Nail Dermoscopy

Jennifer A. Stein MD, PhD
Associate Director, Pigmented Lesion Section
Ronald O. Perelman Department of Dermatology
NYU Langone Medical Center
Pigmented Lesions in the Nail

• Pigmented lesions in the nail are far more challenging
• Behind a frosted window
• Pigment on the plate isn’t the actual lesion
• Harder to biopsy
Melanonychia algorithm (Jin et al JAAD 2016)

275 melanonychia patients
Not melanin

• Stain
• Fungus
• Blood

Jin et al JAAD 2016
Fungal melanonychia

- Yellow color (the most common color in FM), multicolor (88.9%)
- Reverse triangular pattern (wider nail pigmentation at the distal end than the proximal end)
- Nonlongitudinal homogenous pattern
- Scales on the nail
- Subungual keratosis
- White or yellow streaks

Ohn et al JAAD 2017
Blood

• Reddish
• Should grow out
• Fecal occult blood test can confirm blood, not melanin, still need to monitor
Blood

• If it doesn’t involve the nail matrix, it’s very reassuring
• Kazi et al JAMA Derm 2016 – nail matrix, not the nail bed is the primary source of melanocytes
• Couldn’t find nail melanoma in the literature that did not involve the matrix
Extra Melanin Production

• Not melanocytic neoplasm
• Trauma-induced
• Non-melanocytic tumor-induced (wart)
• Lentigo / ethnic melanonychia
Melanocytic Activation - Lentigo

Gray, parallel homogenous lines
Ethnic Melanonychia

- Multiple bands
- Often symmetric
- Watch out for any single band that’s stands out from the others
Trauma-Induced Pigmentation

• Fingernails of frequently used fingers
• Gray background with gray parallel lines
• Surface changes in nail / shape of foot
• Often bilateral 5th toes
True melanocytic proliferations

• Nevus vs Melanoma
Nevus

• Brown or Black
• Regular bands
• Parallel, uniform thickness and spacing
• Pseudo-Hutchinson sign (see pigment through nail fold)
Melanoma

Braun et al JAAD 2007

- Wider at the base
- Multiple, uneven bands
- Destruction of nail plate
- Pigment beyond nail
- Width > 2/3 nail, <1/3 usually benign (Benati et al JEADV 2016)
Nail melanoma can be subtle

Knackstedt and Jellinek JAAD 2017
Patient Sent From Podiatrist
Patient: Can This Just Be Blood?
Sometimes takes multiple bx to get the diagnosis

- Result comes back as atypical melanocytic lesion, insufficient to call melanoma
- Surgery – removed the nail, excision
- Still atypical melanocytic, suggestive melanoma in situ
- Surgical oncology – excision with 5 mm margin
- Melanoma in situ
Thank you!

jas231@nyumc.org
212-263-5889