

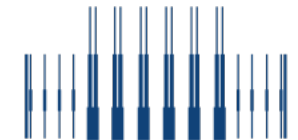


Euroderm excellence course

Dermoscopy for diagnosis of pigmented and non-pigmented lesions

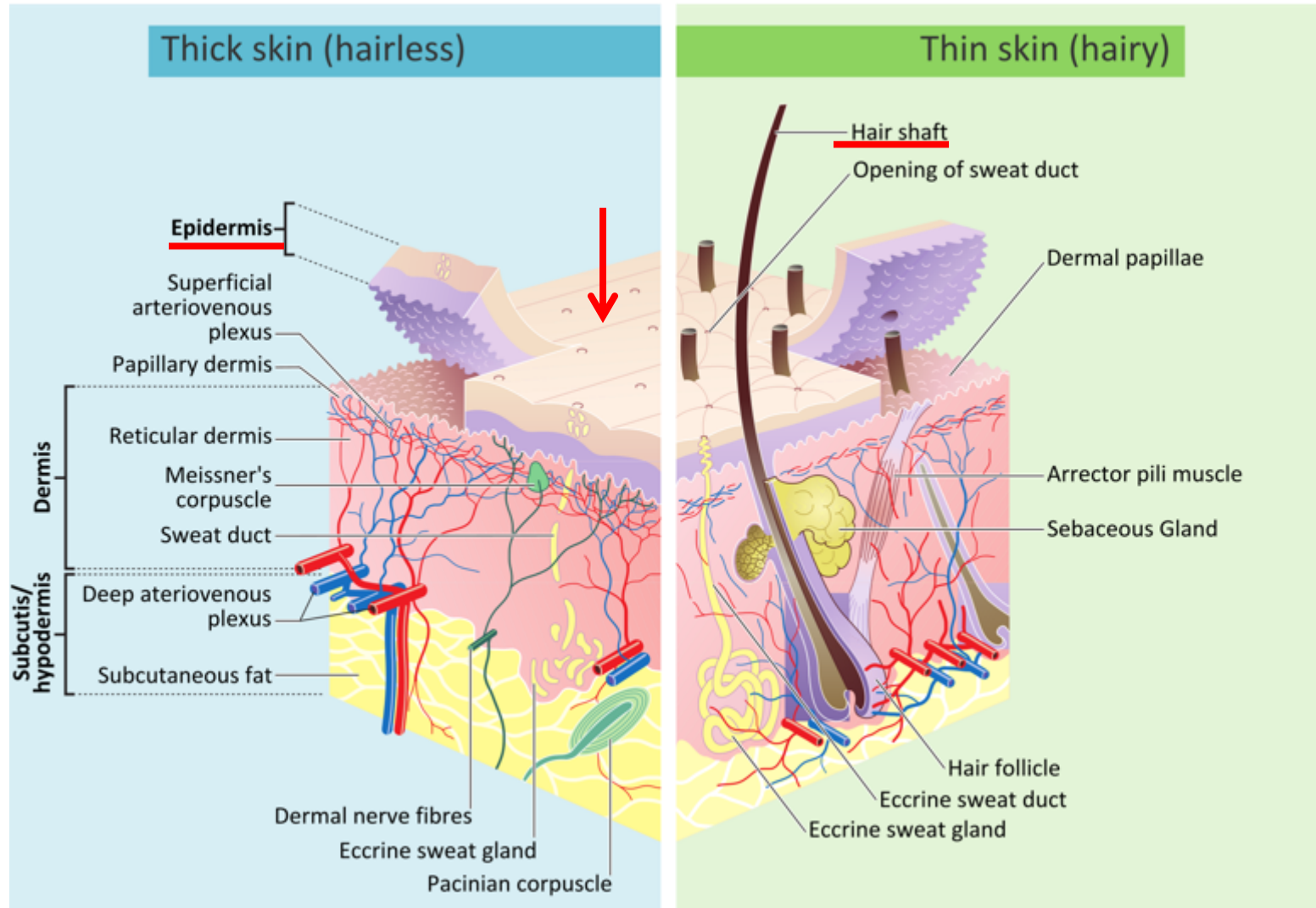
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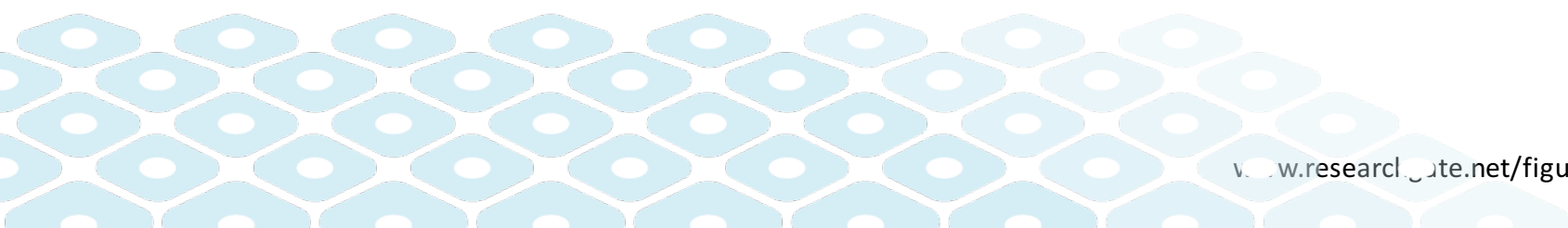
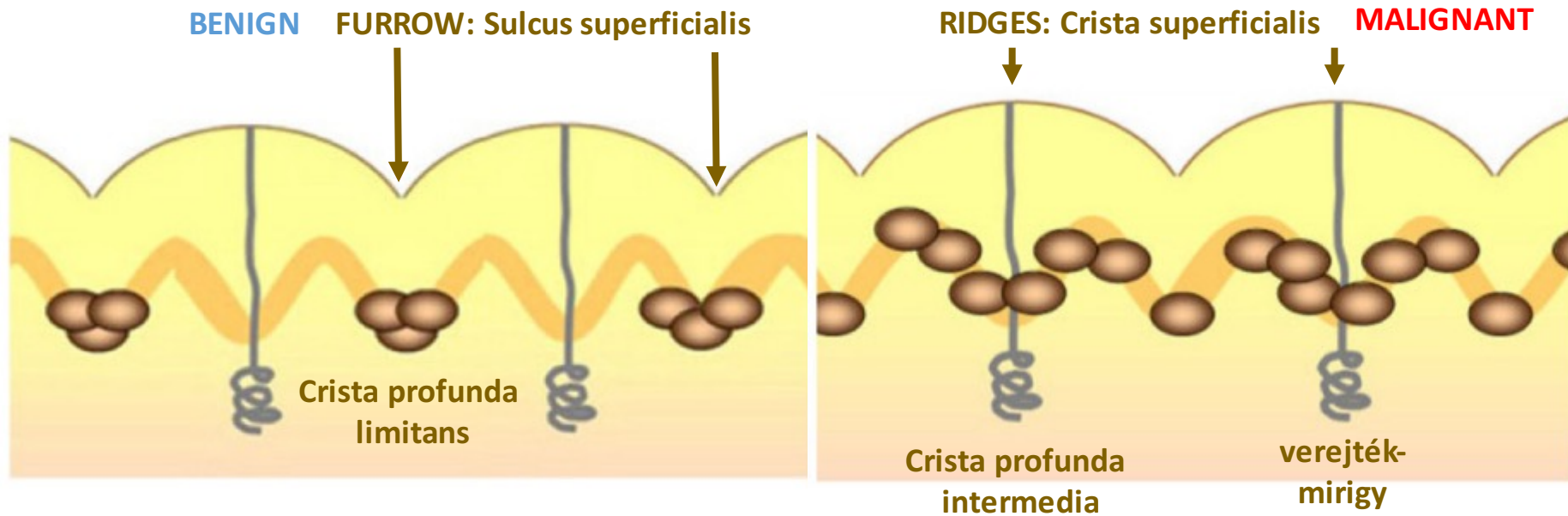
MTA
Kiváló
Kutatóhely

Anatomy of the hairless skin



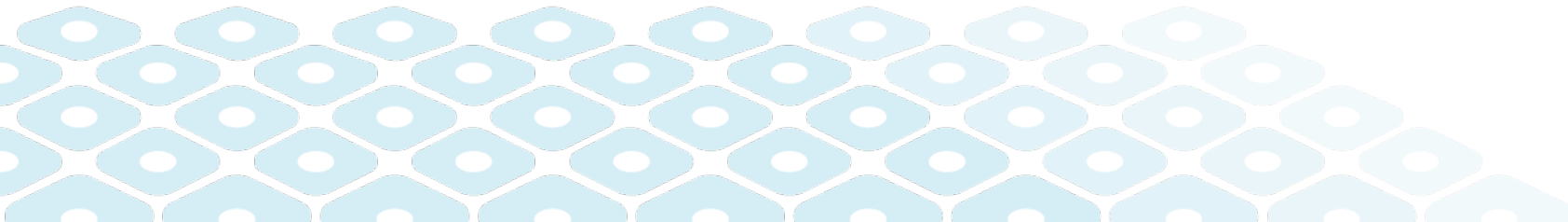


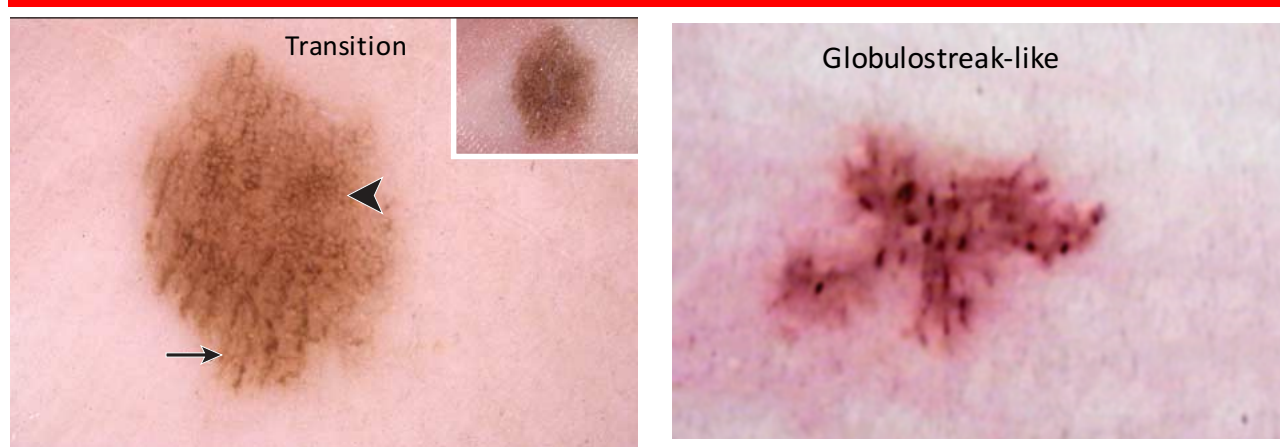
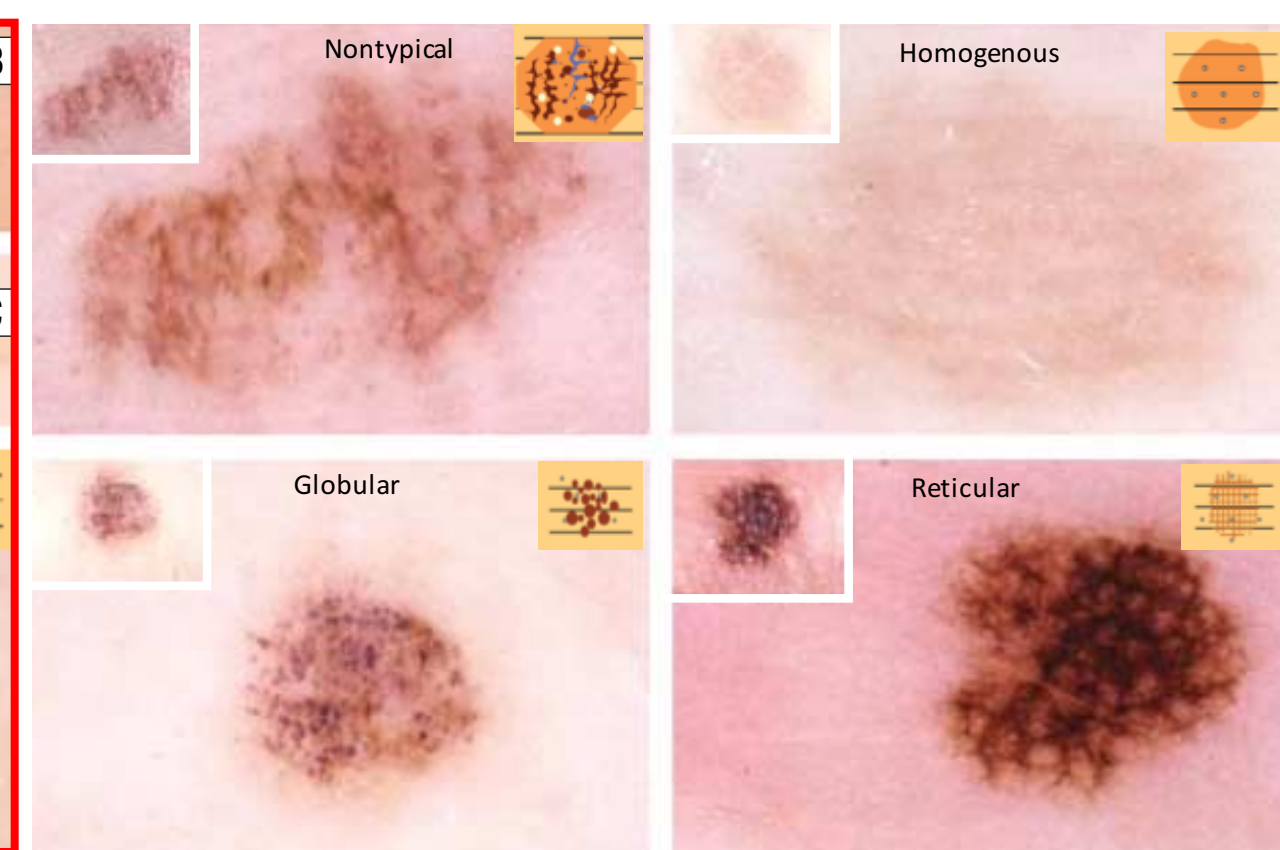
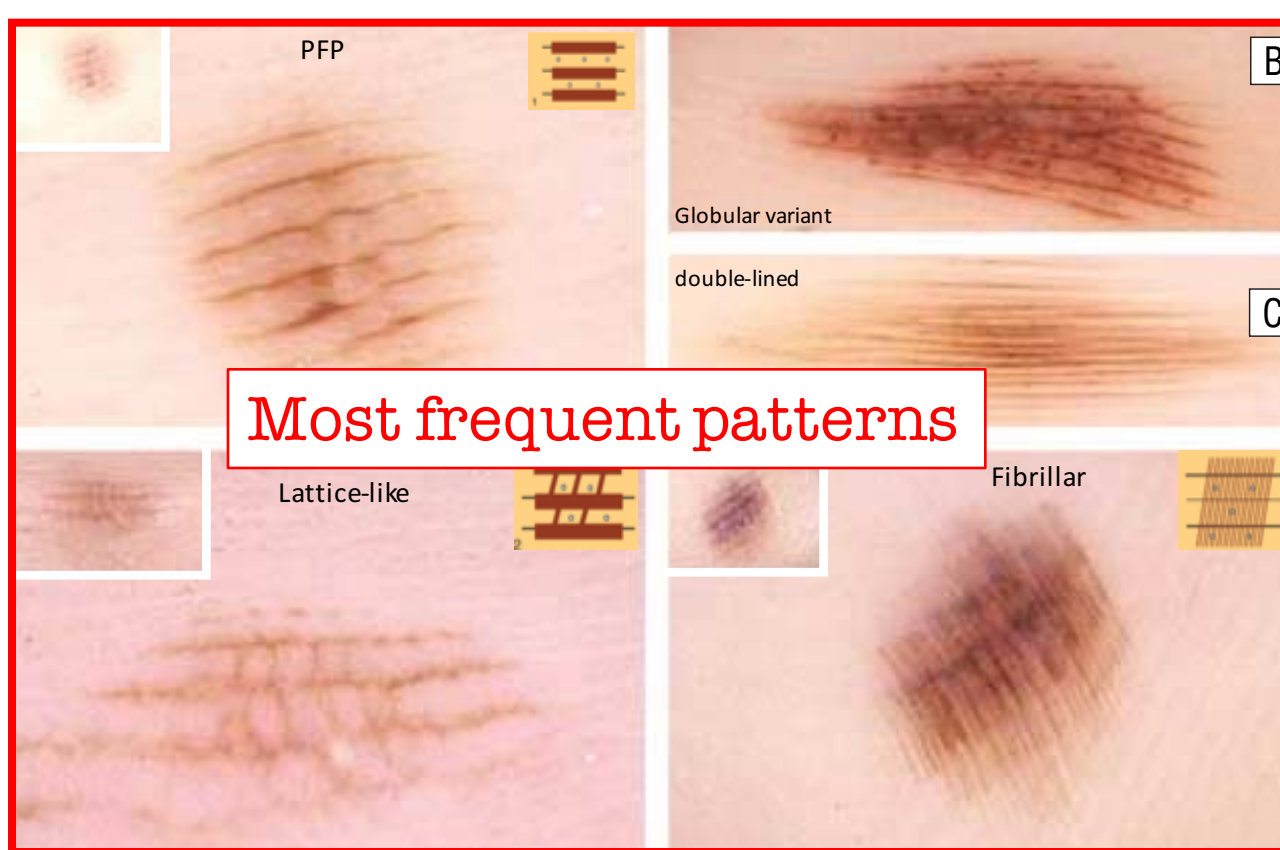
Furrows and ridges



NB: parallel ridge pattern is not always malignant!

- Congenital acral nevus
- Subcorneal hemorrhage (trauma: playsation)
- Exogenous pigmentation
- Drug induced pigmentation (5-FU)
- Systemic disease: Peutz-Jeghers syndrome, Laugier-Hunziker-Baran syndrome

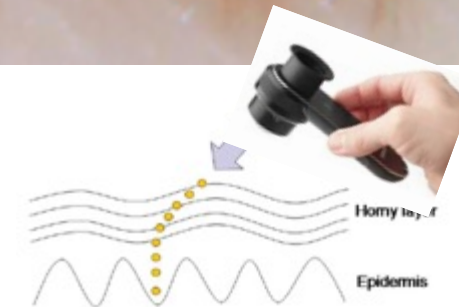
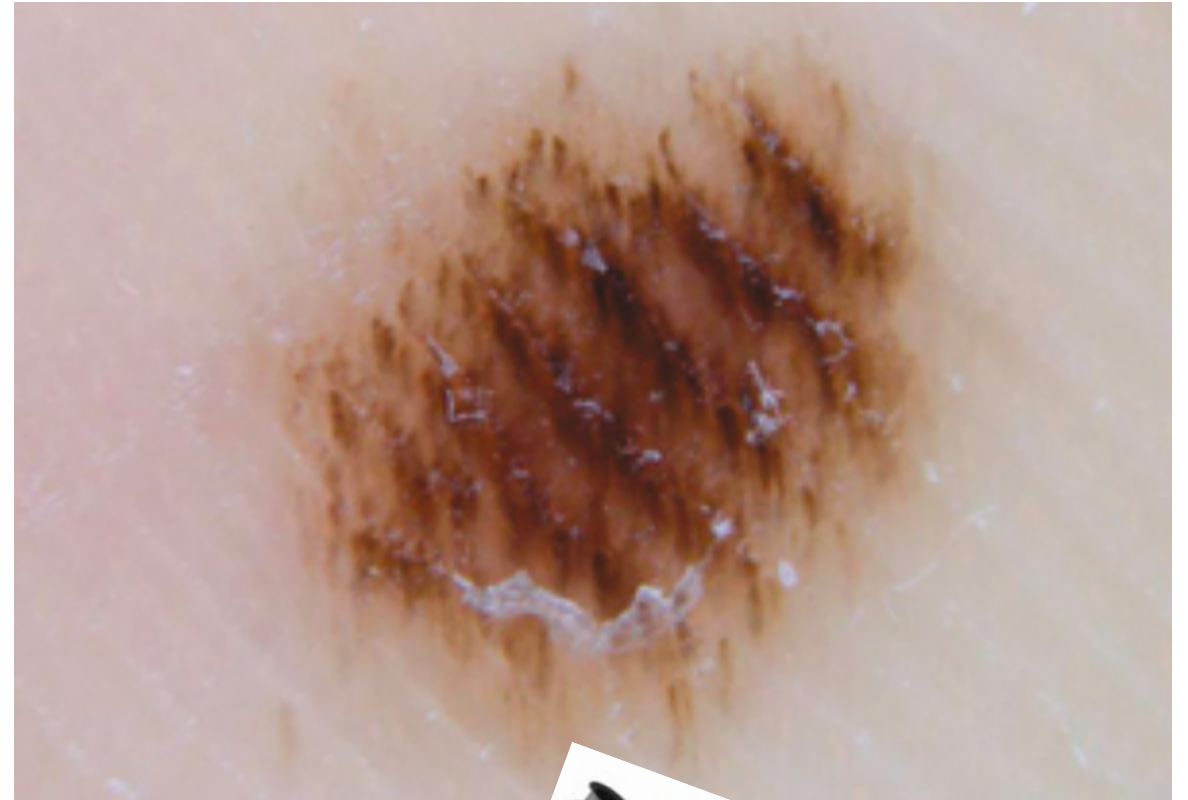




Acquired acral nevi: dermoscopy patterns

Fibrillar pattern in acral nevi (15-20%)

Fibrillar pattern



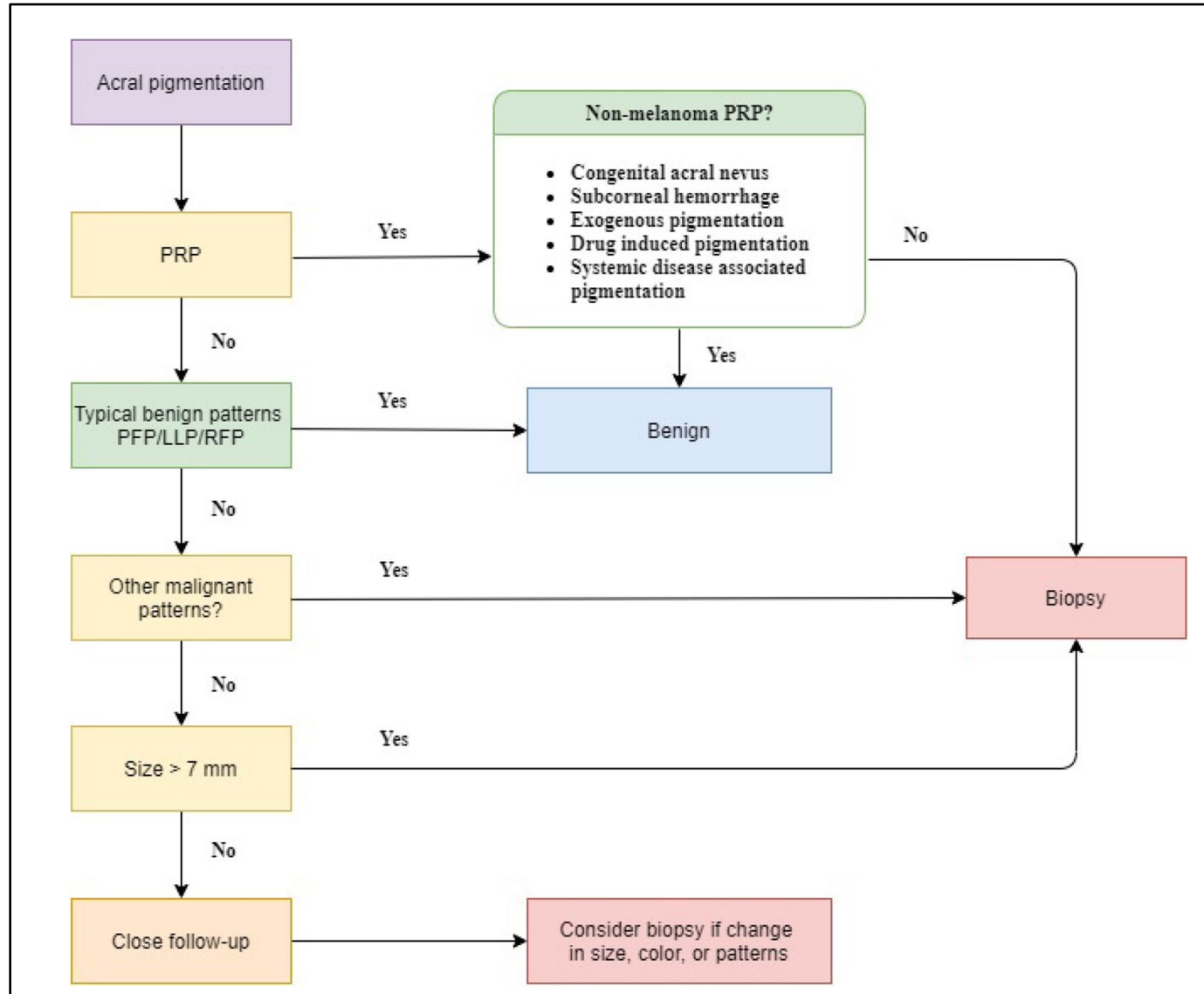
Palmo-plantar acquired melanocytic lesions

1. Parallel ridge pattern?

2. Typical benign pattern?

3. Other malignant pattern?

4. Size?



Dermoscopy criteria of 603 acral melanocytic lesions

Dermoscopic variable	Naevus excised (n = 183)	Naevus not excised (n = 289)	Naevus total (n = 472)	Melanoma in situ (n = 42)	Melanoma invasive (n = 89)	Melanoma total (n = 131)
Global pattern						
Parallel lines	122 (66.7)	226 (78.2)	348 (73.7)	26 (62)	9 (10)	35 (26.7)
Reticular	4 (2.2)	5 (1.7)	9 (1.9)	2 (5)	0	2 (1.5)
Globular	6 (3.3)	17 (5.9)	23 (4.9)	2 (5)	1 (1)	3 (2.3)
Structureless	34 (18.6)	31 (10.7)	65 (13.8)	4 (10)	34 (38)	38 (29.0)
Starburst	0	1 (0.3)	1 (0.2)	0	0	0
Multicomponent	17 (9.3)	9 (3.1)	26 (5.5)	8 (19)	45 (51)	53 (40.5)
Asymmetry of structures	30 (16.4)	19 (6.6)	49 (10.4)	20 (48)	84 (94)	104 (79.4)
Asymmetry of colours	30 (16.4)	14 (4.8)	44 (9.3)	24 (57)	84 (94)	108 (82.4)
Parallel ridge pattern	4 (2.2)	5 (1.7)	9 (1.9)	21 (50)	29 (33)	50 (38.2)
Parallel furrow pattern	98 (53.6)	184 (63.7)	282 (59.7)	6 (14)	7 (8)	13 (9.9)
Fibrillar pattern	39 (21.3)	66 (22.8)	105 (22.2)	4 (10)	6 (7)	10 (7.6)
Lattice-like pattern	24 (13.1)	30 (10.4)	54 (11.4)	0	0	0
Irregular blotches	26 (14.2)	18 (6.2)	44 (9.3)	14 (33)	76 (85)	90 (68.7)
Irregular dots/globules	24 (13.1)	22 (7.6)	46 (9.7)	10 (24)	51 (57)	61 (46.6)
Irregular streaks/pseudopods	3 (1.6)	2 (0.7)	5 (1.1)	1 (2)	6 (7)	7 (5.3)
Blue-white veil	21 (11.5)	10 (3.5)	31 (6.6)	2 (5)	41 (46)	43 (32.8)
Regression structures	5 (2.7)	1 (0.3)	6 (1.3)	3 (7)	14 (16)	17 (13)
Atypical vessels	1 (0.5)	1 (0.3)	2 (0.4)	0	14 (16)	14 (10.7)
Atypical network	2 (1.1)	0	2 (0.4)	2 (5)	0	2 (1.5)
Milky-red areas	1 (0.5)	2 (0.7)	3 (0.6)	0	19 (21)	19 (14.5)

Values are n (%).

acral melanoma:

- no PRP (60%)
- benign patterns (30%)
- other melanoma patterns

The BRAAFF checklist: a new dermoscopic algorithm for diagnosing acral melanoma

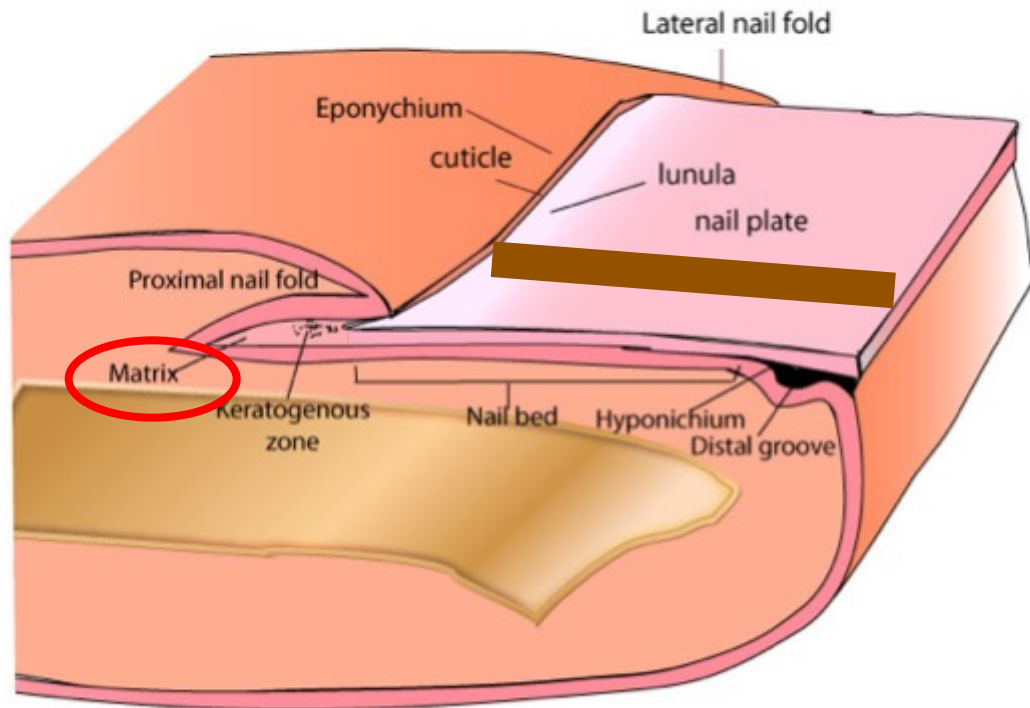
A. Lallas,¹ A. Kyrgidis,¹ H. Koga,² E. Moscarella,¹ P. Tschandl,³ Z. Apalla,⁴ A. Di Stefani,⁵ D. Ioannides,² H. Kittler,⁴ K. Kobayashi,^{6,7} E. Lazaridou,² C. Longo,¹ A. Phan,⁸ T. Saida,³ M. Tanaka,⁶ L. Thomas,⁸ I. Zalaudek⁹ and G. Argenziano¹⁰

Acronym	Criterion	Points
B	Irregular bl otch	+ 1
R	Parallel ri dge pattern	+ 3
A	A symmetry of structures	+ 1
A	A symmetry of colours	+ 1
F	Parallel f urrow pattern	- 1
F	F ibrillar pattern	- 1

A total score of ≥ 1 is needed for a diagnosis of melanoma.

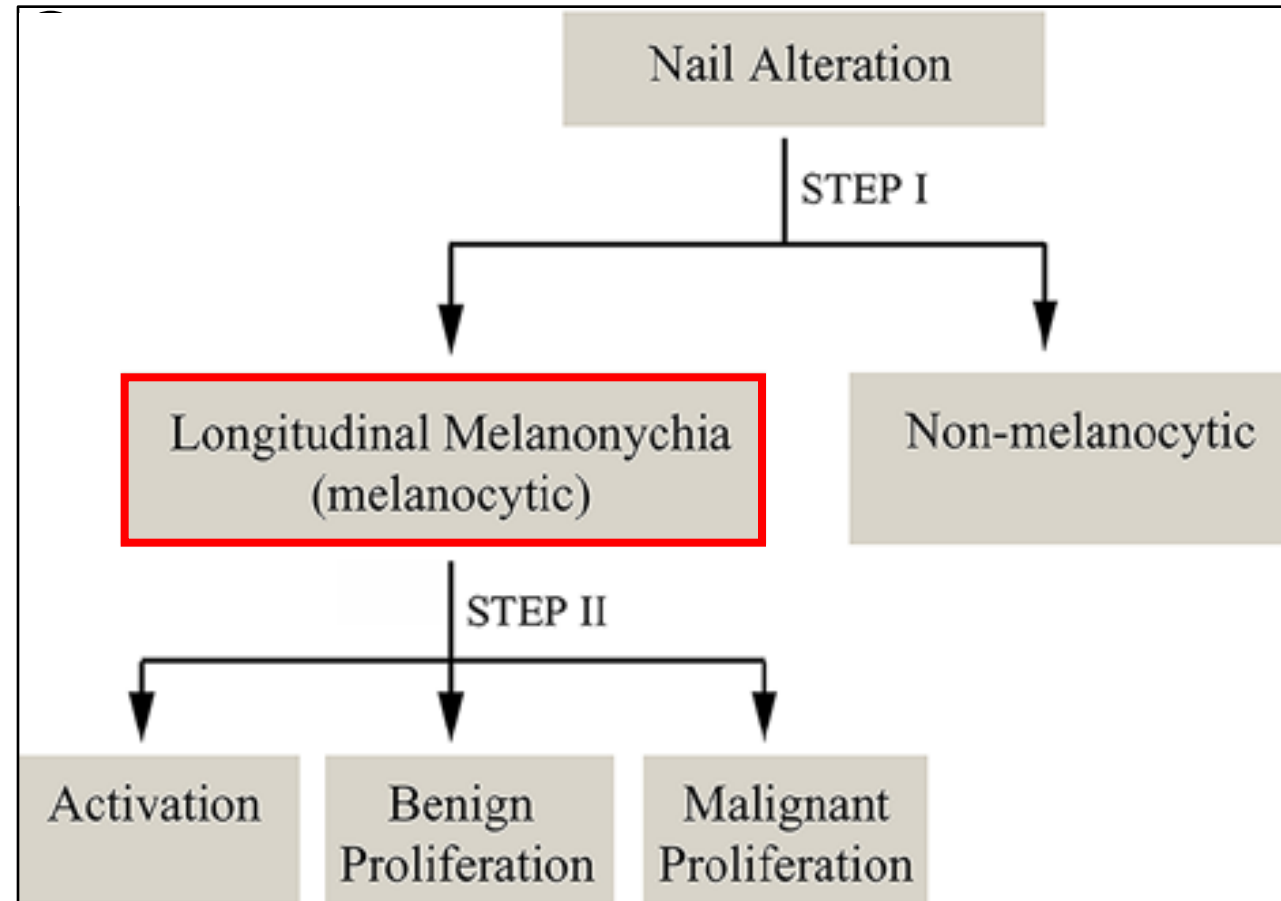
Subgroups	Sensitivity (%)	Specificity (%)
All melanomas vs. all naevi	93.1	86.7
Melanoma in situ vs. all naevi	81.0	89.6
Invasive melanoma vs. all naevi	96.6	92.6

Nail-unit



	Nail matrix	Nailbed
Melanocyte number/mm ²	200	45
Melanin production	distal nail matrix (proximal matrix: low)	no
Longitudinal pigmentstreak	✓	-

Subungual melanocytic lesions: 2 step algorithm



Longitudinal pigmented streaks: what is suspicious for malignancy?

	Benign lesions (57 = 100%)	Nail apparatus melanoma (25 = 100%)	P-value*	Missing
Hand	39 (69.64%)	20 (80%)	0.33	1
Foot	17 (30.36%)	5 (20%)		1
First finger	31 (55.36%)	11 (44%)	0.34	1
Width				
1/3	32 (56.14%)	0		–
2/3	9 (15.79%)	4 (16%)	<0.001	–
3/3	16 (28.07%)	21 (84%)		–
Colour				
Brown	55 (96.49%)	24 (96%)	0.91	–
Grey	10 (17.54%)	19 (76%)	<0.001	–
Black	3 (5.26%)	10 (40%)	<0.001	–
Colour variation	37 (64.91%)	24 (96%)	0.003	–
Background pigmentation	43 (75.44%)	24 (96%)	0.027	–
Single line	11 (19.30%)	0	0.018	–
Homogeneity of parallelism	36 (63.16%)	14 (56%)	0.541	–
Homogeneity of thickness	6 (10.53%)	1 (4%)	0.33	–
Homogeneity of spaces	10 (17.54%)	0	0.025	–
Homogeneity of colour and thickness	23 (40.35%)	2 (8%)	0.003	–
Hutchinson and micro-Hutchinson	1 (1.89%)	12 (52.17%)	<0.001	6
Pseudo Hutchinson sign	22 (41.51%)	10 (43.48%)	0.87	6
Nail dystrophy	7 (12.28%)	8 (32%)	0.03	–
Granular pigmentation	2 (3.51%)	10 (40%)	<0.001	–

*P < 0.05. Values that are in bold are statistically significant.

Susp. for subungual melanoma

Longitudinal pigment streaks:
width > 2/3
Gray or black colour
 (Colour variation)
 (Colour and thickness homogeneity)
 (m)Hutchinson sign
Granular pigmentation

Hutchinson sign

- pigmentation from longitudinal melanonychia extends onto the proximal or lateral nail folds
- 1886: Jonathan Hutchinson
- NOT melanoma specific
- Micro-Hutchinson sign: visible w DS
- Pseudo-Hutchinson sign: reflection of the pigmentation of nail bed/matrix through the transparent cuticule



83 year-old male
in situ nail unit melanoma

Melanocyte activation

- Physiologic
 - pregnancy, skin type
- Trauma: hemorrhage, nail biting
- Dermatological
 - Onychomycosis, viral warts, psoriasis, SLE, lichen planus, Bowen's disease
- Systemic
 - Endocrinological, nutritional, porphyria

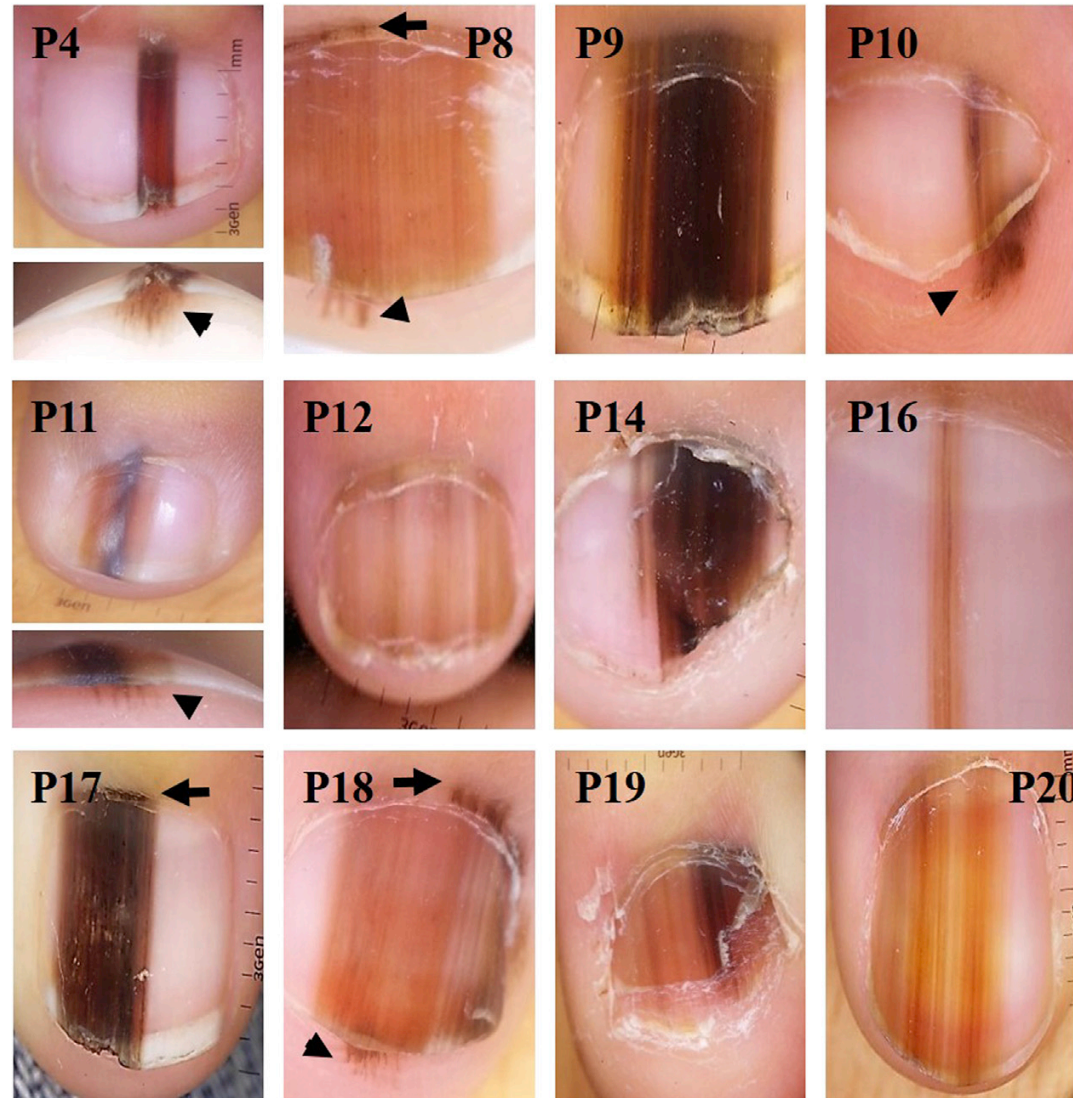
- Syndromes:
 - Peutz-Jeghers, Laugier-Hunziker
- Iatrogenic:
 - UV light, radiotherapy
- Drug-induced:
 - chemotherapy: docetaxel
 - Retinoids
 - Minocyclin, tetracyclin
 - Zidovudin

Acquired subungual nevi (biopsy proven)

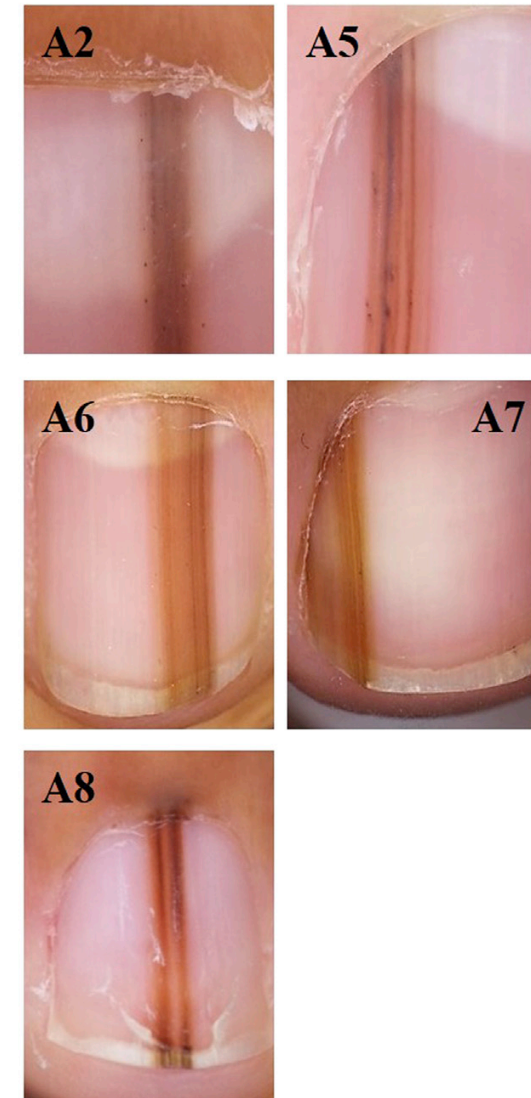
Pediatric:

- width (large part of the nail)
- nail dystrophy
- Hutchinson-sign: “brush-like”
- sharp demarcation
- NB: dermoscopy features may be melanoma-specific

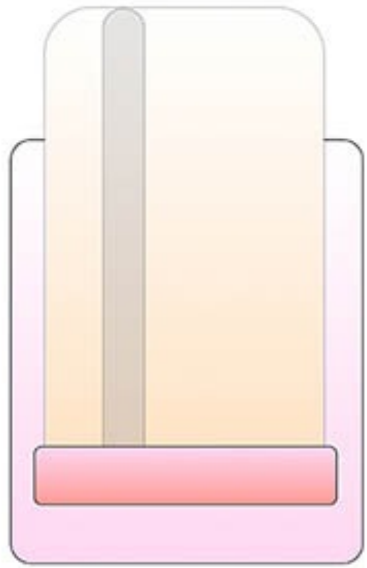
Pediatric cases



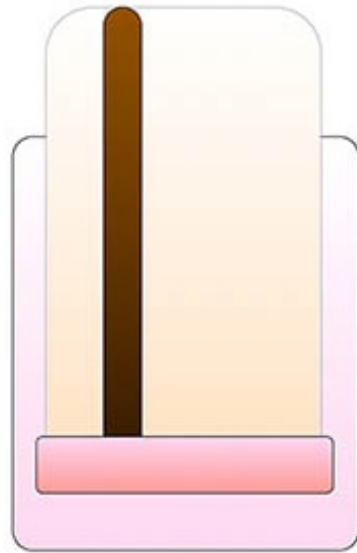
Adult cases



Longitudinal melanonychia: dermoscopy criteria



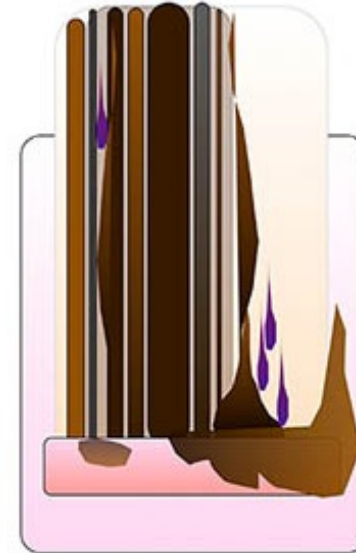
Lentigo



Nevus



Melanoma
in situ



Invasive
melanoma



Is the pigment due to melanin within the nail or not?

No

Exogenous pigmentations
Green nails
Fungal melanonychia
Subungual hematoma

yes

Does melanonychia involve one ore several digits?

several

Racial melanonychia
Systemic drugs
Pregnancy
Endocrine disorders
Frictional melanonychia
Nail biting/onychotillomania

one

is it associated with nail lesions that explain its appearance?

No

Consider age of appearance

Adult

Histopathology needed

yes

Trauma
Inflammatory disease (psoriasis,
lichen planus)
Nail tumors (onychopapilloma,
onychomatricoma, Bowen's disease)

Child

Periodic observation
Remove only if involves the whole nail and is black

Subungual melanocytic lesion: biopsy or not?

Susp. for **benign lesion**:

- Appearance: childhood
- Multiple nails involved
- No change
- Positive family anamnesis
- Other reason for pigmentation (trauma, drug)

- NB: dermoscopy in childhood lesions may suggest malignancy!!

Susp. for **malignancy**:

- Appearance: adulthood
- 1 nail involved
- Anamnesis: new, changing
- DS criteria:
 - IDS study
 - Triangular shape
 - Nail plate destruction