Recognizing Melanocytic Lesions

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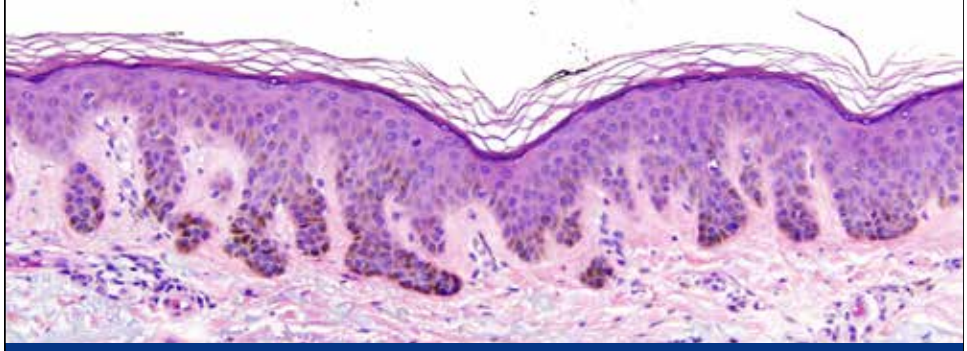
No conflicts of interest to report

Pigmented Skin Lesions

- Pigmented keratinocyte neoplasias
  - Solar lentigo
  - Seborrheic keratosis
  - Pigmented actinic keratosis (uncommon)
- Melanocytic hyperactivity
  - Ephelides (freckles)
  - Café-au-lait macules
- Melanocytic neoplasia
  - Simple lentigo (lentigo simplex)
  - Benign nevocellular nevi
  - Dermal melanocytoses
  - Atypical (dysplastic) nevus
  - Malignant melanocytic lesions

Solar Lentigo

(Lentigo Senilis, Lentigo Solaris, Liver Spot, Age Spot)



- Proliferation of keratinocytes with ↑ melanin
  - –Variable hyperplasia in number of melanocytes
- Pathogenesis- ultraviolet light damage

Solar Lentigo

- Older patients
- Light skin type
- Photodistributed
- Benign course
- Problem-distinguishing form lentigo maligna

Seborrheic Keratosis
"Barnacles of Aging"

- Epithelial proliferation
- Common- 89% of geriatric population
- Pathogenesis unknown
  - –Follicular tumor (best evidence)
  - –FGFR3 mutations in a subset

Seborrheic Keratosis
Clinical Features

- Distribution- trunk>head and neck>extremities
- Primary lesion
  - – Exophytic papule with velvety to verrucous surface- "stuck on appearance"
  - – Color- white, gray, tan, brown, black
- Complications- inflammation, pruritus, and simulation of cutaneous malignancy
- Malignancy potential- none to low (BCC?)

Seborrheic Keratosis

Seborrheic Keratosis-
skin tag-like variant


Pigmented Seborrheic Keratosis


Inflamed Seborrheic Keratosis

Café-au-Lait Spots

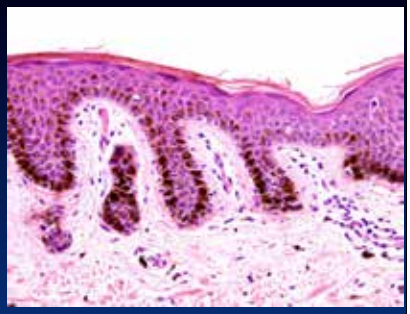
- Subtle increase in number of melanocytes with increased melanin production
- Congenital or early childhood
- Distribution- trunk and proximal extremities
- Typically solitary
- Multiple lesions associated with NF
  - Prepubertal child- 6 or more > 5 mm
  - Crowe's sign

Café-au-Lait Spots in Patient with Neurofibromatosis

+ Crowe sign = axillary freckling

Simple Lentigo (Lentigo Simplex)

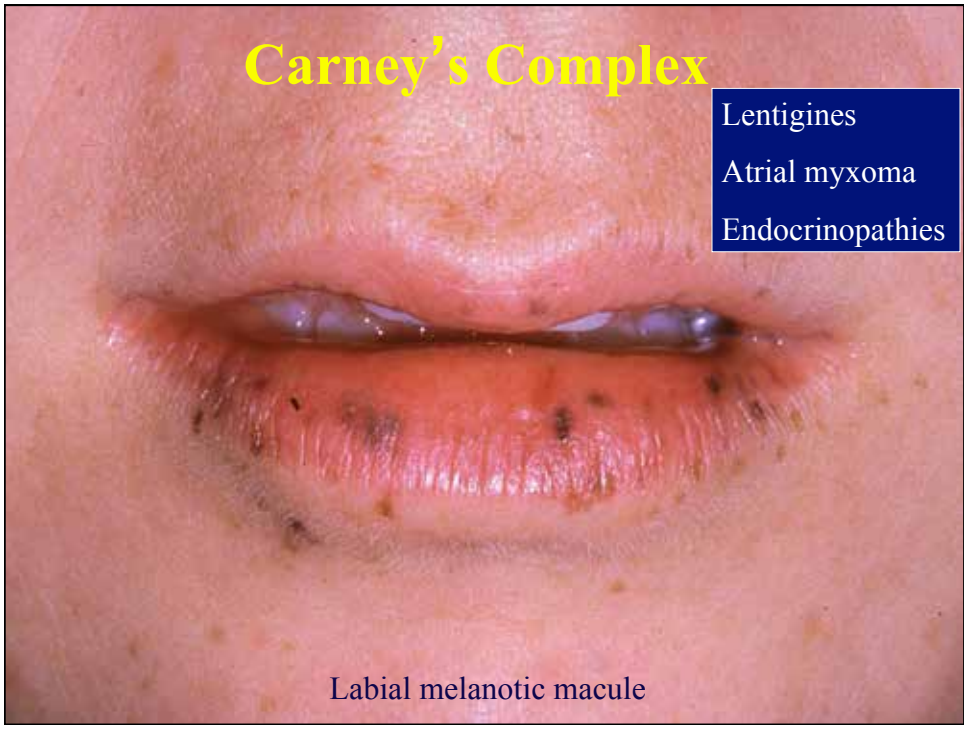
- Lentiginous hyperplasia + melanocytic hyperplasia
  - Closely related to junctional nevus
  - May evolve into junctional nevus



Simple Lentigo (Lentigo Simplex)
Clinical Features

- May occur at any age
- May be single or multiple
- Distribution- skin or mucous membranes
- Primary lesion- tan to brown to black macule usually measuring 5 mm or less
- Multiple lentigines
  - Peutz-Jeghers -syndrome
  - Carney's syndrome
  - LEOPARD syndrome
  - Centrofacial lentiginosis
- Malignancy potential- no statistics

Solitary Simple Lentigo


Carney's Complex
Lentigines
Atrial myxoma
Endocrinopathies
Labial melanotic macule


Genital lentigo

Nevocellular Nevi
(Moles, Melanocytic Nevi)

- Growth patterns
  - Junctional nevus
  - Intradermal nevus
  - Compound nevus
- Number of nevi (Caucasians)
  - 20 years of age = 20 nevi
  - Australian study- number peaks in 2nd & 3rd decade
    - Men = 43 nevi
    - Women = 27 nevi

Nevocellular Nevi
Clinical Features

- Age of onset- infancy to adulthood
- Distribution- any skin surface including mucous membranes
  - Number of nevi increased on sun-exposed skin

Junctional Nevus
Clinical Features

- Location anywhere- especially common on plantar and palmar surfaces
- Size- variable, 1-5 mm
- Primary lesion
  - Macule or subtle papule
  - Surface- typically smooth
  - Color- tan to brown to black

Intradermal Nevus
Clinical Features

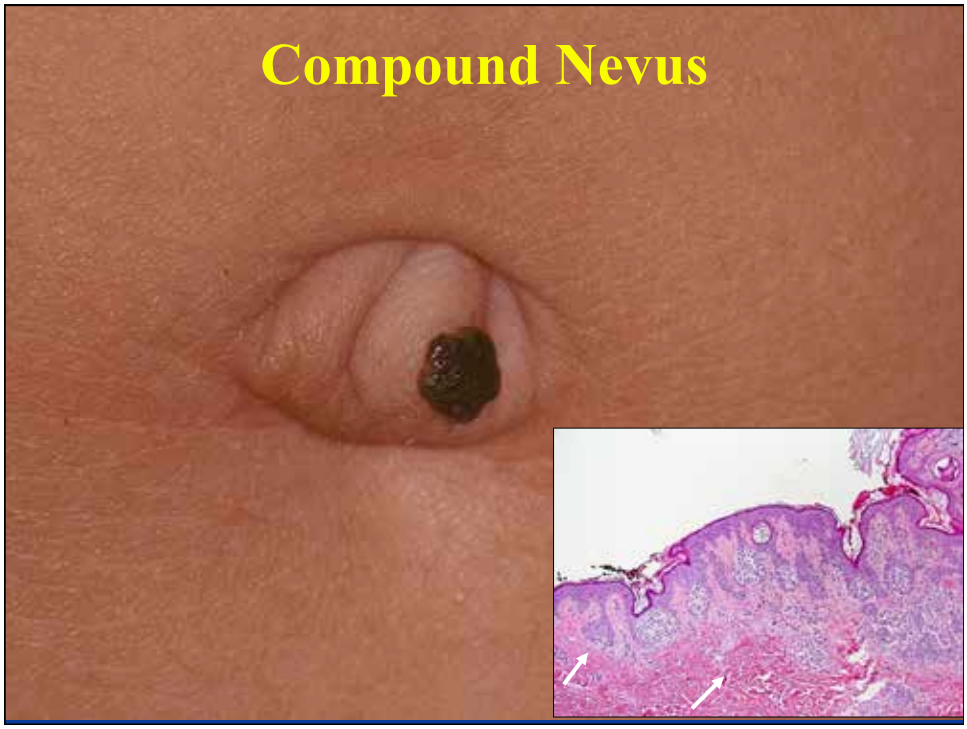
- Location- head and neck most common
- Size- variable, most less than 6 mm
- Primary lesion
  - Papule or nodule
  - Dome-shaped, papillated, pedunculated, cerebriform
  - Color- skin-colored to tan to light brown

Compound Nevus

Clinical Features

- Trunk and proximal extremities- most common
- Size- variable, most less than 6 mm
- Primary lesion
  - –Papule or nodule
  - –Dome-shaped, papillated or pedunculated
  - –Color- tan to brown to black

Compound Nevus



Melanocytic Nevi
Clinical and Histological Variants

- Halo nevus
- Meyerson's nevus
- Spitz nevus
- Pigmented spindle cell nevus
- Desmoplastic nevus
- Nevus spilus

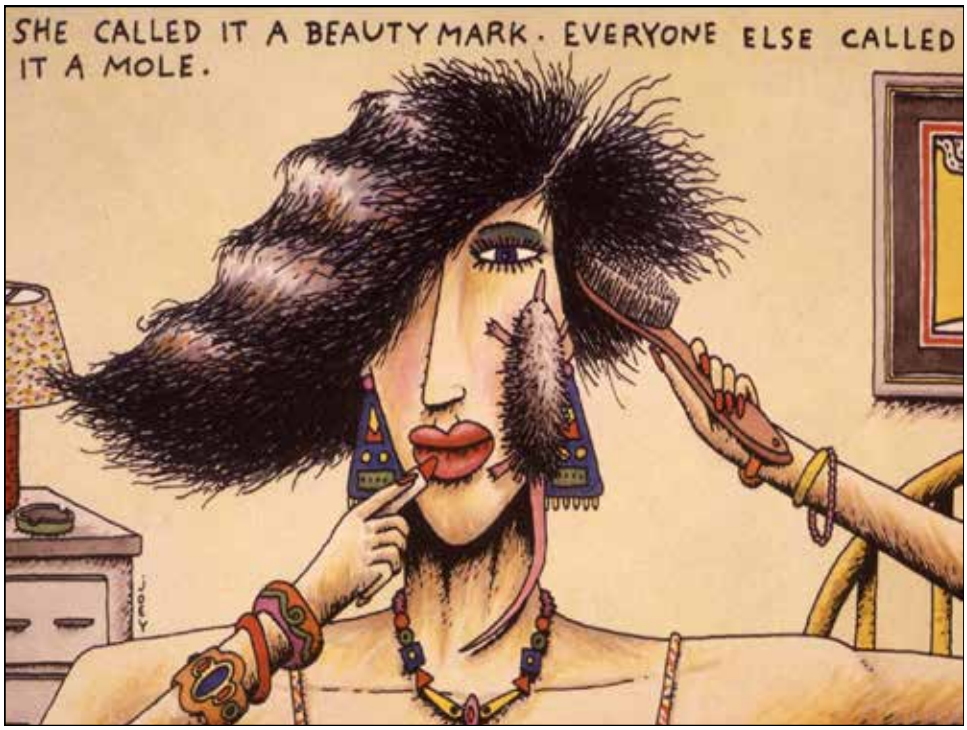

Multiple Halo Nevi


Halo Nevus

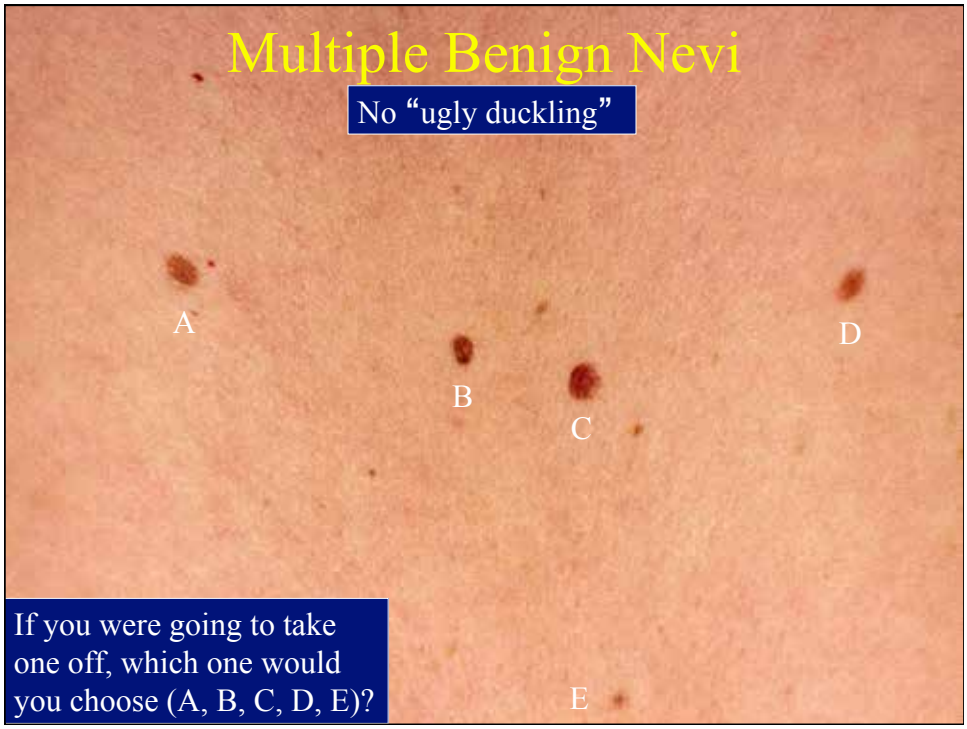
Multiple Spitz Nevi

Histologically difficult to differentiate from melanoma

Nevus Spilus



Multiple Benign Nevi



Nevocellular Nevi

Treatment Options

- Standard of care
  - Tangential (shave) biopsy
  - Punch biopsy
  - Excision biopsy
- Outside of the standard of care
  - Electrodessication
  - Cryotherapy
  - Dermabrasion (exception- congenital nevus?)
  - Laser

Recurrent Nevus

Recurrent nevi are often asymmetric, show multiple colors, dark colors and irregular borders.

Courtesy- Loren Golitz, M.D.

Recurrent Nevus after Electrodessication

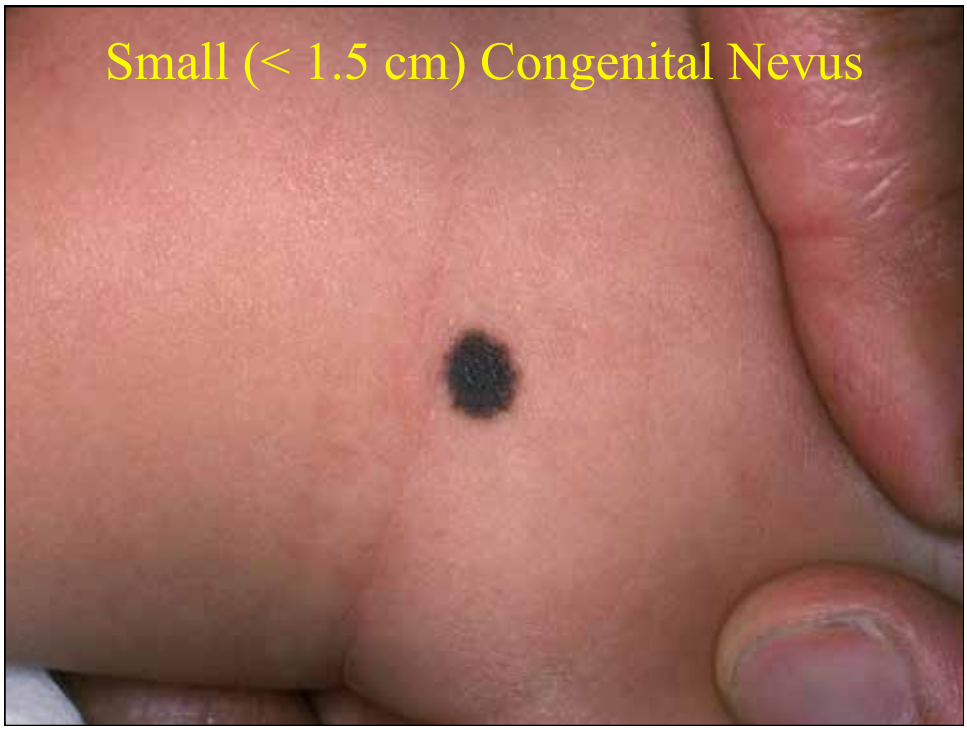
Congenital Nevi

Congenital Nevi

- Congenital pigmented lesions- 2.5% of newborns
- Congenital nevi- 1% of newborns
- Congenital nevi > 10 cm- 1 in 20,000

Congenital Nevi

- May be solitary or multiple
- May affect any cutaneous surface
- Primary lesion is 1 mm to huge
  - Presence of dark hairs- no clinical significance
- Complications
  - Head, neck, posterior midline- cranial and/or leptomeningeal melanocytosis
  - Melanoma
- Associations- neurofibromatosis



Medium (1.5-19.9 cm) Congenital Nevus

Medium (1.5-19.9 cm) Congenital Nevus

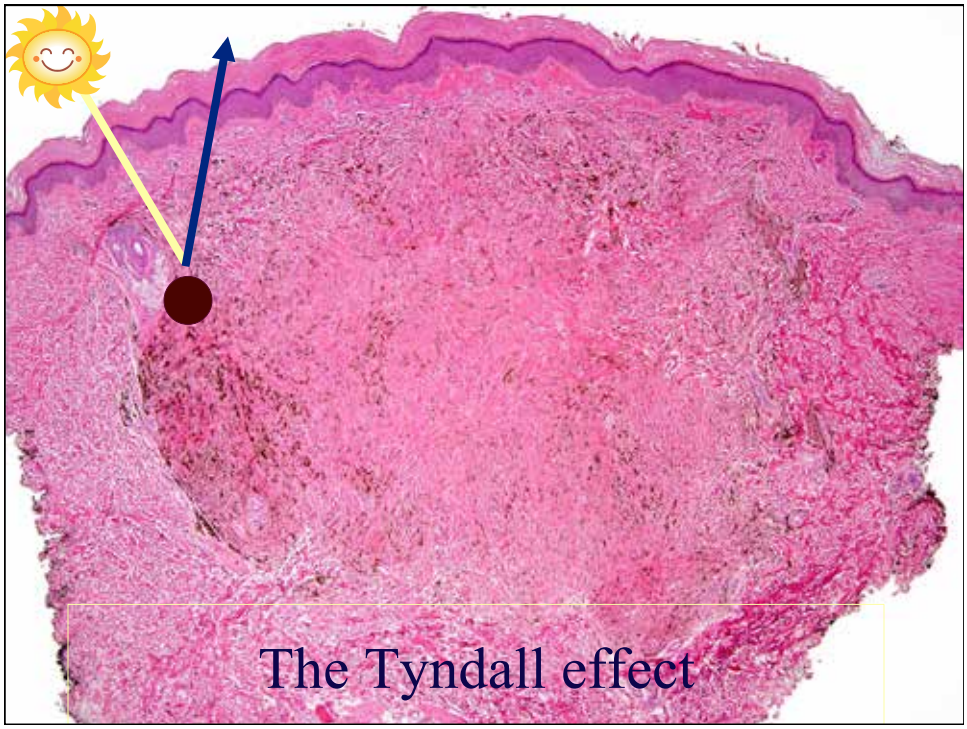
Medium (1.5-19.9 cm) and Multiple Small (< 1.5 cm) Congenital Nevi

Giant (≥ 20 cm) Congenital Nevus with satellite lesions

Melanoma arising in Medium Congenital Nevus

Blue Nevus

- Definition- dermal proliferation of melanocytes that produce abundant melanin
- Blue color- optical effect where longer wavelengths are absorbed and shorter wavelengths are reflect back
- Other dermal melanocytoses
  - Mongolian spot
  - Nevus of Ota
  - Nevus of Ito



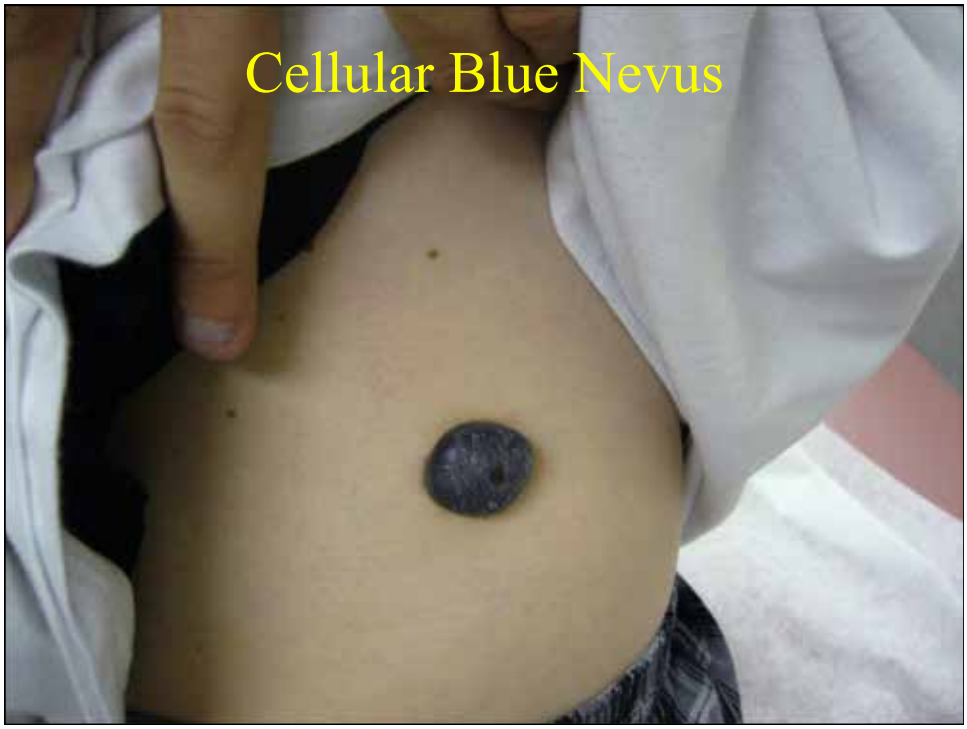
Blue Nevus
Clinical Features

- Congenital (1:3000) or acquired (4% of adults)
- Most common in Asians and whites, uncommon in blacks
- Primary lesion- blue to blue-gray to blue-white papule or nodule
- Size- 1 mm to 2 cm

Blue Nevus
Variants

- Common blue nevus
- Cellular blue nevus
- Combined nevus
- Malignant blue nevus (very rare)

Multiple Common Blue Nevi



Mongolian Spot

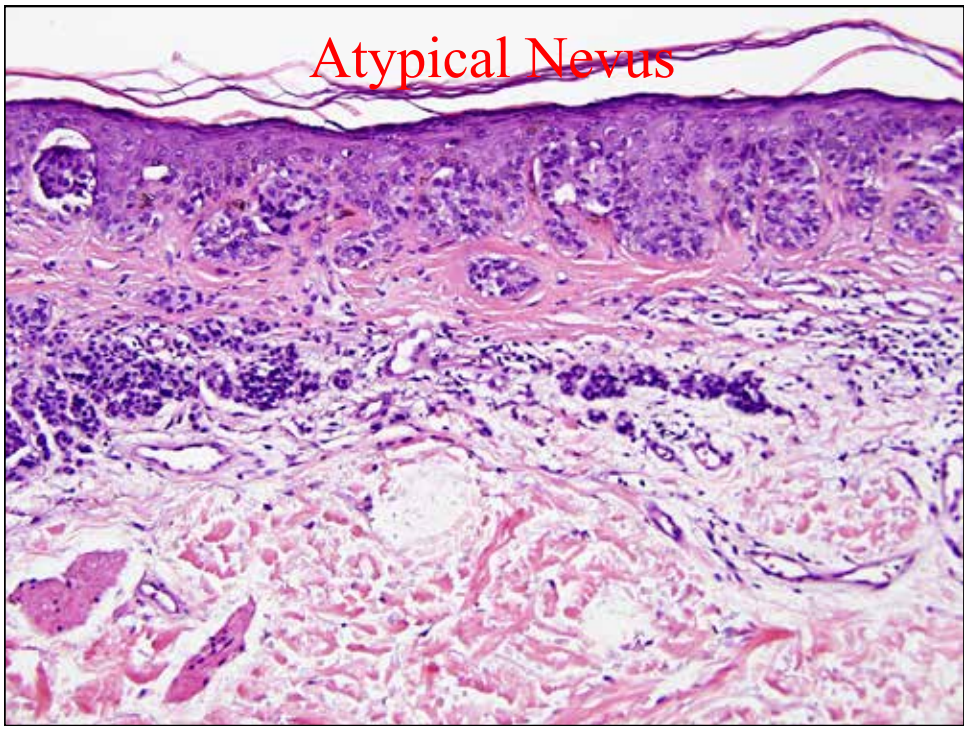
Dysplastic Nevus

(Atypical Nevus, Clark's Nevus, Nevus With Cytologic Atypia and Architectural Disorder)

- Acquired melanocytic proliferation
  - Epidermal and/or dermal proliferation of cytologically atypical nevomelanocytes
  - Abnormal growth pattern (architectural disorder)
- Sporadic or familial
- Clinical importance
  - Ten studies- 6.6%-70.3% of melanomas are contiguous with dysplastic nevi
  - Familial dysplastic nevus syndrome- risk of melanoma approaches 100%

Dysplastic Nevi
Clinical Features

- Males = Females
- Age of onset- usually apparent by 20 years
- Location- any cutaneous site especially trunk
- Number of lesions- solitary to hundreds
- Primary lesion
  - Round to oval to irregular
  - Variegation in color- tans, brown, black, reds
  - Margins- often indistinct (fuzzy), pigment bleeds into surrounding skin, irregular margins
  - Size- no limit



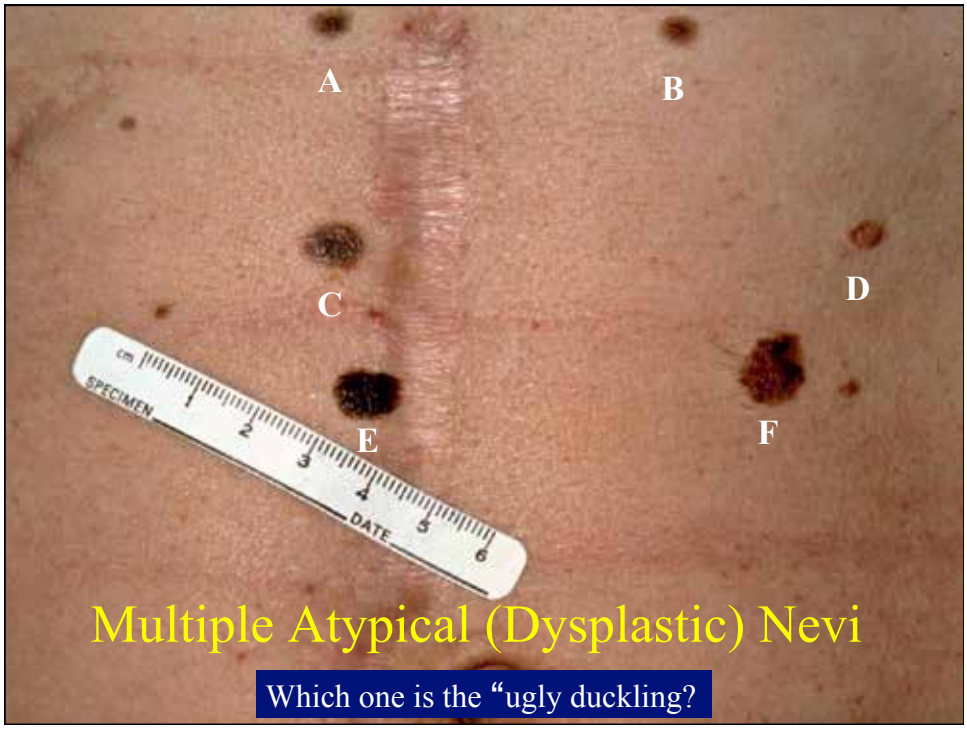
Atypical (dysplastic) Nevus

What is wrong with this nevus?

- Larger than other nevi
- More than one color
- Asymmetric

Severely Atypical Nevus

- Large
- More than one color
- Asymmetric
- Irregular margins



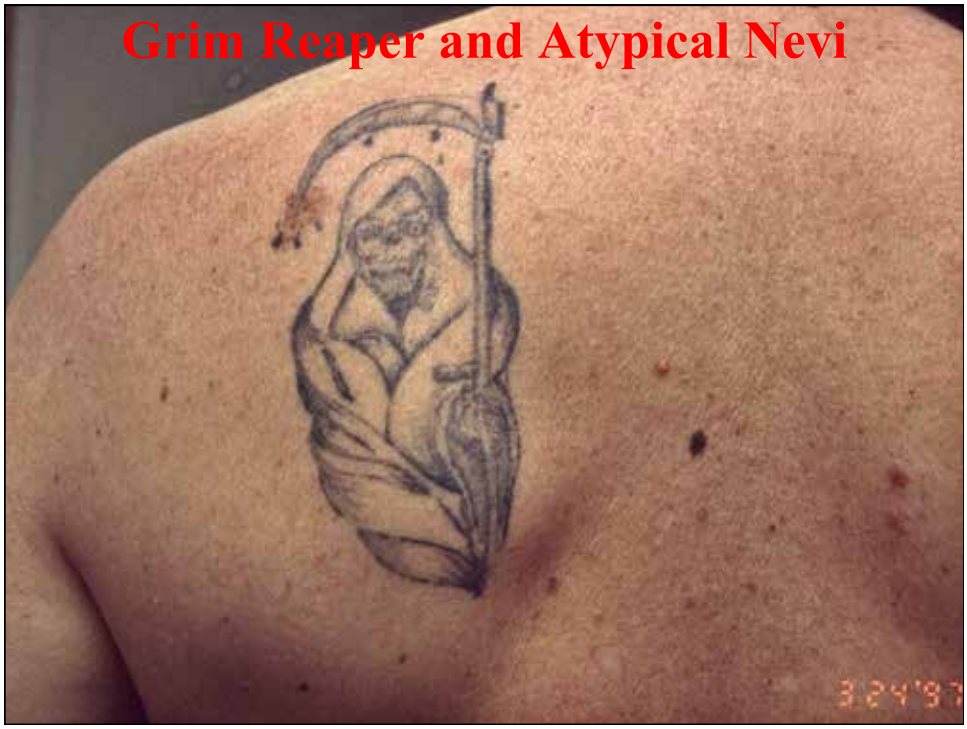
Familial Atypical Nevi (FAMMM syndrome)

- Numerous atypical nevi
- History of melanoma and MM-situ


Familial Atypical Nevi
(FAMMM syndrome)
Oldest daughter (16 yo)
20 nevi upper chest
>100 total

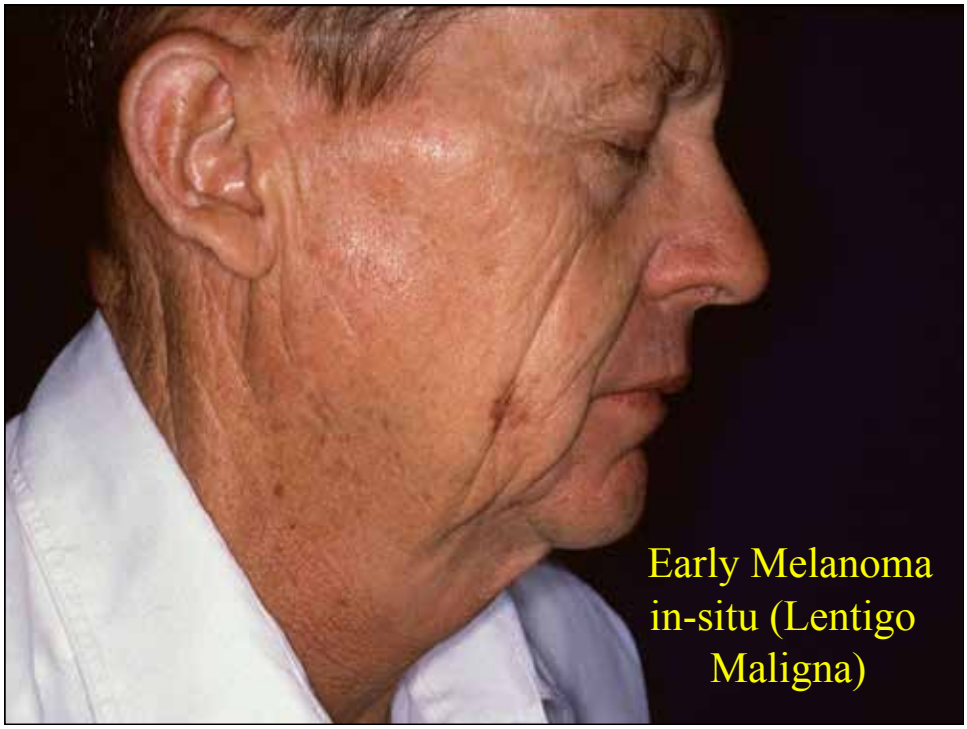

Familial Atypical Nevi
(FAMMM syndrome)
Youngest daughter
44 nevi on back
and posterior arms

Grim Reaper and Atypical Nevi



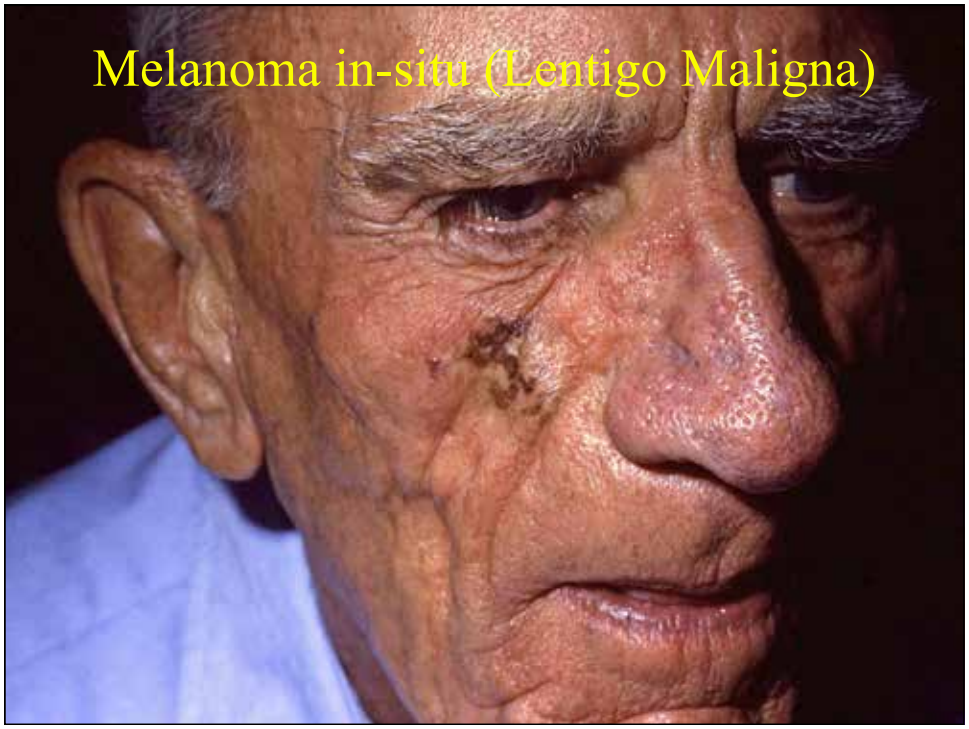
Malignant Melanoma
Clinical Variants

- Superficial spreading- 65%
- Nodular- 20%
- Lentigo maligna melanoma- 10%
- Acral lentiginous- 4%
- Desmoplastic- 1%


Early Melanoma
in-situ (Lentigo
Maligna)


Early Melanoma in-situ (Lentigo Maligna)

Melanoma in-situ (Lentigo Maligna)



Melanoma in-situ
(Lentigo Maligna)

Melanoma in-situ
(Lentigo Maligna)

Melanoma in-situ
(Lentigo Maligna)

Superficial Spreading Melanoma

Superficial Spreading Melanoma

Superficial Spreading Melanoma

Superficial Spreading Melanoma

Superficial Spreading Melanoma with Nodule

Ulcerated Nodular Melanoma

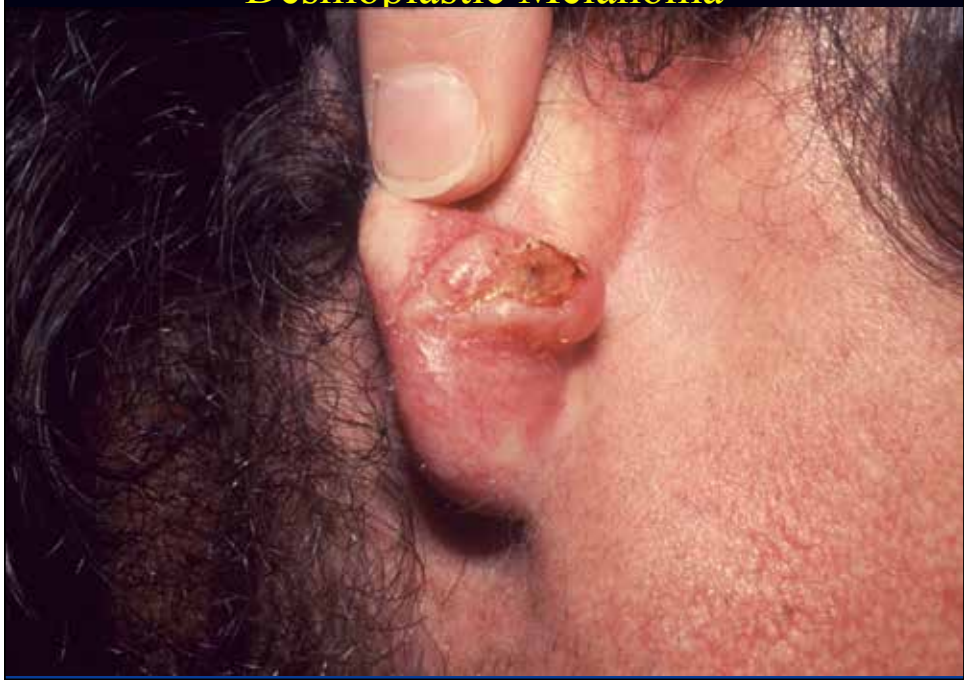
Superficial Spreading Melanoma with Nodule

Regressed Melanoma

Acral Lentiginous Melanoma

Acral Lentiginous MM

Desmoplastic Melanoma



Visual Diagnosis of Melanoma
"Room for Improvement"

Melanoma	Non-dermatologists	Dermatologists
6 of 6	2%	27%
5 of 6	10%	42%
4 of 6	26%	23%
3 of 6	33%	8%
2 of 6	22%	-
1 of 6	7%	-

J Am Acad Dermatol 14:555-560, 1986

Malignant Melanoma
ABCDE Guidelines

- A = Asymmetry
- B = Border irregularity (notches, pseudopods)
- C = Color variegation (black blue, brown, tan, white, gray, red)
- D = Diameter greater than 6 mm
- E = Evolution (change, bleeding)

The "Ugly Duckling"

The End