

Spot that diagnosis: identifying pigmented lesions, melanomas, and other concerning conditions

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Disclosures

- No COI relevant to this presentation

Objectives

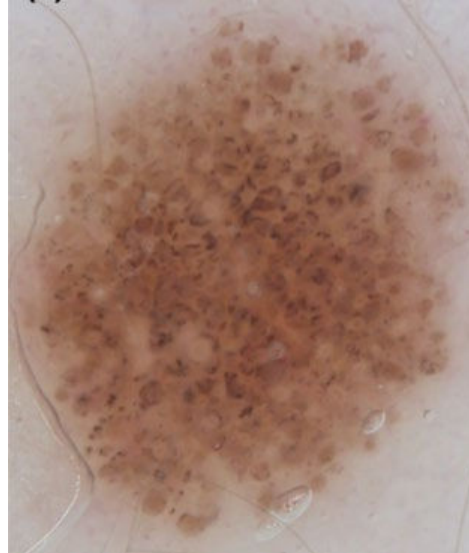
1. Review the clinical presentation, natural history and management of common pigmented lesions in children
2. Discuss the dermoscopic features of these lesions
3. Highlight the particular aspects of melanoma in childhood

- Onset of new nevi or changes in nevi are often a source of parental concern and a frequent cause of dermatology consultation
- Many melanocytic lesions have a dynamic nature during childhood
- Melanomas affect 1:1 million children under 4yo, 10:1 million adolescents 15-19 yo¹

- After 1 year of age, increase in number in adolescence
- Mean nevus count by end of first decade is 15 to 30 in Caucasian children vs 5 to 10 nevi in children with darker skin¹
- Distribution and number influenced by pigmentary features of the individual, geographic latitude, altitude, and family history of melanoma
- May stabilize, undergo spontaneous regression, malignant transformation

Acquired melanocytic nevi

Globular



Reticular diffuse



Peripheral reticular with central globules



Peripheral reticular with central hypopigmentation



Reticular patchy

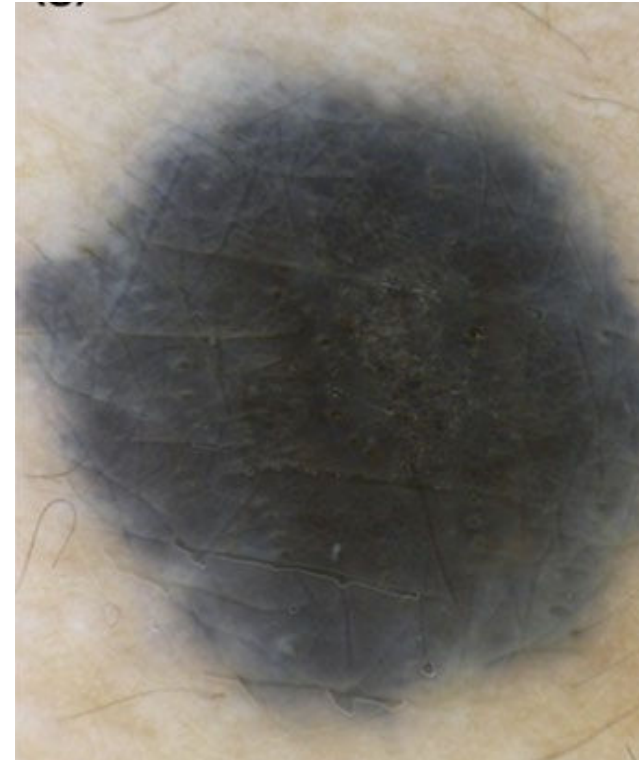


Peripheral reticular with central hyperpigmentation

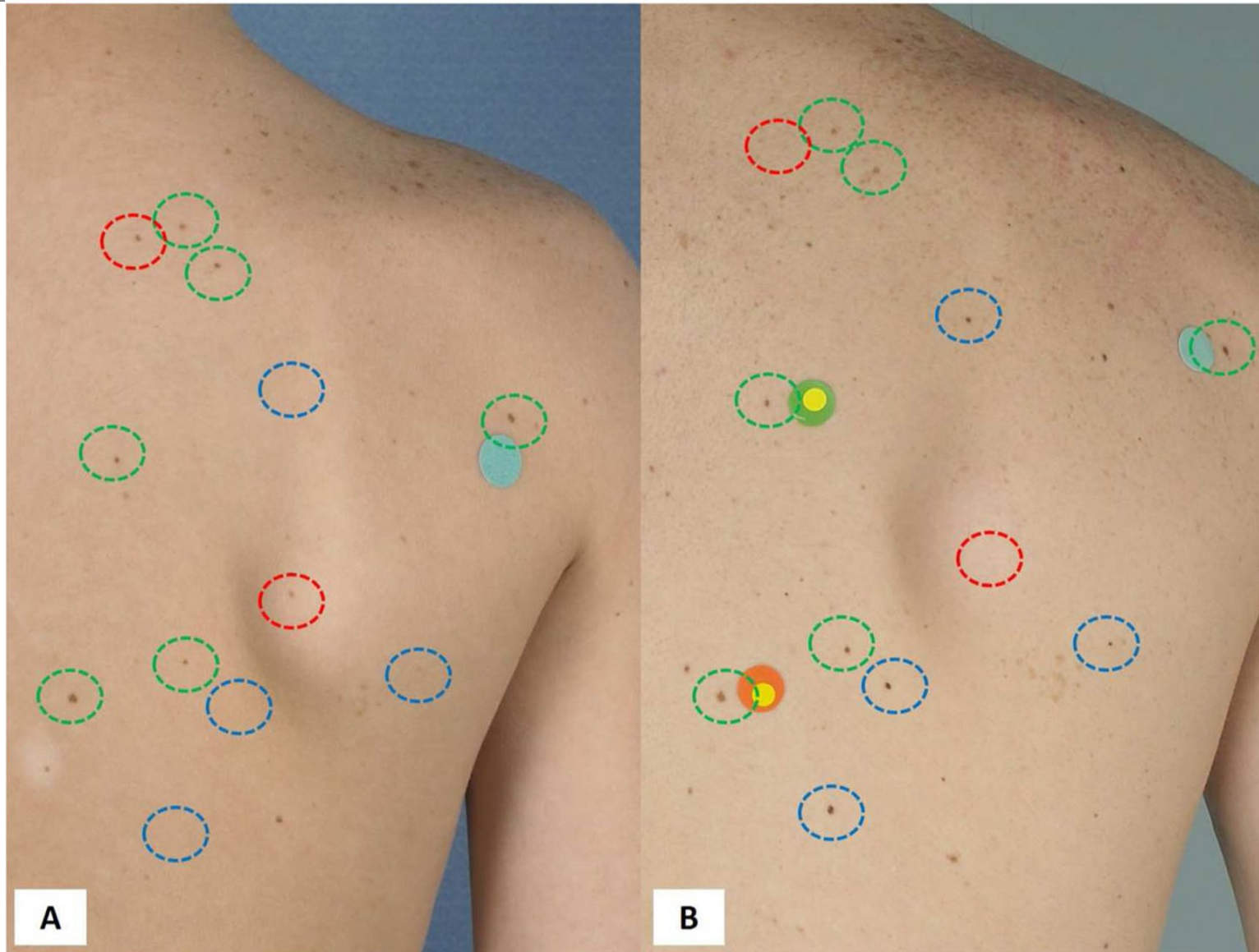


Acquired melanocytic nevi

Homogeneous brown, tan, or
blue pigmentation



Acquired melanocytic nevi



11 yo and 17 yo

Acquired melanocytic nevi

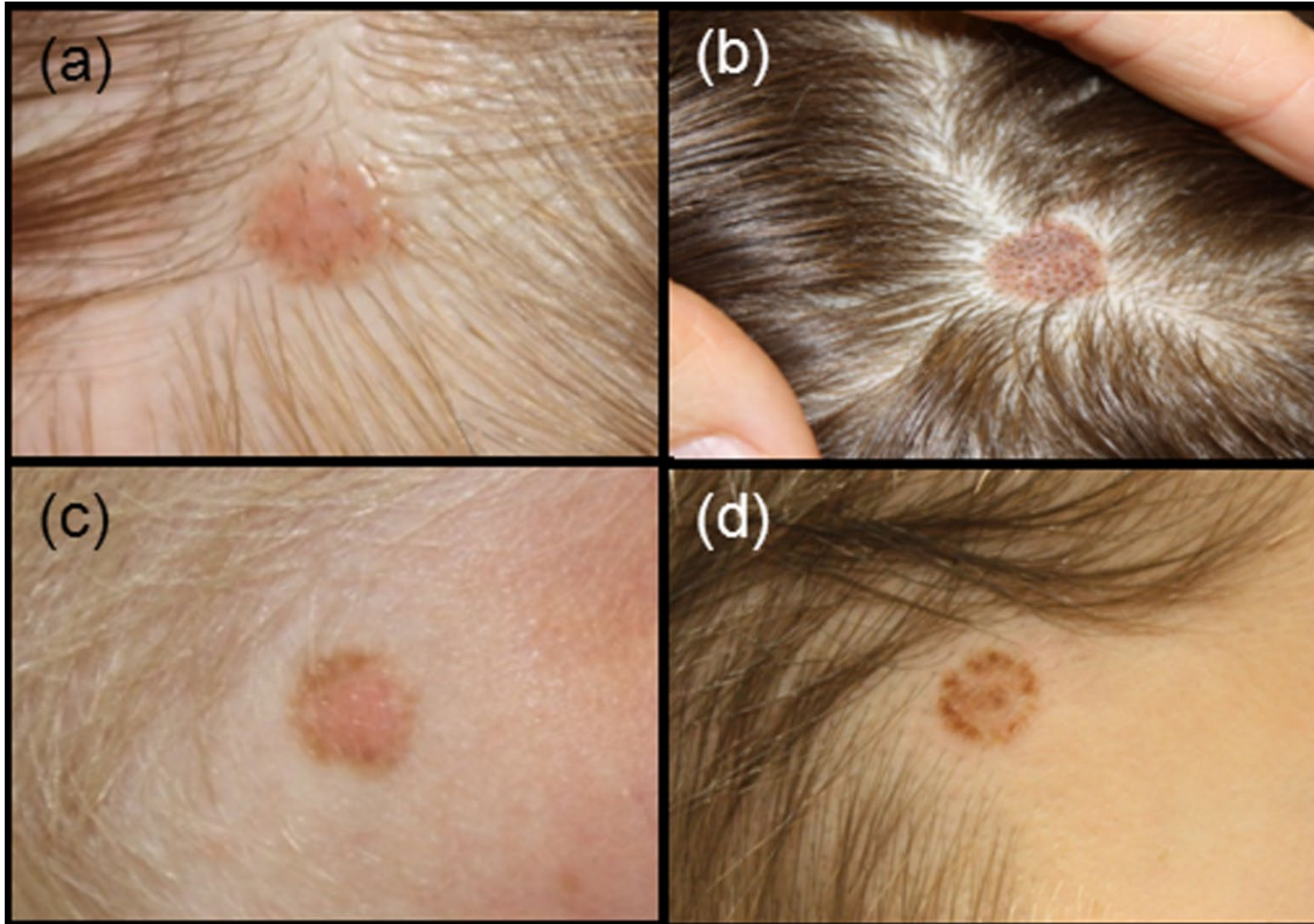


Acquired melanocytic nevi

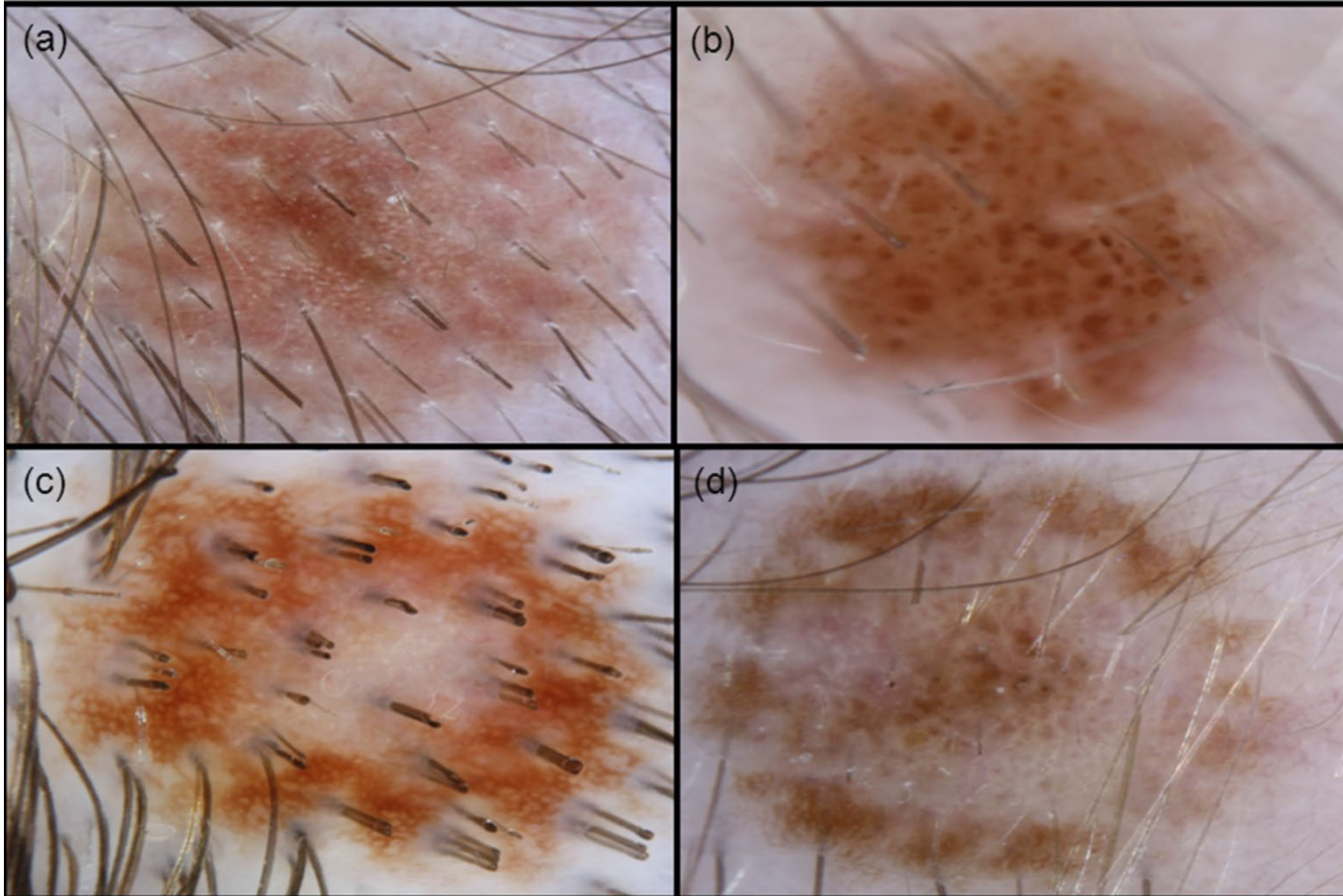


- Common in children with high count of nevi, boys 1.5x more than girls
- High incidence dysplastic nevi and is often site involved in dysplastic nevus syndrome¹
- 77% of scalp nevi had clinical changes in 3-year follow up²
- Clinically: solid brown, solid pink, eclipse and cockade
- Dermoscopy of solid nevi: globular (57%), complex (reticular-globular) (27%), reticular (9%), homogenous (6%), and fibrillar (1%)
- Unifying feature: perifollicular hypopigmentation (scalloped, irregular borders or variegation in pigmentation)³

Acquired scalp melanocytic nevi



Acquired scalp melanocytic nevi



Atypical or “dysplastic” melanocytic nevus or “nevus with architectural disorder”

- No consensus on nomenclature or definition
- Disorganized clinical and dermoscopic appearance
- Poor clinical-histopathologic correlation in children*
- 66 clinically atypical nevi in children, only 3 had histologic dysplastic, no melanomas¹
- The “ugly duckling”
- Not inevitable precursors of melanoma ➔ a phenotypic marker of skin at risk

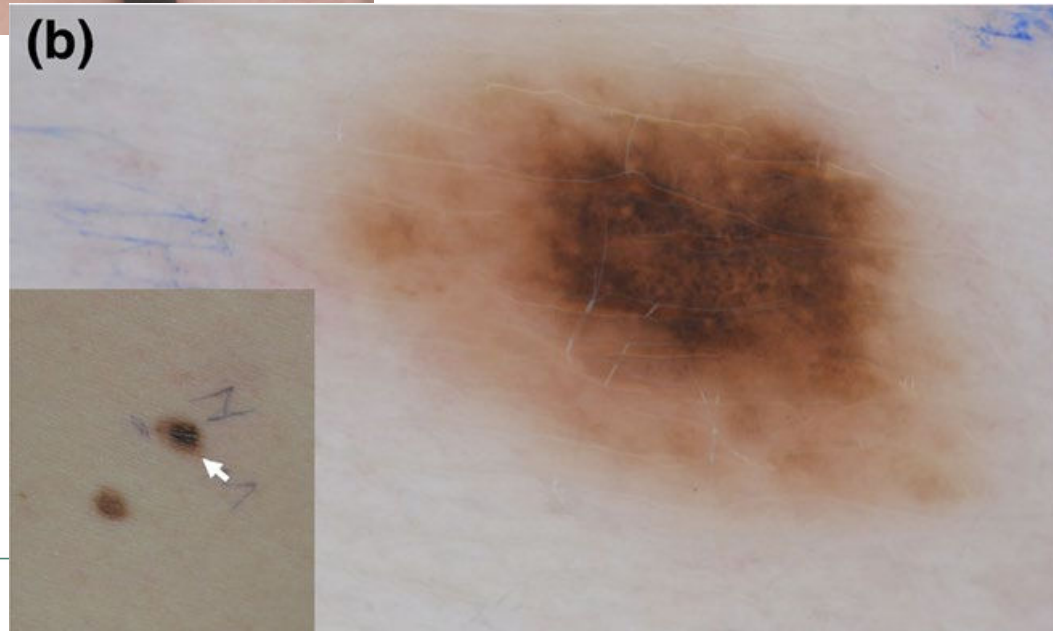
Atypical melanocytic nevus



Multicomponent

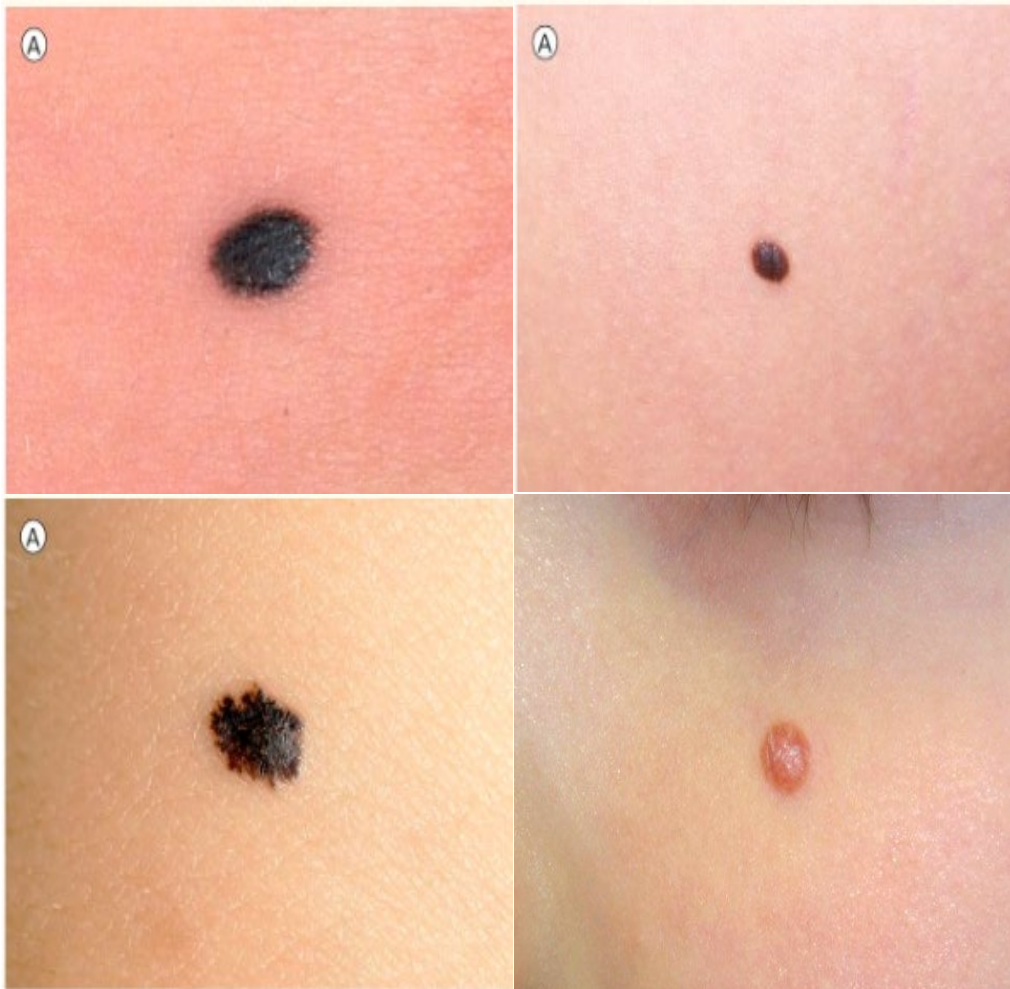


Haliasos EC et al, 2013.

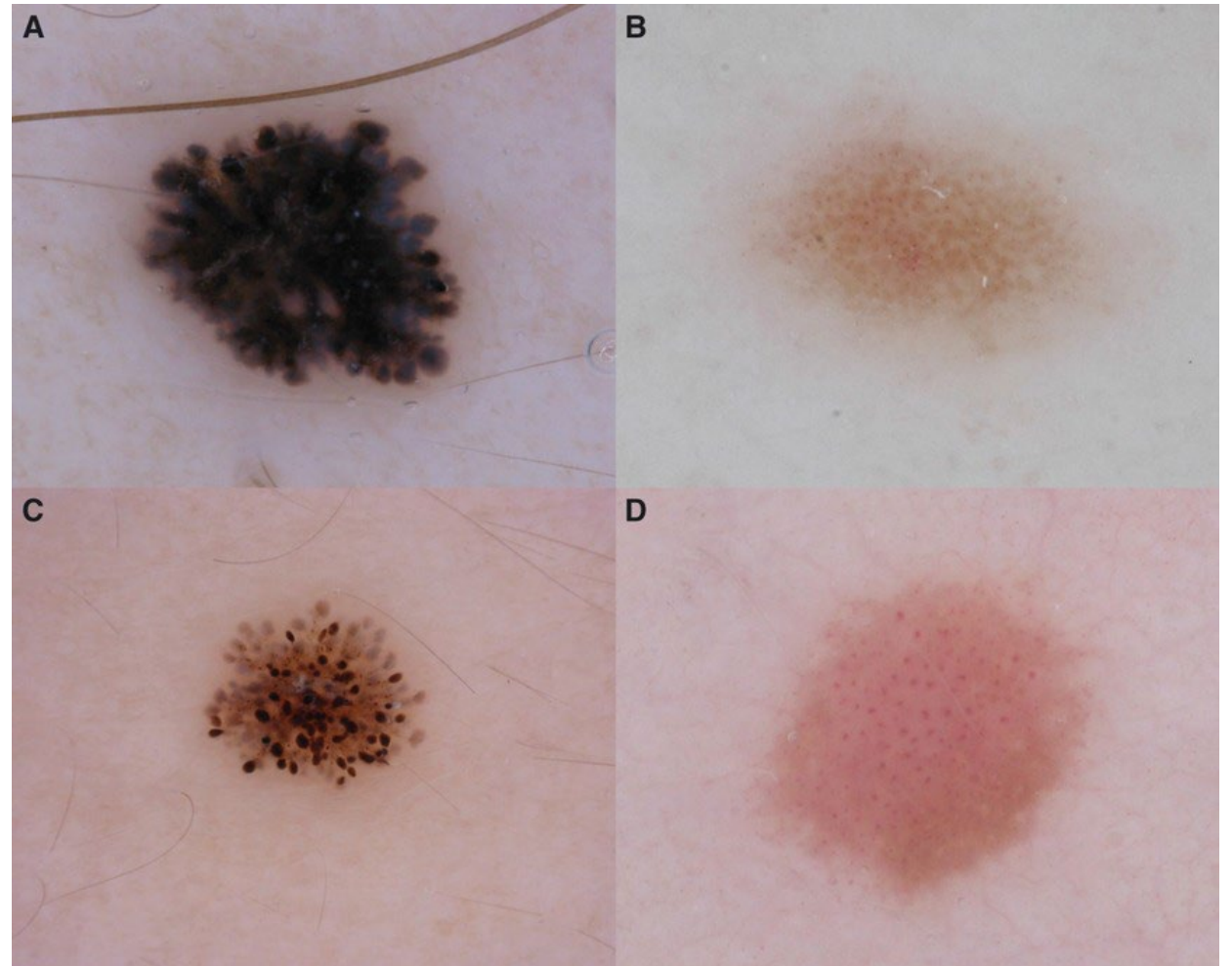


- 50% of cases occur under the age of 10y and 70% in the first two decades of life
- Solitary, well-circumscribed papules/nodules, non-pigmented, red/pink to brown pigmentation, less than 10 mm
- Face, upper/lower extremities, trunk, genitalia
- Rapid growth phase followed by a stable phase
- Most frequently found in fair-skinned individuals and both sexes are equally affected¹

Spitz nevus



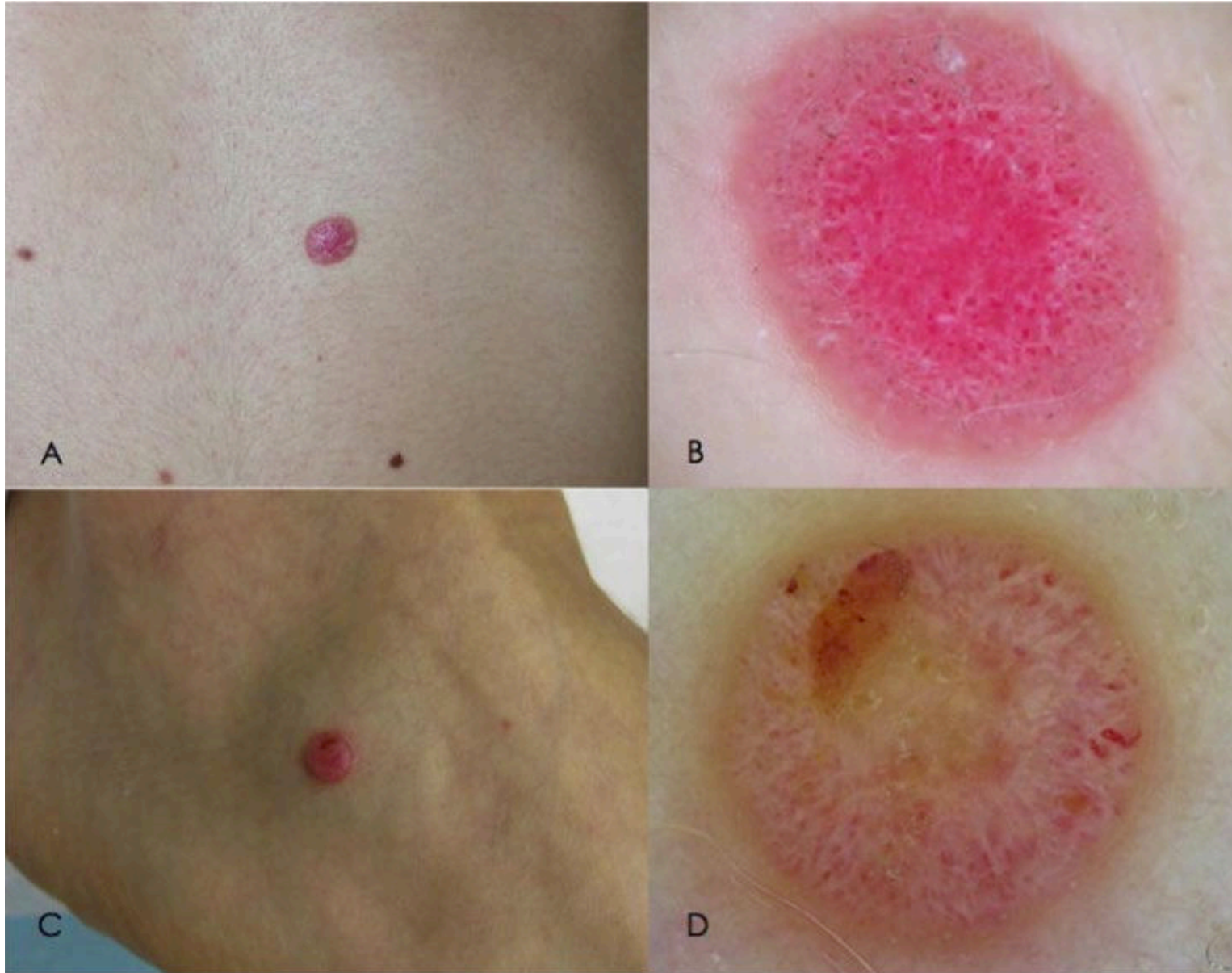
Bär M et al, 2012.



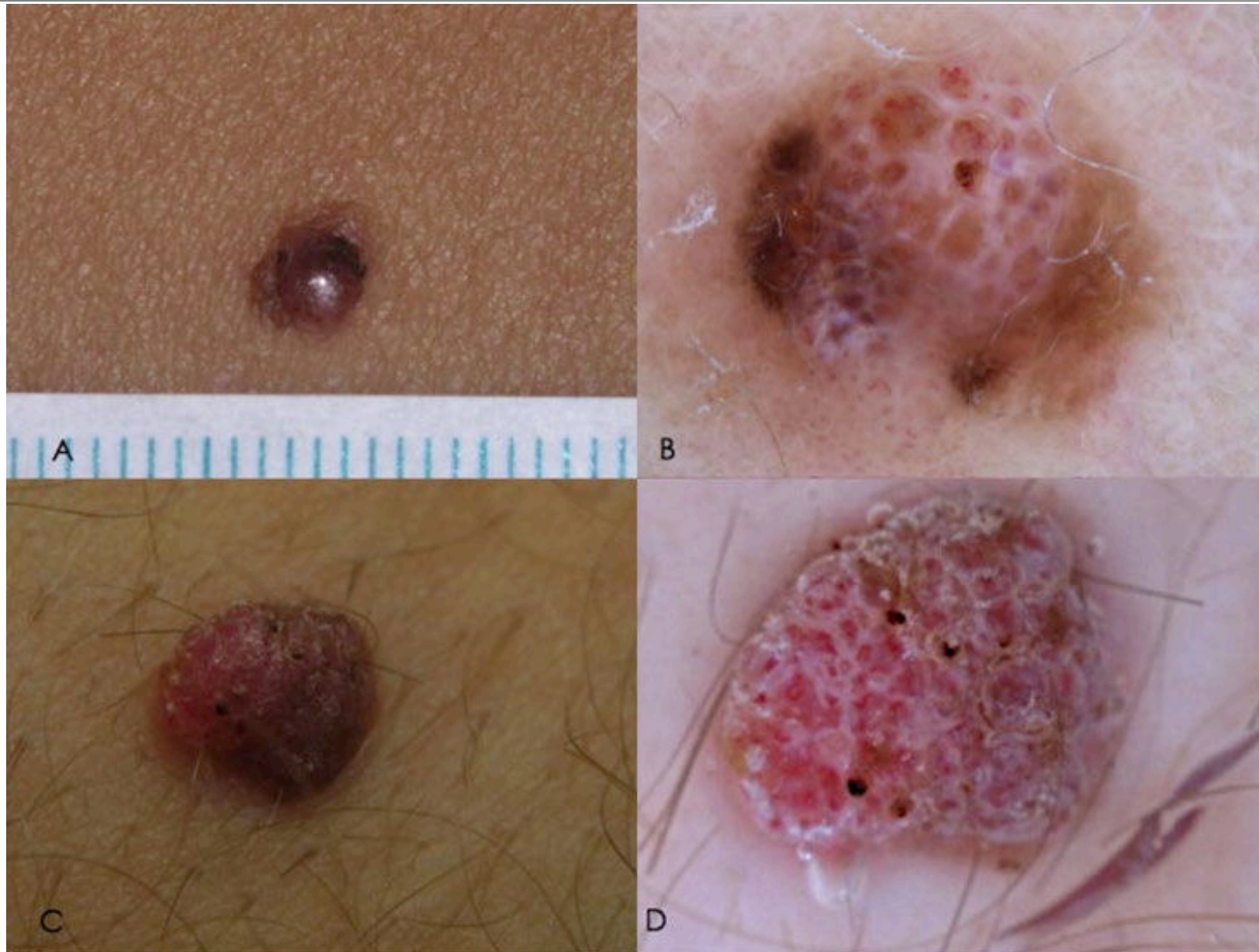
Haliasos EC et al, 2013.

- Atypical → Spitzoid tumor of uncertain malignant potential (STUMP) → Spitzoid melanoma
- Risk factors
 - Age of onset >10-12 years
 - Diameter > 10mm
 - Location on trunk
 - Asymmetry
 - Presence of ulceration
 - Disorganized or multiple dermoscopic patterns
- Surgical excision with clear margins

Atypical Spitz nevi



Atypical Spitz nevi



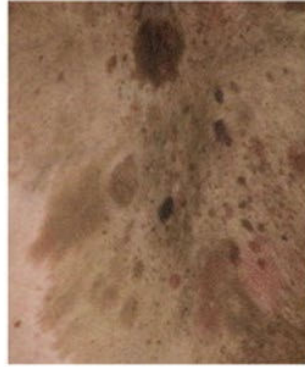
Congenital melanocytic nevi

- Affects 1% to 6% of newborns ¹
- Classified according to size
 - Small <1.5 cm
 - Medium 1.5–19.9 cm
 - Large >20 cm
 - Very large/Giant CMN >40 cm (“garment”)
 - Multiple satellites
- Lifetime risk of melanoma < 1% small/medium (post-pubertal), 5% large (first few years of life)
- Dynamic – flat to elevated, darken/lighten/mottled, papules and nodules, hypertrichosis, ulcerations due to skin fragility, halo phenomenon

C1:



C2:



R1:



R2:



A

N1 (dermal):



N2 (dermal):



B

N1 (subcutaneous):



N2 (subcutaneous):



C1

H1:



C2

H2:



D

- Routine surveillance
- Most authors do not recommend routine excision of small and medium CMN
- Surgical excision considerations: psychological factors, risk stratification, function, feasibility, pruritus
- Laser treatment is controversial, as well as dermabrasion and cryotherapy
- Reduction in melanoma risk?

Congenital melanocytic nevi

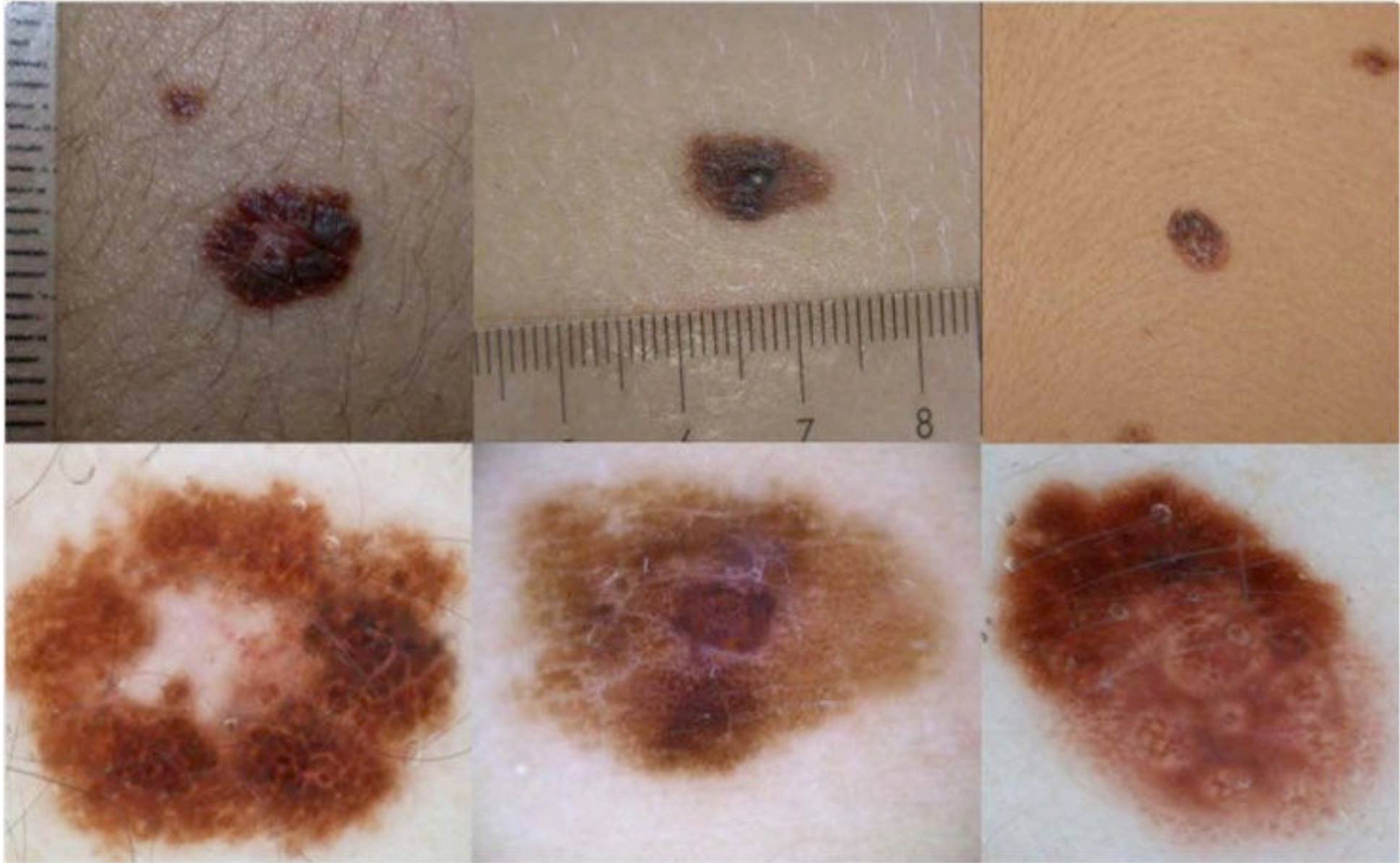


- Rare in children, particularly before puberty
- In the US is the most common cancer affecting women 25-29 yo
- Risk factors: transplacental transmission, large size CMN, xeroderma pigmentosum, congenital or acquired immunodeficiency, radiation therapy, FAMMM, increased number of melanocytic nevi, number of large AMN (>5-6 mm), family history of melanoma, lighter skin types, sun exposure
- Most melanomas are sporadic¹
- No guidelines for staging, workup and treatment – extrapolation from adult studies

3 major subtypes

- Spitzoid melanoma - characteristic histopathological and genomic aberrations. Despite frequent involvement of the sentinel lymph nodes, most cases have a less aggressive clinical course. Excellent prognosis (99% 5-year OS), significantly higher than nodular melanoma or unclassified subtypes
- Melanoma arising in a congenital melanocytic nevus – the risk of melanoma varies by projected size in adulthood, with the greatest risk in large or giant nevi. The clinical course is generally aggressive and accounts for most melanoma-related deaths in childhood
- Conventional (also known as adult-type) melanoma - superficial spreading and nodular melanoma account for most cases, with risk factors and presentation largely similar to adult disease. Patients with nodular melanoma had about 20 times greater risk of death than patients diagnosed with spitzoid subtypes

Malignant melanoma



Malignant melanoma



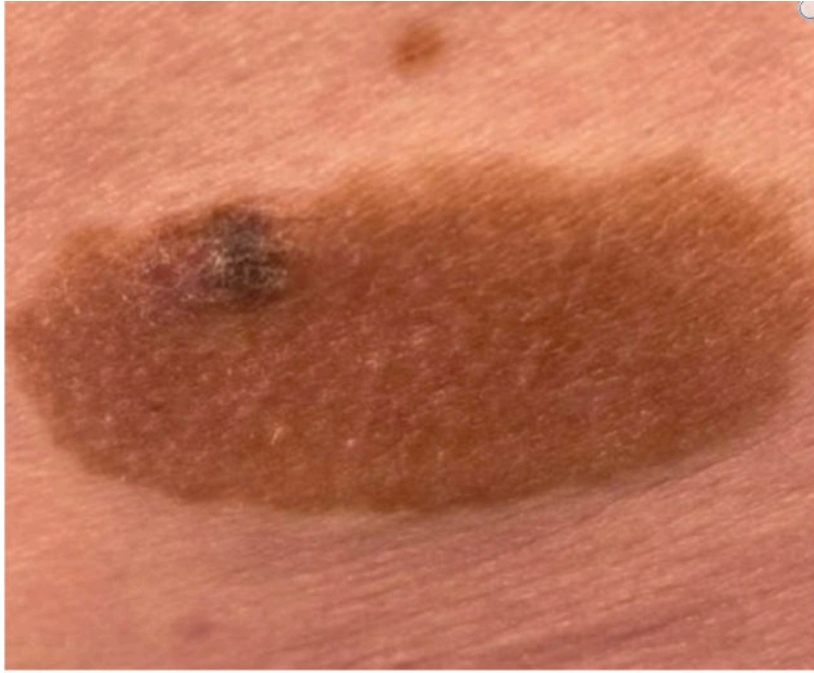
Malignant melanoma

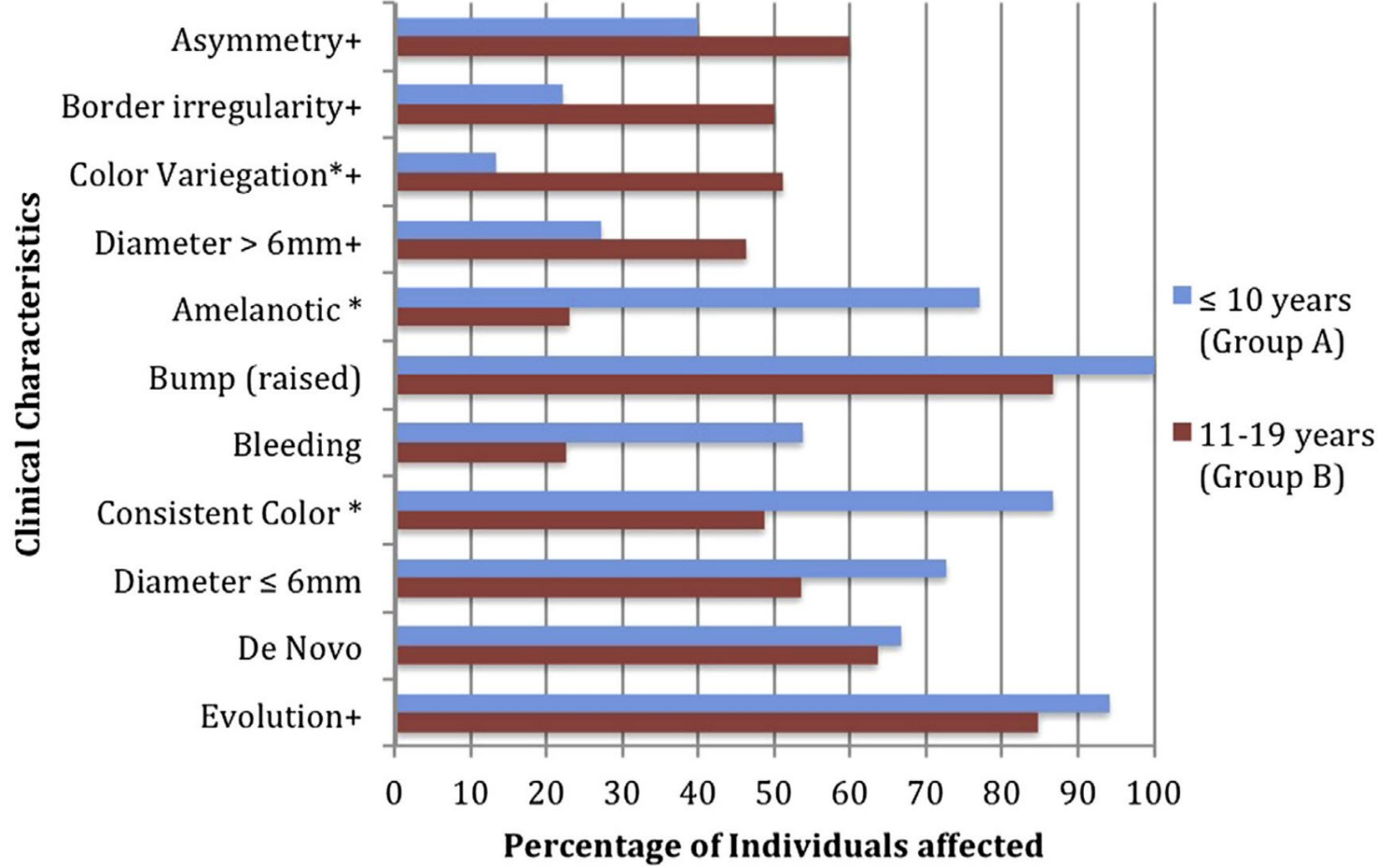


Malignant melanoma



Malignant melanoma





Malignant melanoma



+ Amelanotic

+ Bleeding, Bump

+ Color Uniformity

+ De novo, any Diameter

- Pediatric patients can present with a variety of melanocytic lesions
- Dynamic nature during childhood
- Particular clinical and dermoscopic features in pediatric patients
- Melanomas are rare in children, but risk increases with age
- Dermoscopy is a non-invasive, accessible, useful technique to minimize unnecessary biopsies and for long-term surveillance