Disclosures

- Abbvie speakers bureau
- 3Gen
Disclosures

• Today’s program sponsored by 3Gen, manufacturer of dermatoscopes
Today’s program will focus on the science and technique of dermoscopy rather than the sale of specific devices manufactured by 3Gen

Mitigation of Bias
Dermoscopy: A closer look

Jenni Holman MD
 BS Zoology, University of Oklahoma
 M.D., University of Oklahoma
 Dermatology Residency, University of Missouri
 Currently in Tyler, TX in dermatology group practice
   Medical, surgical, and cosmetic dermatology
 Married to ER physician and mother of 3
Define dermoscopy
- Explain the applications of dermoscopy
- Recognize dermoscopy basics
- Identify dermatoscopic characteristics of melanoma
- Identify dermatoscopic characteristics of common non-pigmented lesions

Dermoscopy: A Closer Look
- Dermoscopy: The examination of skin lesions with a dermatoscope
- Primarily used as a aid to differentiate benign and malignant lesions

Dermoscopy defined
Oil Immersion Dermatoscope
Dermlite
Dermoscopy Photography
Smartphone Dermatoscopes
• Introduced in 1663 by Kolhaus
• Improved by addition of oil immersion in 1878 by Ernest Abbe
• Johann Saphier added a built-in light source
• Goldman coined the term “dermoscopy”

**History of Dermoscopy**
- Aid in melanoma diagnosis
- Monitor pigmented lesions
- Diagnosis of scabies or pubic lice
- Wart diagnosis
- Fungal diagnosis
  - Differentiate and diagnose tinea vs alopecia areata
  - Trichoscopy
- Surgical margin determination

Dermoscopy Applications
• Increase diagnostic accuracy for melanoma
  • Increased sensitivity by 20%
  • Increased specificity by 10%
Dermoscopy Basics
FIRST STEP

Is it melanocytic or not?
Melanocytic lesions are composed of 3 basic structures

- Pigment Network
- Dots and Globules
  - Streaks
- Amorphous Areas
  - Blue Areas

FIRST STEP
A delicate regular grid of brownish lines over a light brown background
- Correlates to rete ridges (pigment) and dermal papillae
- A pigment network is the hallmark of a melanocytic lesion

Pigment network
Pigment Network

- A Pigment Network
  - Reticular Pattern
  - Lattice like structure
  - Localized or Diffuse
Dots and Globules?
Amorphous Areas
Is it melanocytic?
Melanocytic: Benign or Not?
Color
Symmetry

- Shape
- Pattern
Dermoscopy of Melanoma
• Multiple Methods
  • 3 point Rule
  • Menzies Method
  • 7 point Rule
  • Pattern Analysis
  • ABCD
  • Kittler Method

Melanoma Diagnosis
- Asymmetry of Color
- Asymmetry of Pattern
- Blue or White Structures

3 Point Method
• Major Criteria
  • Irregular Pigment Network
  • Blue White Veil
  • Irregular vascularity
• Minor Criteria
  • Irregular dots and globules
  • Irregular streaks
  • Irregular blotches
  • Regression Structures

7 Point Method
Non-Melanocytic Lesions
Pigmented non-Melanocytic Lesions
  - Seborrheic Keratoses
  - Pigmented Basal Cell Carcinoma
  - Dermatofibromas
Seborrheic Keratosis

- No true network/globules
- Milia-like cysts
- “Fat Fingers”/ Cerebriform Surface
- Fissures/Ridges
- Blue-Gray dots
Milia Like Cysts?
Cerebriform Surface?
• Absence of pigment network
• Linear and arborizing telangiectasia
• Leaf like areas on periphery
• Blue-grey ovoid nests or globules
• Spoke wheel areas

Basal Cell Carcinoma
Arborizing Telangiectasia?
Basal Cell Carcinoma
leaf like areas
Basal Cell Carcinoma
Blue–grey areas
- Widespread blue/red lacunae
- Homogenous red-blue-black areas

Vascular Lesions
Vascular Lesions
Lacunae
Hemorrhage