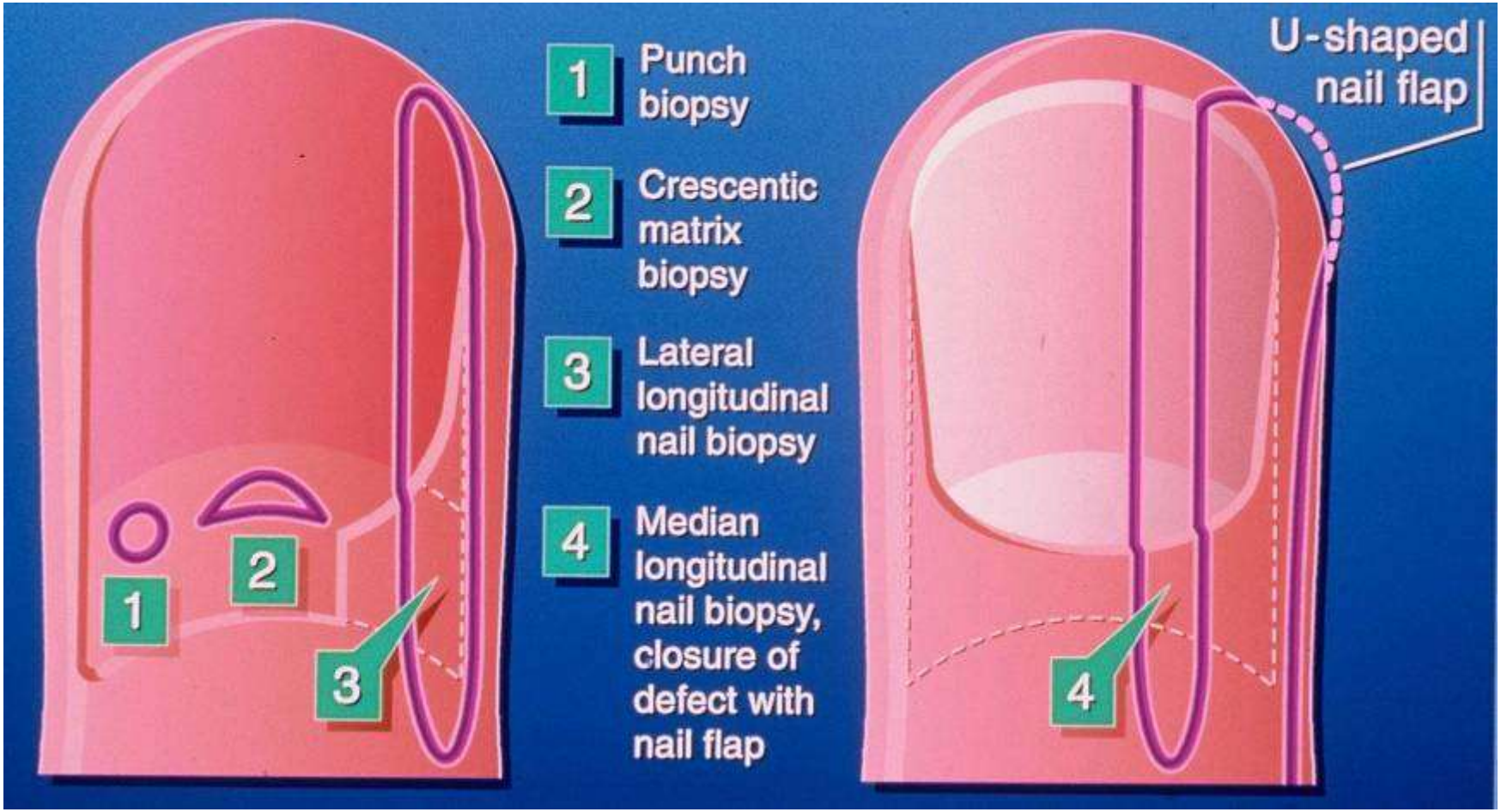


BIOPSY INDISPENSABLE

Obtaining a specimen sufficient for interpretation is one of the main impediments to successful diagnosis in this setting.

HOW TO PROCEED: BIOPSY TECHNIQUES

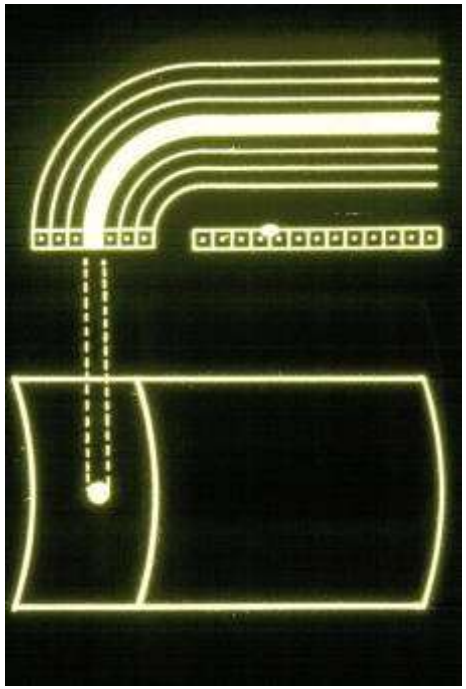
The gold standard is the histopathologic examination of an adequate biopsy specimen

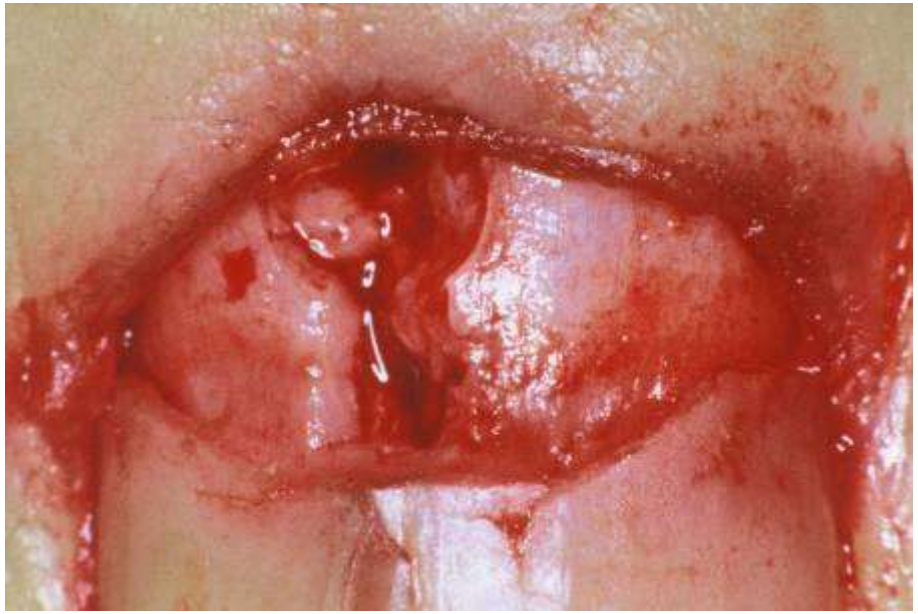


HOW TO PROCEED: BIOPSY TECHNIQUES

Punch biopsy
followed by removal of
the proximal nail plate

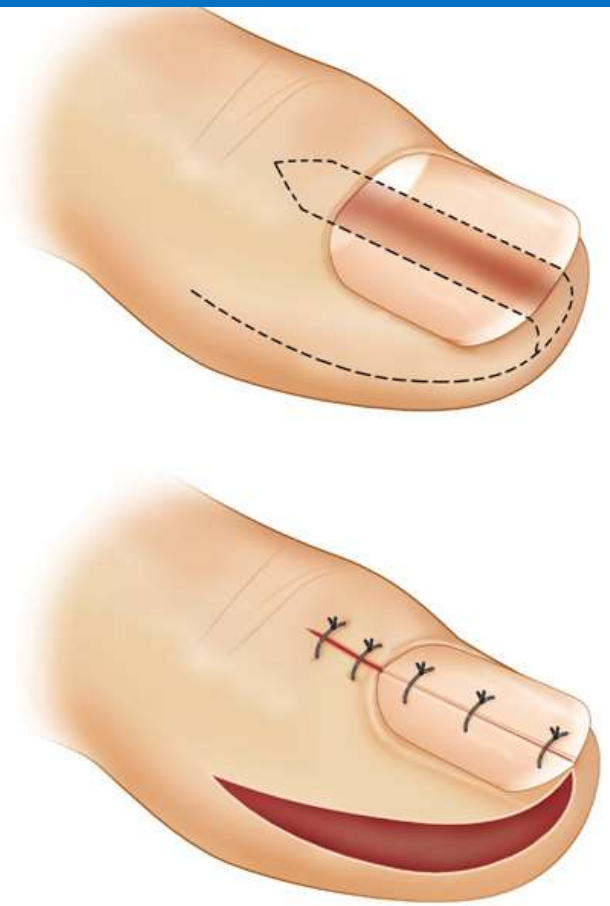
HOW TO PROCEED: BIOPSY TECHNIQUES

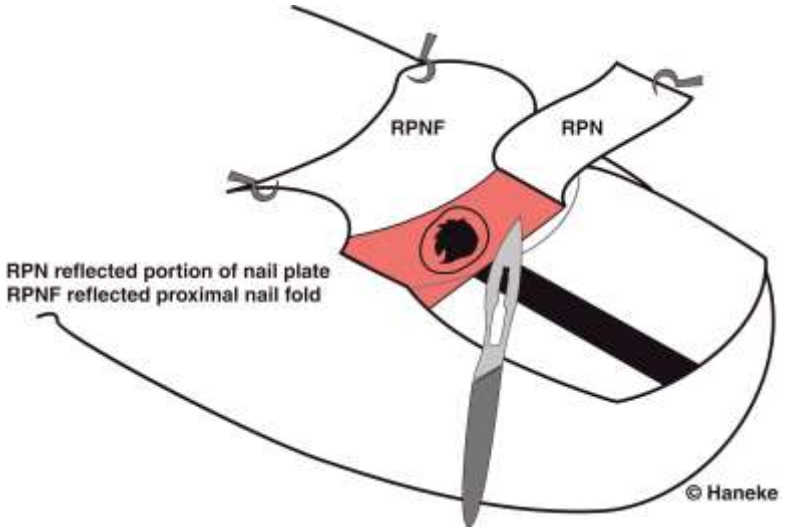




Matrix punch biopsy followed by distal excision of any remaining pigmentation

HOW TO PROCEED: BIOPSY TECHNIQUES





Matrix shaving biopsy

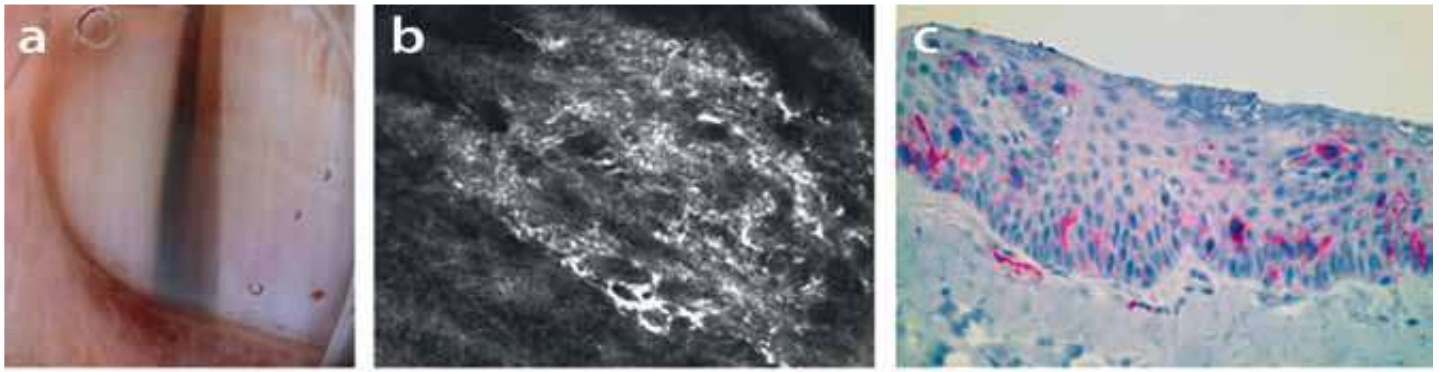
Midline nail unit biopsy: Schernberg's technique (U-shaped nail flap)

In Schernberg's releasing flap method : A rectangular monoblock comprising the involved NP, NB, matrix, and PNF is removed.

The excision is delineated laterally by a curve incision running from the distal end of the monoblock incision to the proximal edge of the matrix. The flap is rotated into position and closed with 5-0 nylon sutures.

HOW TO PROCEED: CONFOCAL MICROSCOPY

Reflectance confocal microscopy (RCM)

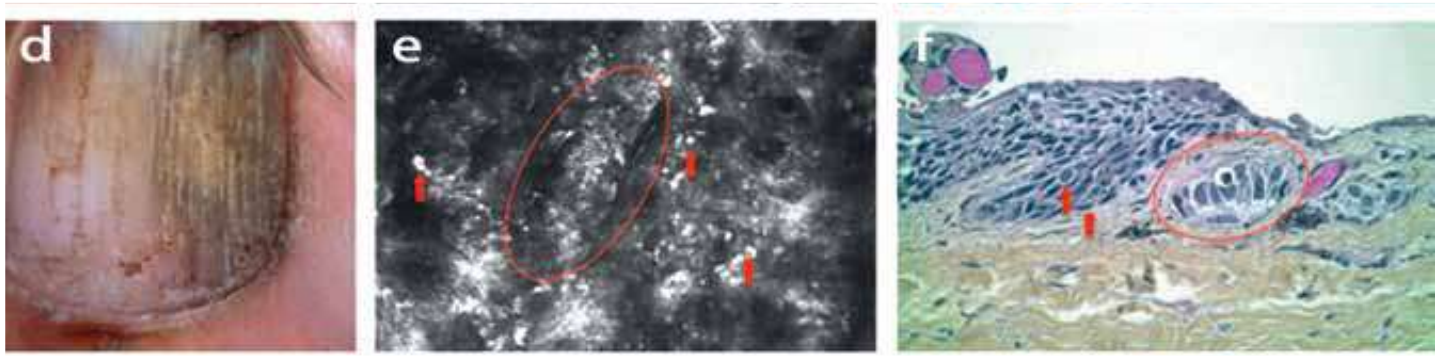


S. Debarbieux (France)

(a) Dermoscopy of the nail plate showing Hutchinson's sign, irregularity and triangular shape of the pigmentation.
(b) In vivo reflectance confocal microscopy (RCM) examination showing melanocytic proliferation at the dermoepithelial junction.
(c) Histopathological MelanA-stained section confirming an early melanoma.

Fouilloux B, Cinotti, E. The nail in confocal microscopy The Nail, What's New? 2013

HOW TO PROCEED: CONFOCAL MICROSCOPY

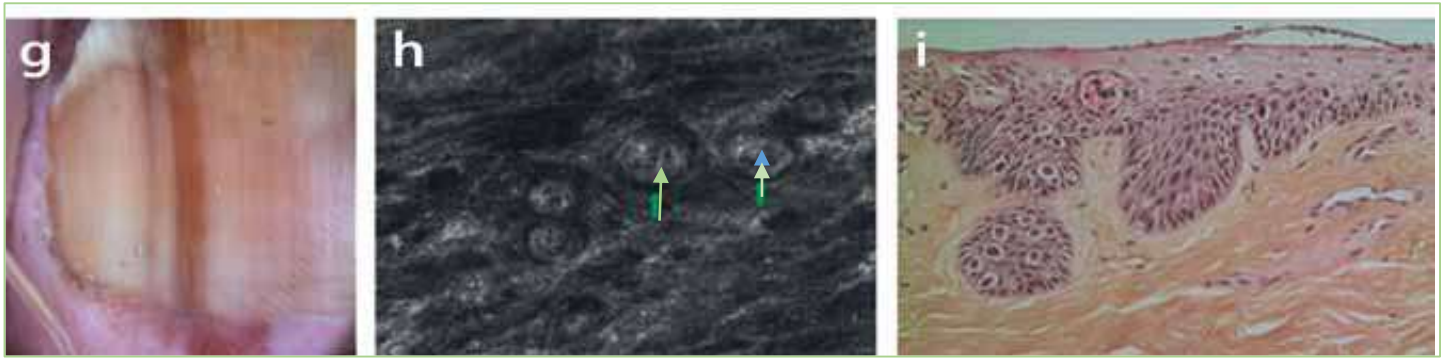


S. Debarbieux (France)

(d) Dermoscopy of the nail plate showing a nonspecific pattern but the presence of a Hutchinson's sign (slight pigmentation of the hyponychium, not seen on the photograph).
(e) In vivo RCM examination showing isolated (red arrows) and nested (red circle) atypical large nucleated round bright cells.
(f) Hematoxylin and eosin stained histopathological sections showing a malignant proliferation of isolated (red arrows) and nested (red circle) atypical melanocytes. (e-f).

Fouilloux B, Cinotti, E. The nail in confocal microscopy The Nail, What's New? 2013

HOW TO PROCEED: CONFOCAL MICROSCOPY



S. Debarbieux (France)

(g) Dermoscopy of the nail plate showing the irregularity of thickness and pigmentation of lines, a Hutchinson's sign and a slight pigmentation of the hyponychium.
(h) RCM ex vivo examination showing nests of moderately refractile atypical large nucleated cells in the papillary dermis (green arrows).
(i) Histopathologic correlation: interpapillary epithelial projections colonized by atypical melanocytes (h-i).

Fouilloux B, Cinotti, E. The nail in confocal microscopy The Nail, What's New? 2013

HOW TO PROCEED: IMMUNOLABELING

The use of immunolabeling with anti P16, BAP-1 and K167, GRAF, V600E brings an additional diagnostic argument.

Unfortunately, immunolabeling does not state with **certainty** whether the lesion is malignant or benign.

HOW TO PROCEED: GENETIC APPROACH

DNA ploidy investigations have been used to differentiate subungual nevi from melanoma.

Multiple gene amplification is found in subungual melanomas early in their progression, about one half of them in the **cyclin D1 locus**.[1]

Comparative **G**enomic **H**ybridization (CGH) has allowed the diagnosis of subungual melanoma to be made in a 13-y-o girl.[2]

Unexpectedly, **CGH** and **F**luorescence **I**n **S**itu **H**ybridization (FISH) have detected and spatially mapped aberrations in the skin adjacent to acral melanoma.[3,4]

1. Bastian BC, Oncogene 2003; 22: 3081-6
2. Takata M. Human Pathol. 2003; 34:89-92
3. North JP, Kageshita T, Pinkel D, et al. J Invest Dermatol 2008; 128:2024-28.
4. Romano RC, Shon W, Sukov WR Int J Surg Pathol 2016; 24: 512-8

HOW TO PROCEED SURGICALLY

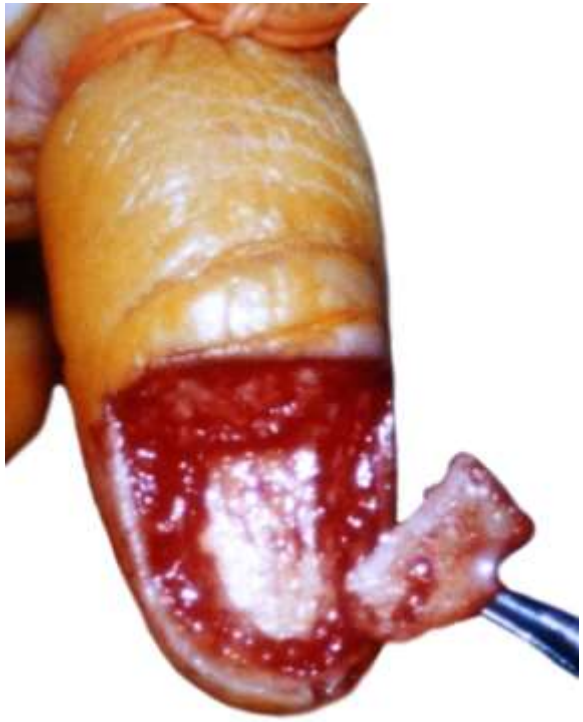
Amputation of the terminal phalanx is no longer performed. As prognosis was significantly correlated with the Breslow thickness, regression and ulceration, the current surgical management (disarticulation with respect to functional surgical excision) did not influence the prognosis of NUM.

B. Richert-Baran (Belgium)

Dika E, Patrizi A, Fanti PA et al, Dermatology 2016; 232:177-84

HOW TO PROCEED SURGICALLY

Nevertheless there is a plausible explanation for the tendency of certain melanoma types to recur locally despite apparently having undergone complete excision. **U**sing array **C**omparative **G**enomic **H**ybridization and **F**luorescence **I**n Situ **H**ybridization to detect and spatially map aberrations in the skin adjacent to acral melanoma, North et al 2008) have shown that the ''field cells'' extend *significantly into seeming normal skin*.



A. Ankri (France)

North JP, Kageshita T, Pinkel D et al. J Invest Dermatol 2008, 128:2024-8

CONCLUSION

The dermoscopic patterns of Non Melanoma Nevus (NMN) in children are different from those in adults.

Dermoscopic finding show that NMNs have more melanoma-associated features in children than in adults.
Children present darker and more multicolored melanonychia than adults, where the triangular sign, also known as a crucial sign of nail unit melanoma, is found in 5% to 25% in melanomas. However, it can also be found in benign nevi, especially in children presenting 24.1% with this sign.
Therefore the triangular sign should not be considered as an indicator for biopsy in children. In addition, irregular patterns, Hutchinson's sign, non melanoma Hutchinson's sign and dots/globules are more frequent in children.

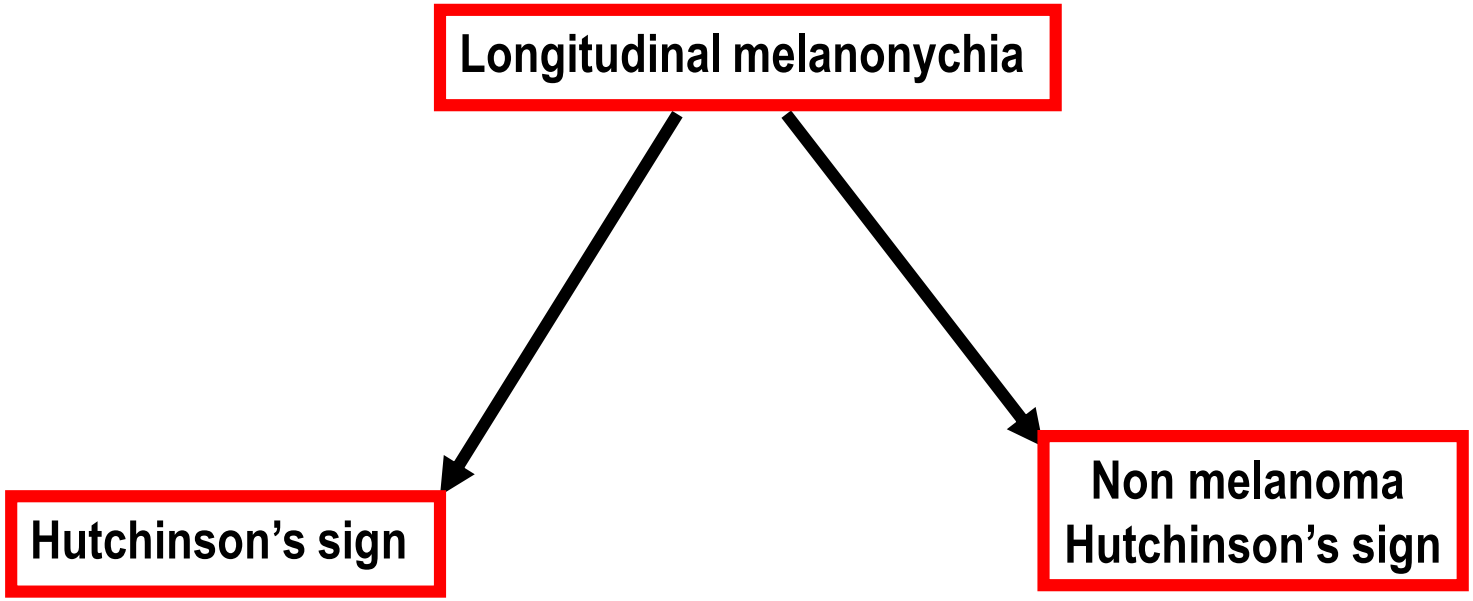
Ohn J, Choe YS, Mun JH. JAAD 2016; 75:535-40

HUTCHINSON'S SIGN

HUTCHINSON'S SIGN

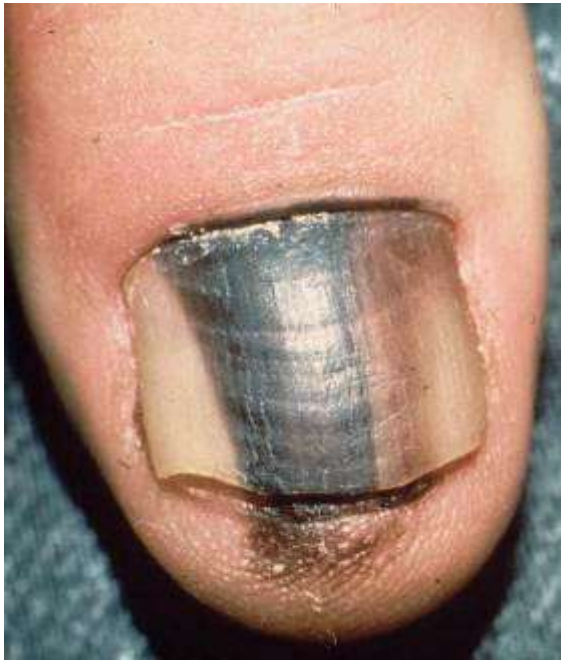
Corresponds to the lateral extension of a nail melanoma onto the periungual tissue

- Three physical signs are of utmost importance



- Longitudinal melanonychia can be seen in either

HUTCHINSON'S SIGN



Subungual melanoma

E. Haneke (Germany)

HUTCHINSON'S SIGN

Melanoma

C. Beylot (France)

HUTCHINSON'S SIGN

Acral lentiginous melanoma

HUTCHINSON'S SIGN

J. Mascaro (Spain)

Acral melanoma

HUTCHINSON'S SIGN

E. Duhard (France)

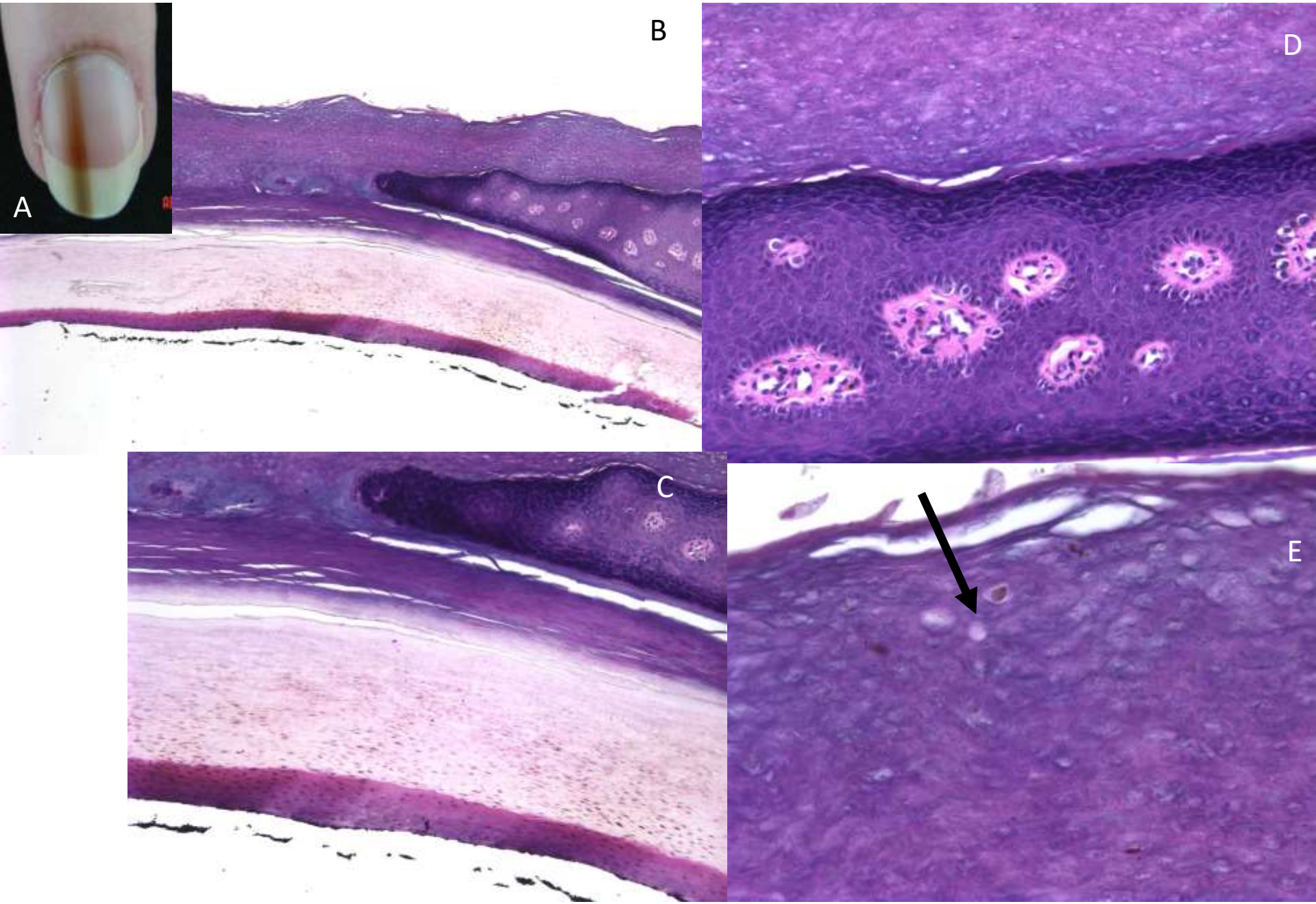
Melanoma

HUTCHINSON'S SIGN

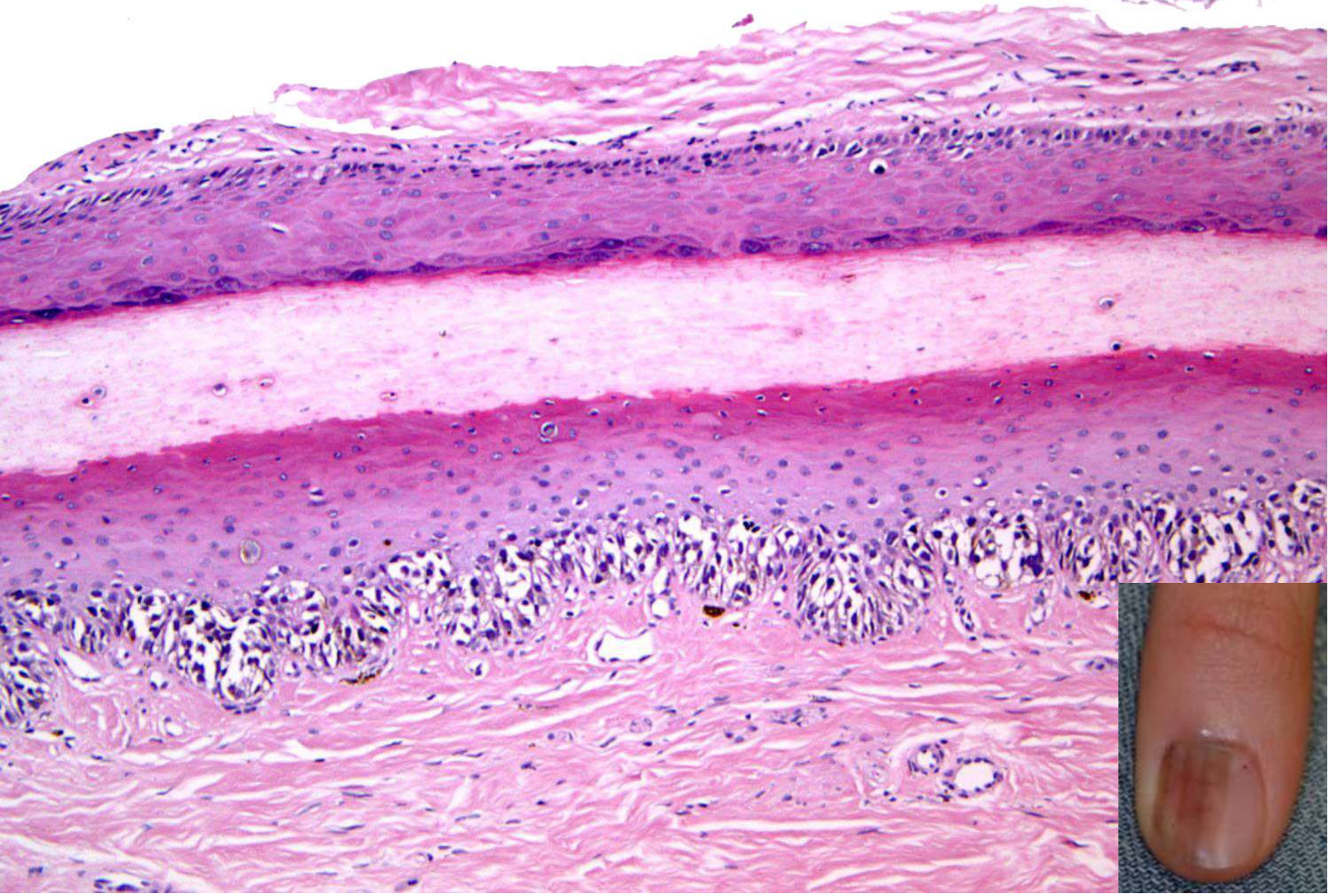
Acral lentiginous melanoma

C. Taylor, MD (USA)

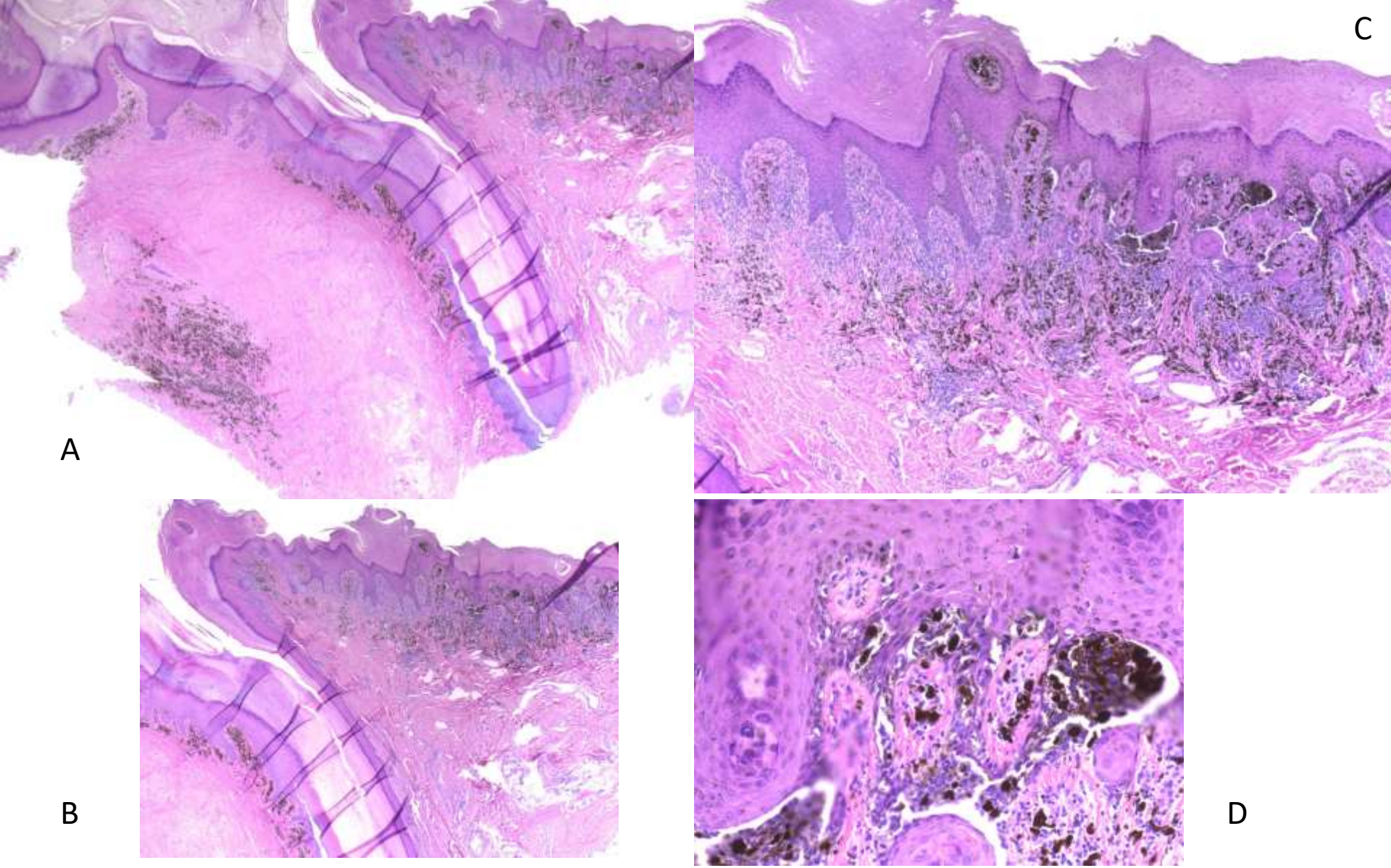
HUTCHINSON'S SIGN



There may be only epidermal pigmentation depending on the area sample. As such, this can cause confusion with benign simulants, such as melanocytic nevi. (B. Ruben, USA)

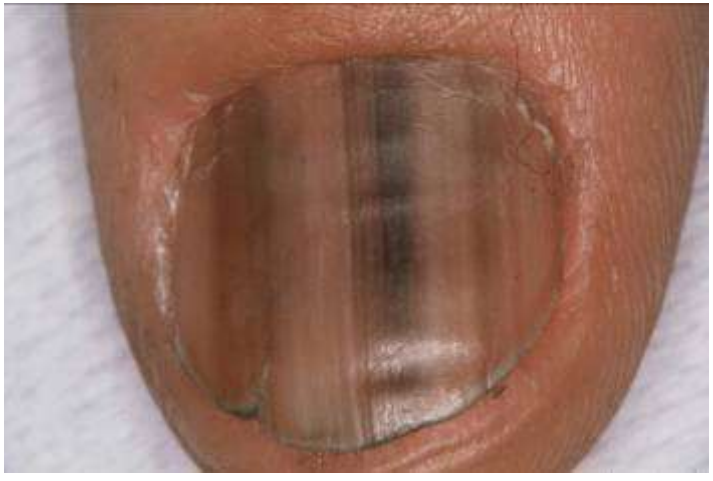


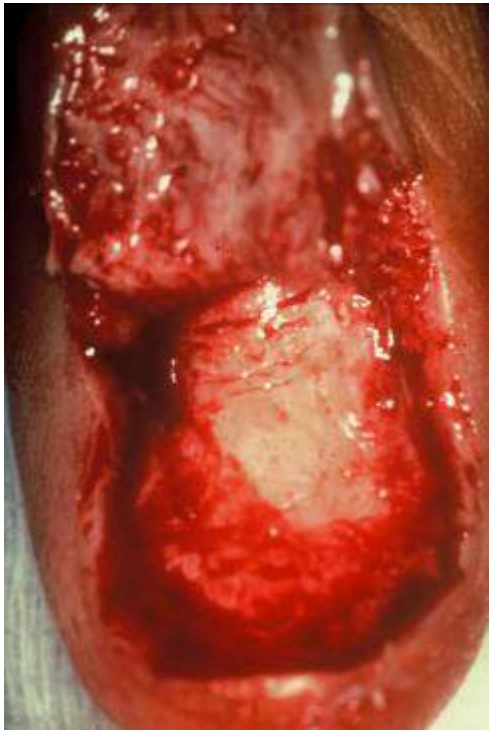
Histologic features can be subtle. There may be a sparse junctional melanocytic proliferation which lacks striking cytologic atypia or suprabasal scatter of melanocytes. (B. Ruben, USA)

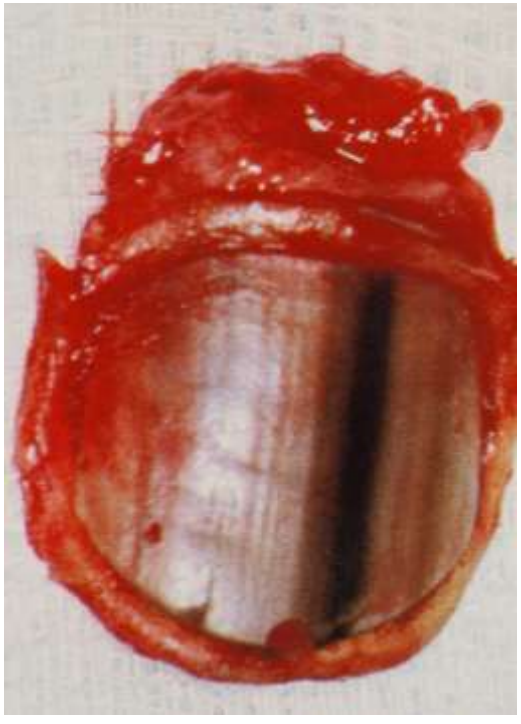


Histopathology of HS is virtually identical to the lentiginous pattern of ALM in situ of palm and soles. Atypical melanocytes, often polygonal or even dentritic are dispersed mainly in the basal layer of the periungual epidermis with relatively few cells, being localized suprabasally. (B. Ruben, USA)

LONGITUDINAL MELANONYCHIA [1]

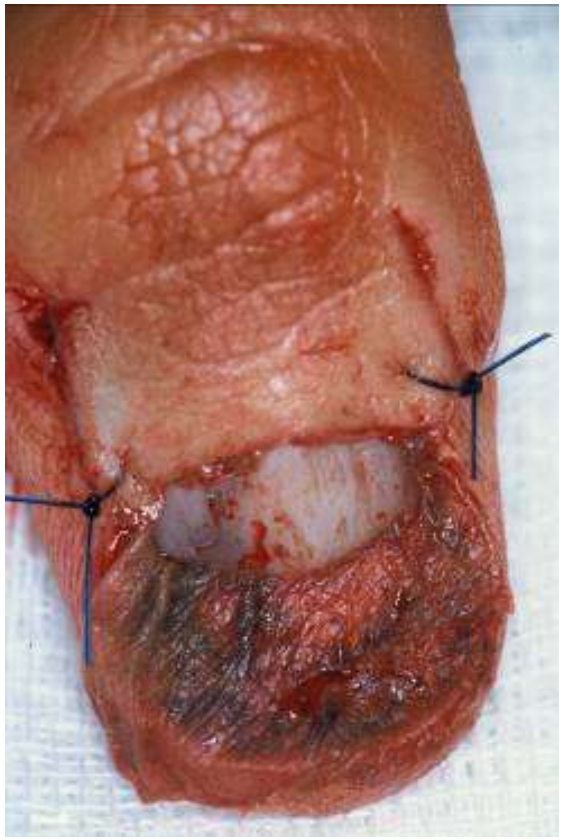






Atypical melanocytic hyperplasia

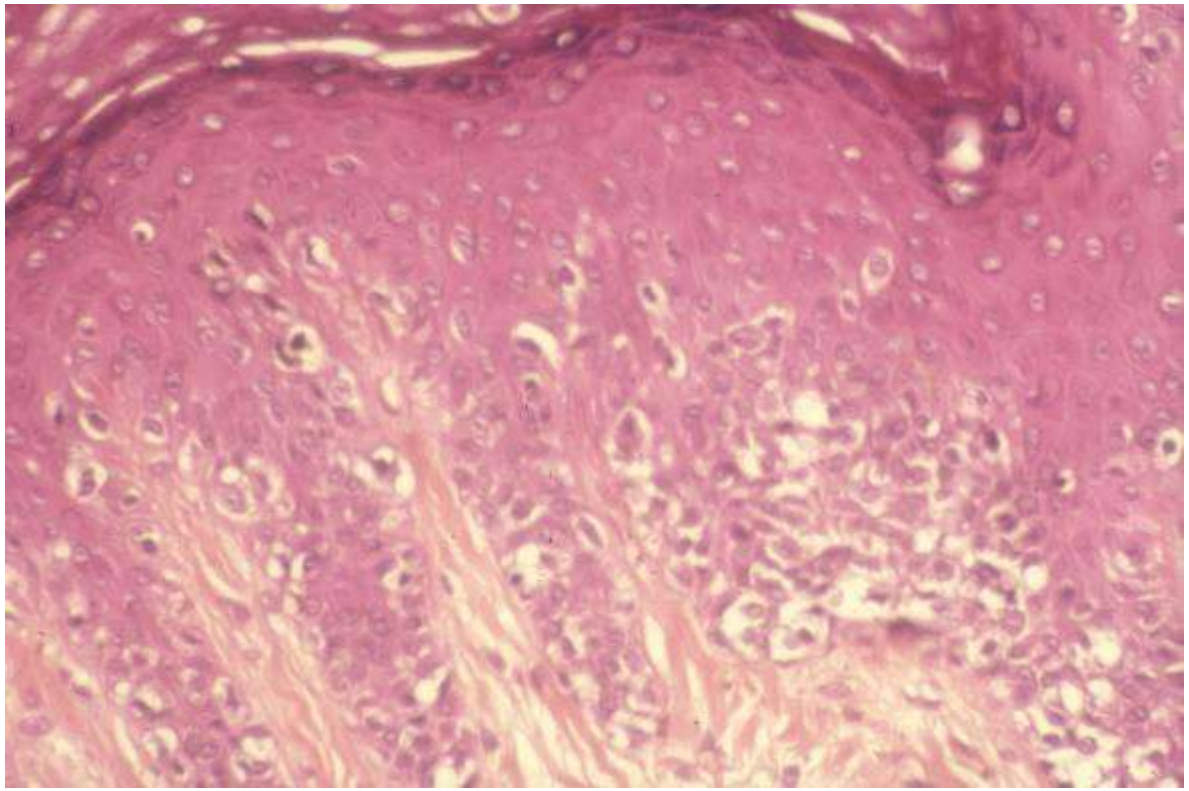
LONGITUDINAL MELANONYCHIA [2]



post op 6 m. later

HUTCHINSON'S SIGN [3]

Epidermis of the NB graft



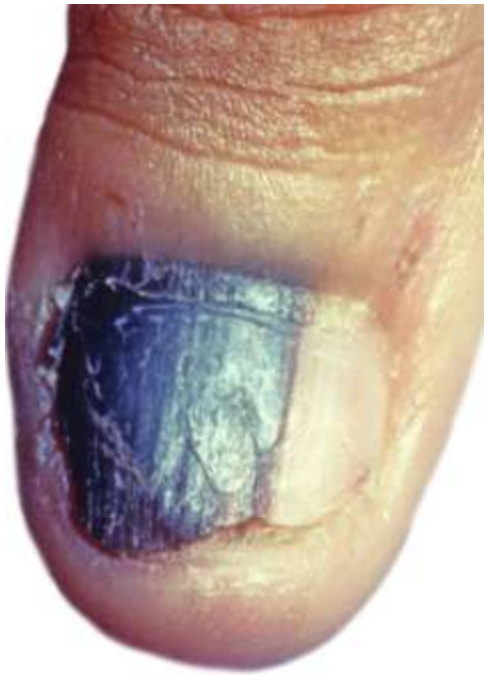
Acrolentiginous melanoma in situ

NON MELANOMA HUTCHINSON'S SIGN

1. Ethnic pigmentation
2. Illusory Appearance

[1] ETHNIC PIGMENTATION

[2] ILLUSORY APPEARANCE

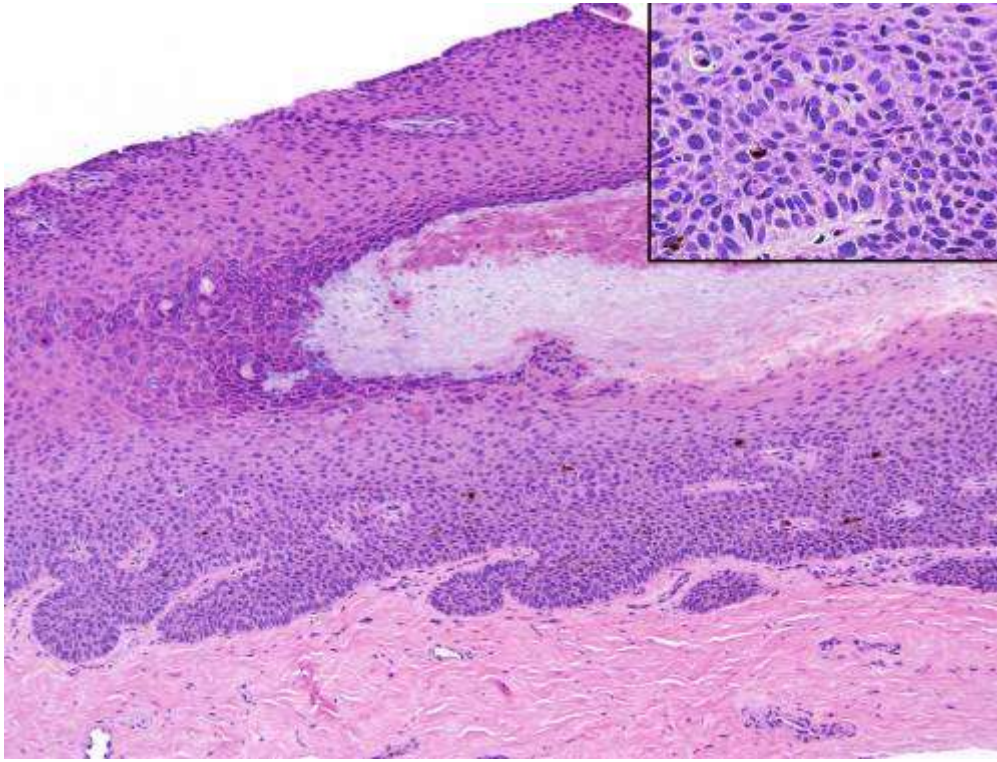


NON MELANOMA HUTCHINSON'S SIGN

3. NON MELANOMA NAIL UNIT CANCER

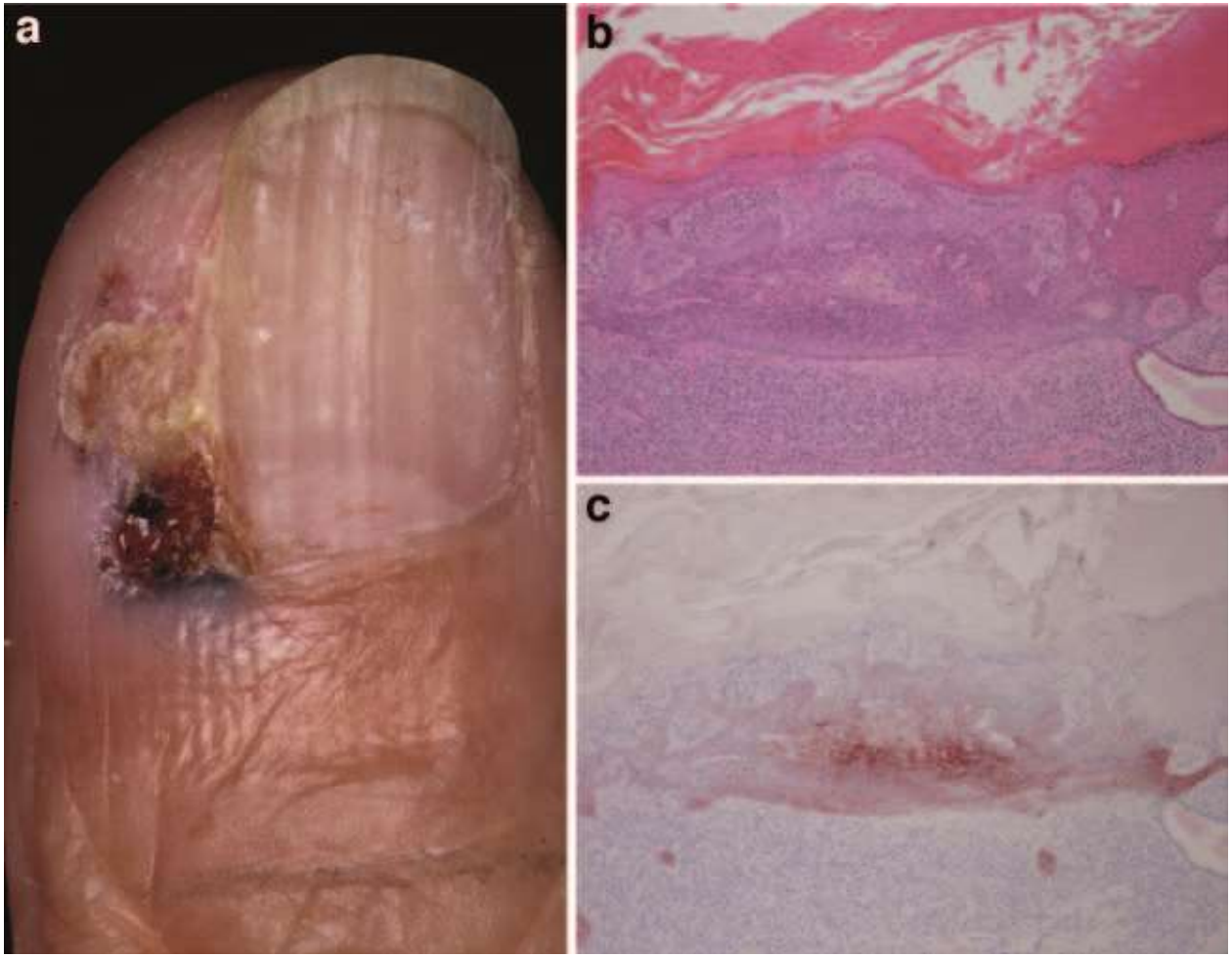
- 3.1 Bowen's Disease
- 3.2 Basal Cell Carcinoma
- 3.3 Epidermodysplasia verruciformis

NON MELANOMA UNIT CANCER
[3.1] BOWEN'S DISEASE



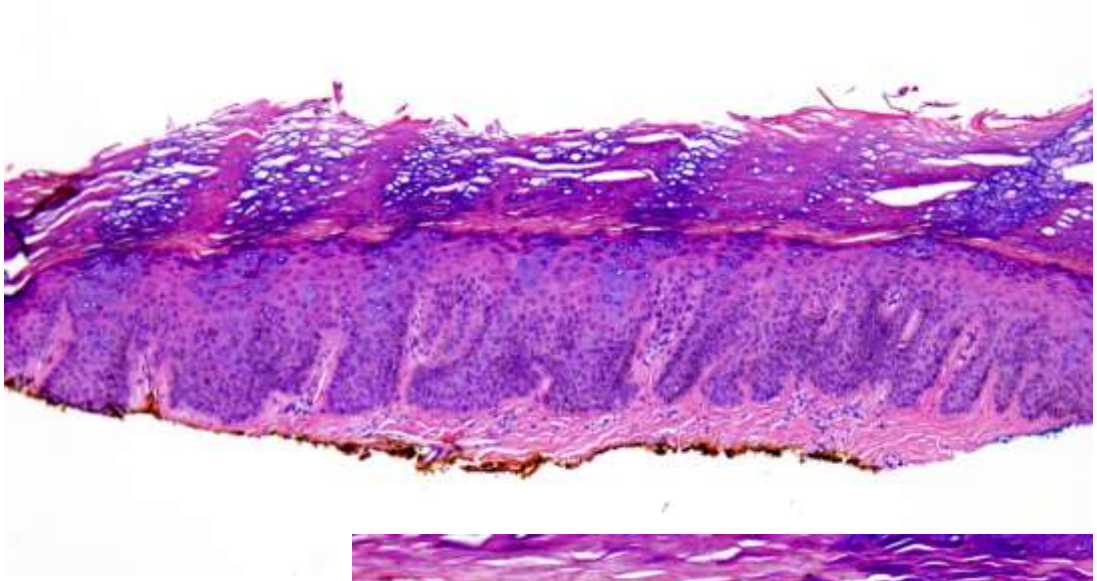
- Baran R, Simon C, Longitudinal melanonychia: a symptom of Bowen disease. JAAD 1988. 18:1359-60
- Saxena A, Kasper DA, Campanelli CD et al.Pigmented Bowen's disease clinically mimicking melanoma of the nail. Dermatol Surg 2006; 32: 1522-1525

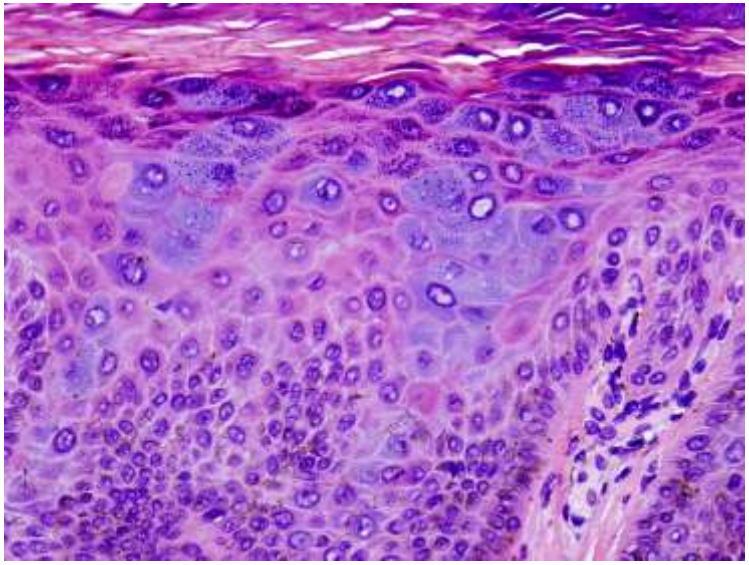
NON MELANOMA UNIT CANCER
[3.2] BASAL CELL CARCINOMA



- Okuyama R et al. Subungual Basal Cell Carcinoma in an Elderly Japanese Woman. Acta Dermato-Vener 2006; 86:261.

NON MELANOMA UNIT CANCER
[3.3] EPIDERMODYSPLASIA VERRUCIFORMIS





- Cutlan JE et al. Dermatol Online J 2010; 16(8): 12

NON MELANOMA HUTCHINSON'S SIGN

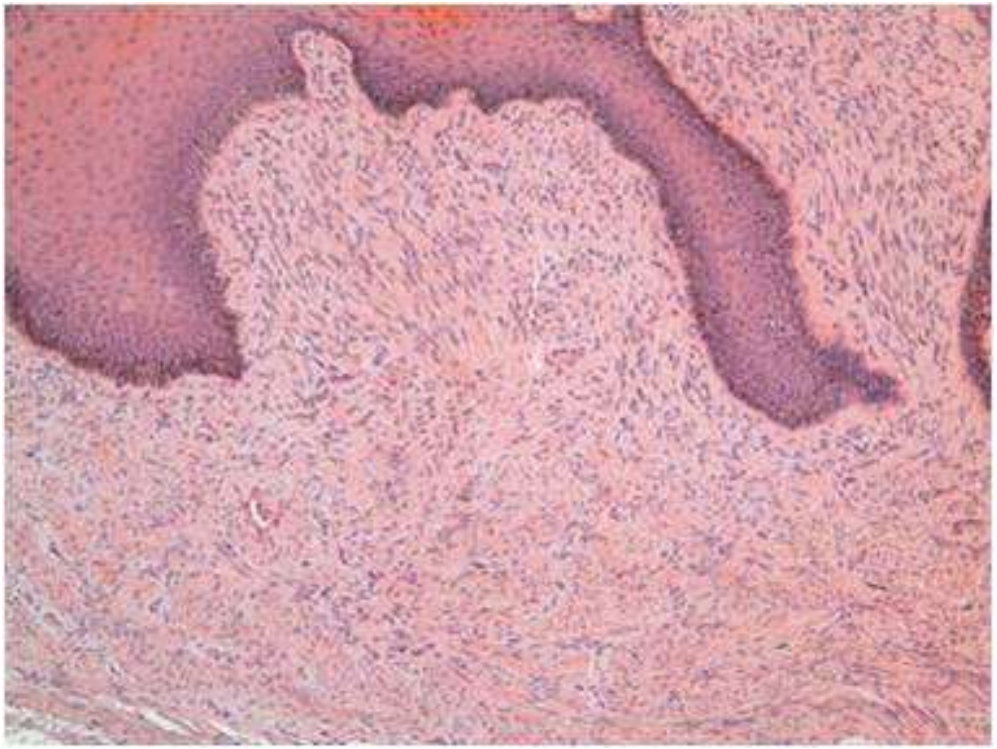
4. BENIGN TUMORS OF THE NAIL UNIT

4.1 Onychomatricoma
4.2 Superficial acral fibromyxoma

BENIGN TUMORS OF THE NAIL UNIT
[4.1] ONYCHOMATRICOMA

BENIGN TUMORS OF THE NAIL UNIT
[4.2] SUPERFICIAL ACRAL FIBROMYXOMA

Kwok C et al (UK)



NON MELANOMA HUTCHINSON'S SIGN

5. NAIL AND MUCOUS MEMBRANE PIGMENTATION

5.1 Laugier syndrome
5.2 Peutz-Jeghers syndrome

NAIL and MUCOUS MEMBRANE
[5.1] LAUGIER SYNDROME

NAIL and MUCOUS MEMBRANE
[5.2] PEUTZ-JEGHERS SYNDROME

NON MELANOMA HUTCHINSON'S SIGN

6. NAIL UNIT NEVI

1. Congenital nevus
2. Acquired nevus
3. Subungual Spitz nevus
4. Pigmentation following excision of nevi
5. Regressing nevoid melanosis in childhood

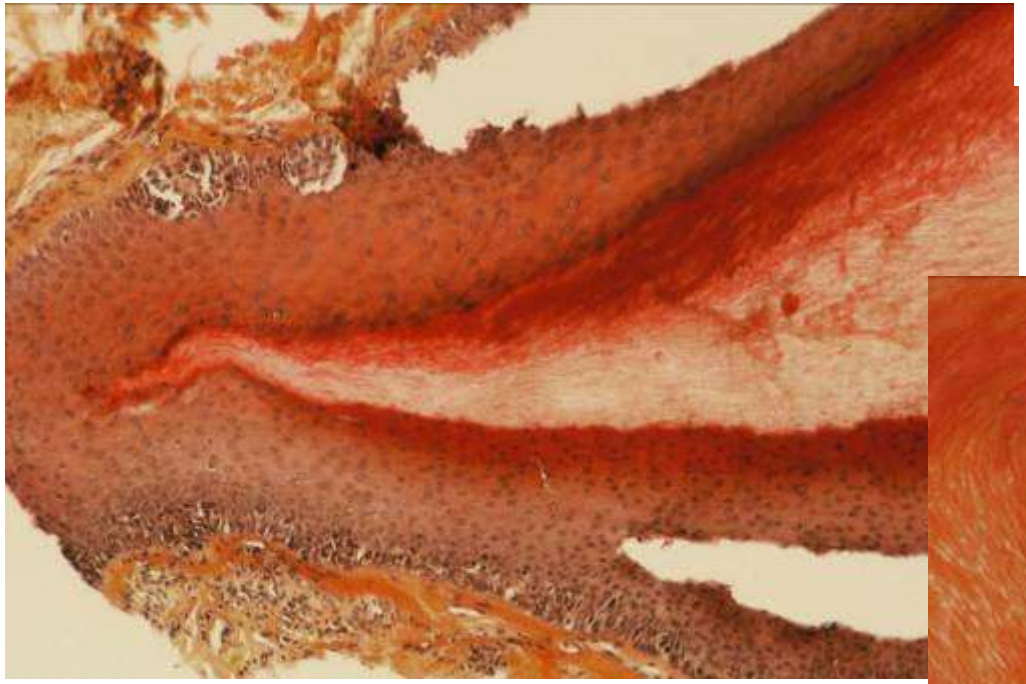
NAIL UNIT NEVI
[6.1] CONGENITAL NEVUS

L. Thomas (France)

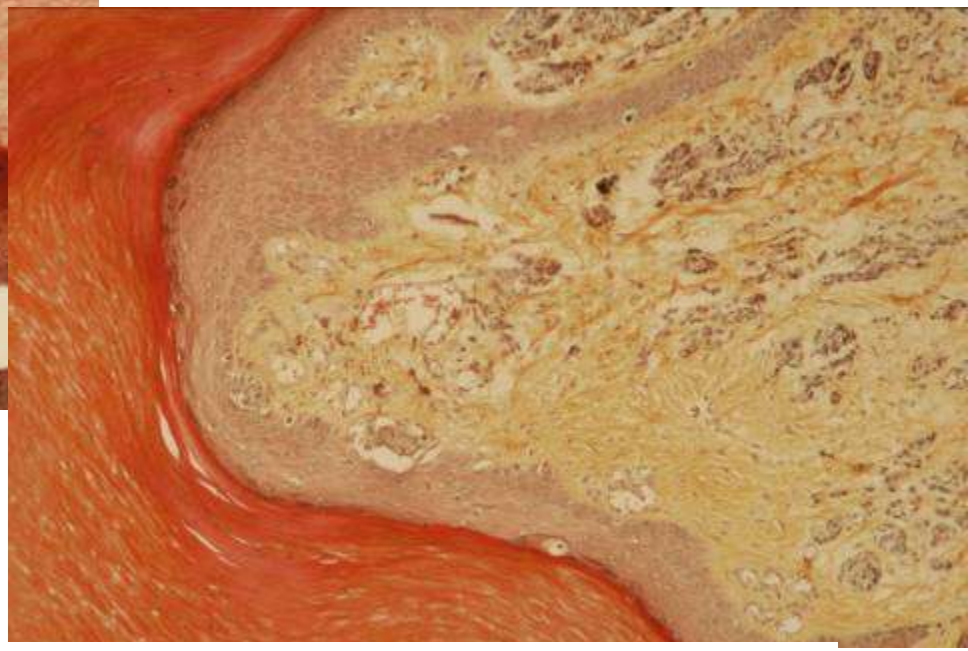
Periungual pigmentation is not always evident of subungual melanoma because it can be seen in both melanoma and melanocytic nevus.
However, there is a wide difference in dermatoscopic features between the two.
A linear brushy pattern indicates the benign condition and a **diffuse haphazard pattern indicates the malignant condition.**
In fact, usually most of the dermatoscopic features observed in congenital nevi are very similar to those observed in melanoma.
Therefore, it is not possible to extrapolate the dermatoscopic algorithms used in adults to very early pediatric observations

NAIL UNIT NEVI
[6.1] CONGENITAL NEVUS

NAIL UNIT NEVI
[6.1] CONGENITAL NEVUS



Matrix & eponychium

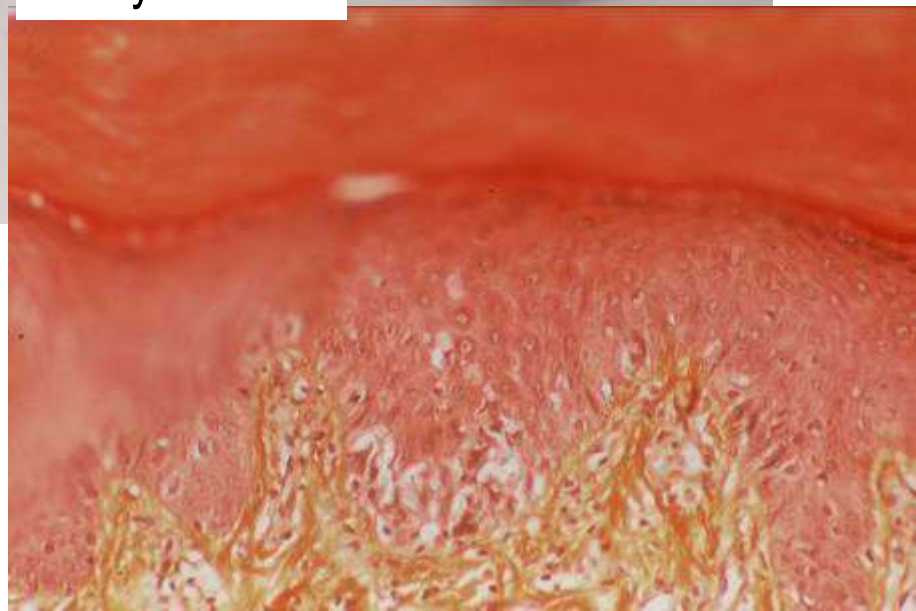


Eponychium and reflection of the epidermis of the PNF

NAIL UNIT NEVI
[6.1] CONGENITAL NEVUS

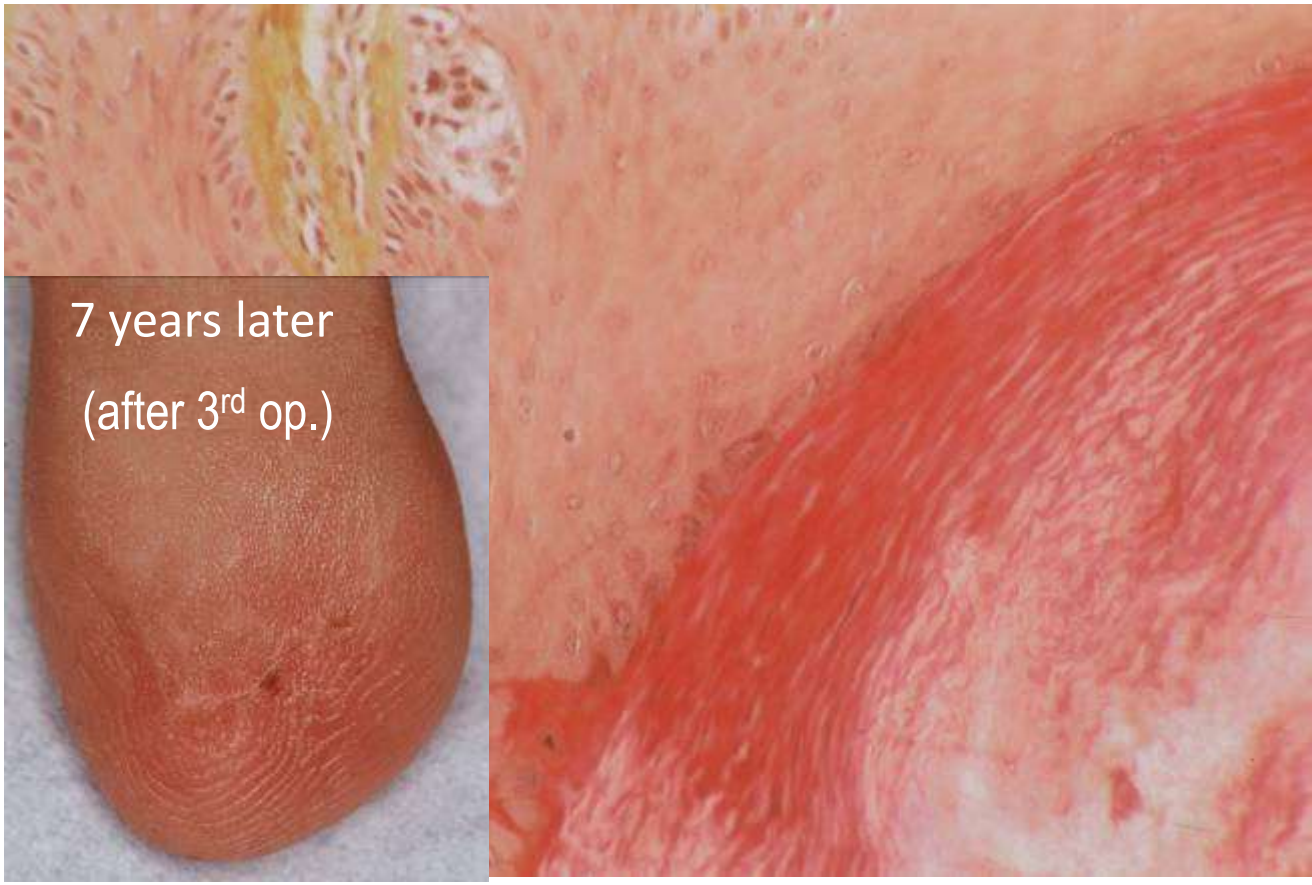
Implantation cyst

One year later



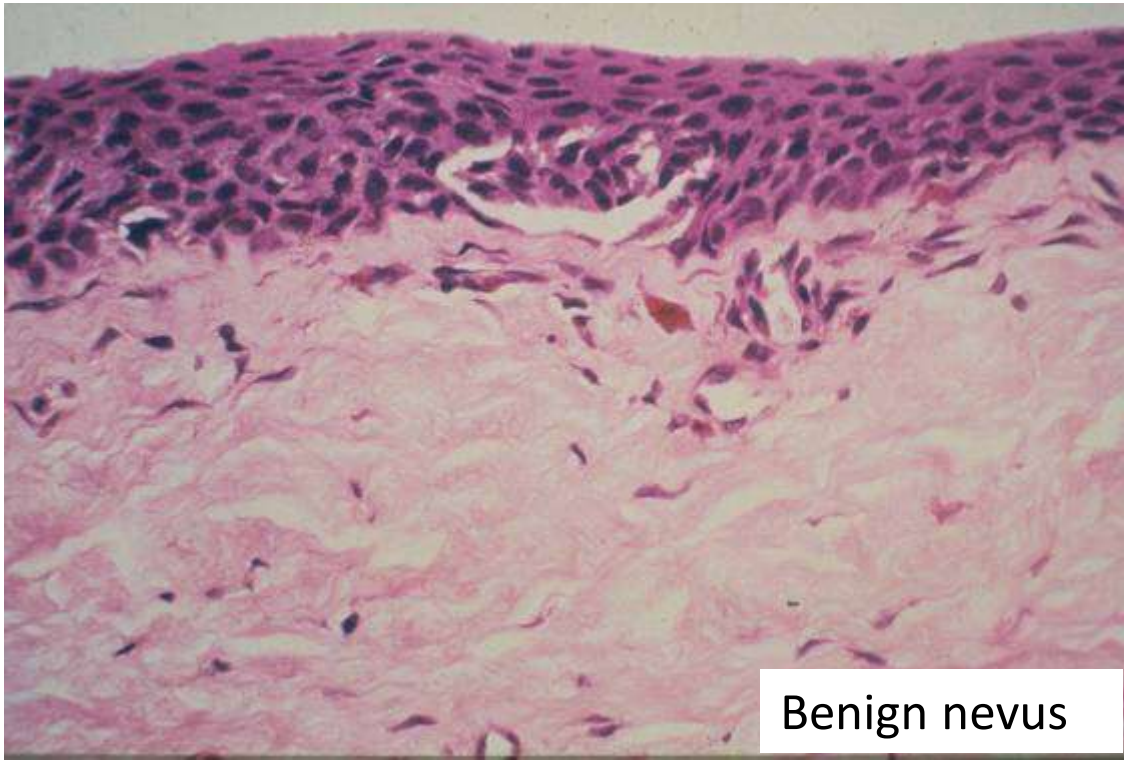
Recurrent nevus on the cyst

NAIL UNIT NEVI
[6.1] CONGENITAL NEVUS



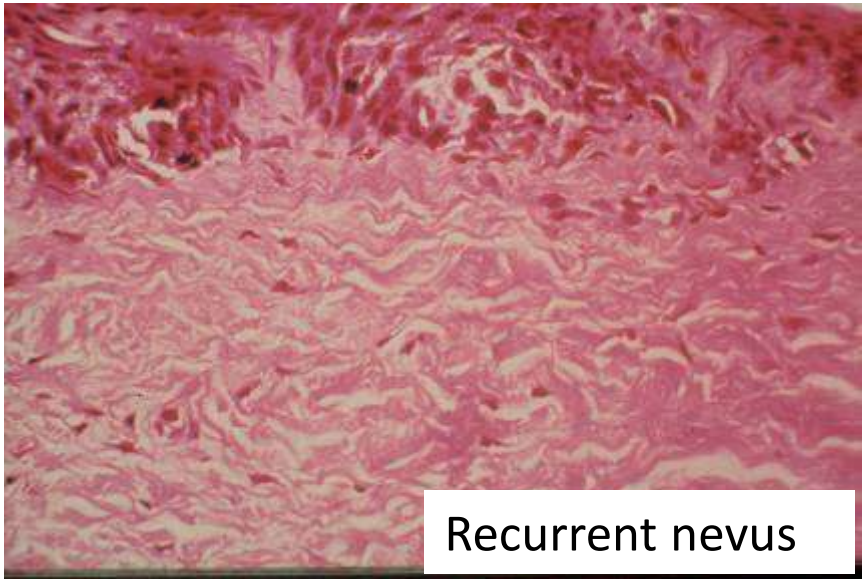
NAIL UNIT NEVI
[6.2] ACQUIRED NEVUS

1



Kopf AW and Waldo E. (USA)

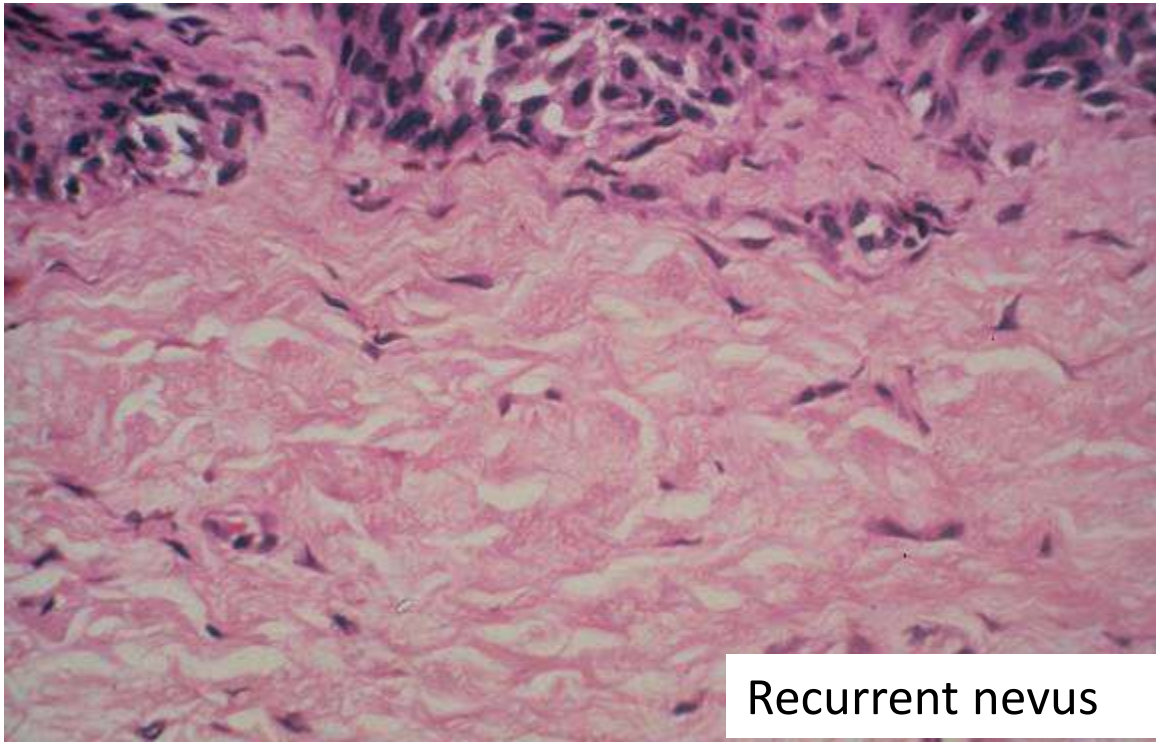
NAIL UNIT NEVI
[6.2] ACQUIRED NEVUS



Recurrent nevus

2

NAIL UNIT NEVI
[6.2] ACQUIRED NEVUS



Recurrent nevus

3

NAIL UNIT NEVI
[6.3] SUBUNGUAL SPITZ NEVUS

Dominguez-Cherit J (Mexico)

NAIL UNIT NEVI
[6.4] REGRESSING NEVOID MELANOSIS IN CHILDHOOD



Regressing nevoid melanosis in childhood

NON MELANOMA HUTCHINSON'S SIGN

7. SYSTEMIC CONDITIONS

1. AIDS
2. Pregnancy
3. Pituirary tumor and Addison's disease
4. Malnutrition
5. Drugs

SYSTEMIC CONDITION
[7.1] AIDS

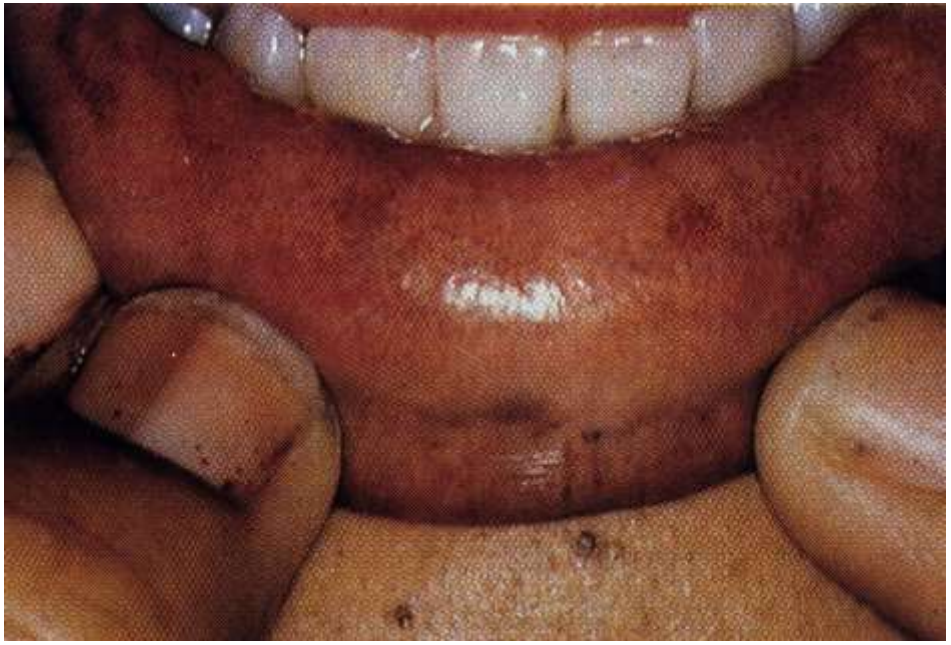
R. Arenas, MD (Mexico)

JPh Lacour, MD (France)

HIV positive subjects

SYSTEMIC CONDITION
[7.2] PREGNANCY

SYSTEMIC CONDITION
[7.3] PITUITARY TUMOR AND ADDISON'S DISEASE



Addisson disease (QL Erickson, Sweden)

- Minocycline
- Zidovudine
- Amlodipine
- Hydroxycarbamide

NON MELANOMA HUTCHINSON'S SIGN

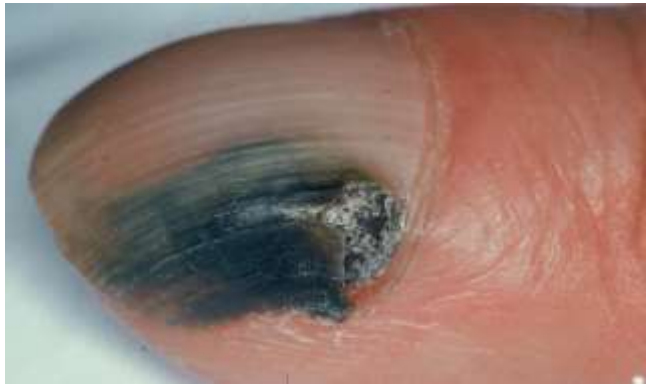
8. EXOGENOUS CONDITIONS

8.1 Bacterial and fungal infection

8.2 Trauma induced pigmentation
8.2.1 Friction
8.2.2 Nail biting and piting
8.2.3 Boxing
8.2.4 Subungual hemorrhage

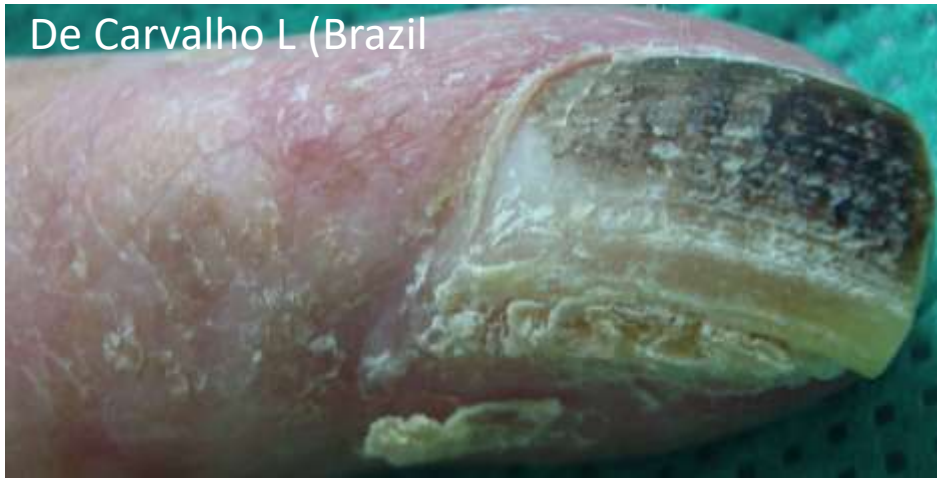
8.3 Post inflammatory pigmentation
8.4 Radiation therapy
8.5 Silver nitrate nail staining

EXOGENOUS CONDITIONS
[8.1]



8.1 Bacterial infection
Pseudomonas

8.1 Fungal infection
T. rubrum



8.1 Fungal infection
Phialophora spp

EXOGENOUS CONDITIONS
[8.2]Trauma induced pigmention

EXOGENOUS CONDITIONS
[8.3; 8.4, 8.5]

Blatière V. (France)

Hwang JI (South Korea)

EXOGENOUS CONDITIONS
[8.2.4]

Sinclaire (Australia)

Subungual hemorrhages

What about LM with HS regression in adults? [1]

Charpentier, MD (France)

What about LM with HS regression in adults? [2]

- Regressing thin malignant melanoma has a metastatic potential[1] and look for concurrent regional lymph node metastases.[2]
- Great attention should be devoted to identification of regression in melanoma clinically and histopathologically, evaluating the prognostic implications which regression might indicate.[3]
- Regressed subungual melanoma may simulate cellular blue nevus.[4]
- The potential poor prognosis associated with regression is that the disappearance of a portion of the tumor may lead to underestimation of the original Breslow thickness.

1 Gromet MA et al. Cancer 1978; 42: 2282-92; 2 Shaw HM et al. Histopathology 1989; 15: 257-65.
3 Shai A et al. J Dermatol Surg Oncol 1994; 20: 342-5; 4 Yang CH et al. Dermatol Surg 2006; 32: 577-81.

What about LM with HS regression in adults? [3]

Quite the contrary!

- White et al reported that in thin melanoma (<1 mm), the presence of regression is associated with a lower likelihood of position SLN findings.[5,6]
- French guidelines advocate SLNB in the case of Breslow thickness greater than 1.0 mm, and or ulceration of the primary melanoma and/or histologic regression of the primary melanoma.[7]

5. White RL et al. Ann Surg Oncol 2011; 18: 3593-600 6.Louari S et al. JEADV 2012; 26: 1230-5. 7. Ribero S et al. JAMA Dermatol 2015; 151: 1301.7.

The relevance of Hutchinson’s sign to the diagnosis of subungual melanoma has withstood the test of time. If the possibility of false Hutchinson’s variants is kept in mind, the clinician is less likely to over diagnose this important malignancy and more likely to address the problem with confidence and precision.


THANK