

Melanoma: Screening & Diagnosis

David Ciocon, MD,FAAD
Assistant Clinical Professor of Medicine
Director of Mohs Surgery & Procedural Dermatology
Director of Clinical Operations, Division of Dermatology
Albert Einstein College of Medicine
Montefiore Medical Center
December 20, 2013

Disclosures

- None

Melanoma: Prevention and Early Detection

Objectives:

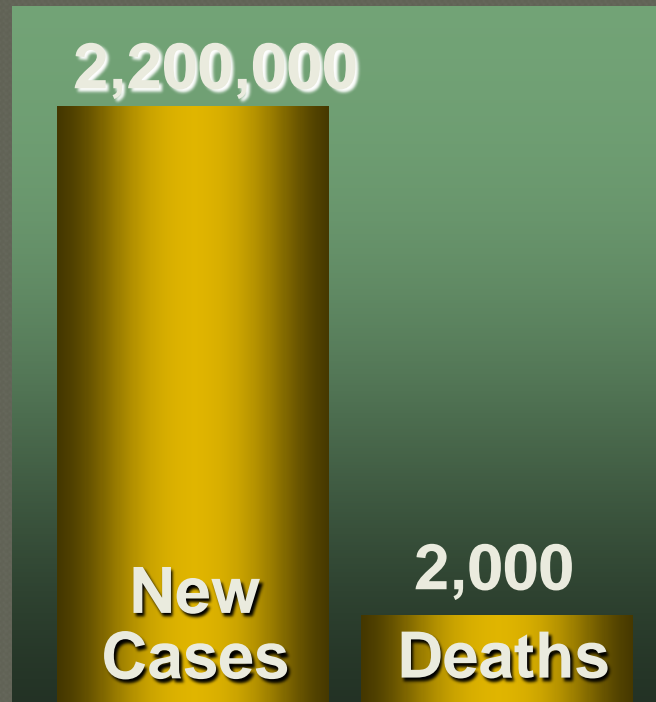
1. Describe melanoma cancer mortality and incidence.
1. Describe the changes over the past several decades in the epidemiology of melanoma.
1. Describe the magnitude of the melanoma disease burden in the United States
1. Identify persons who are at increased risk of melanoma.

Melanoma: Prevention and Early Detection

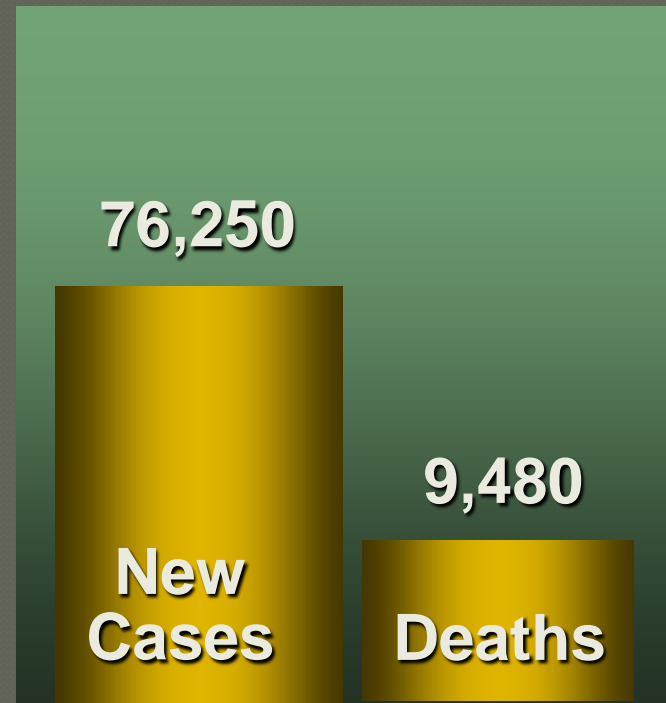
Objectives (continued):

5. Counsel patients concerning skin melanoma prevention.
6. Identify cutaneous lesions that may be melanoma or melanoma precursor lesions.
7. Help perform skin cancer screening for melanoma.
8. Recommend and refer for appropriate management of suspicious lesions.

Skin Cancer Incidence and Mortality



Nonmelanoma:
(basal and squamous cell)



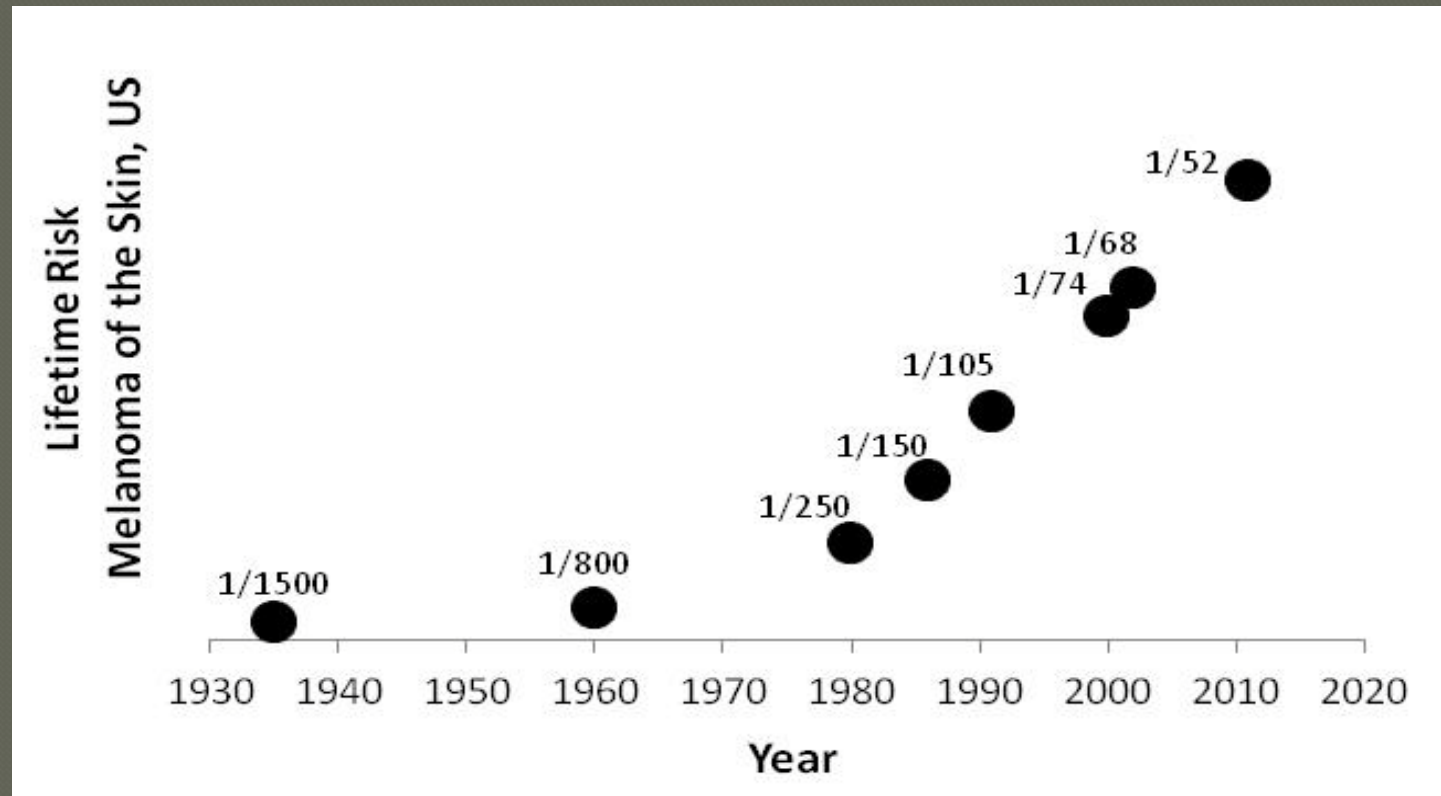
Melanoma:

Source: Cancer Statistics 2012, American Cancer Society

Mortality from Skin Cancer

- Malignant Melanoma ~ 20%
- Squamous Cell Carcinoma 2%
- Basal Cell Carcinoma < 1%

Magnitude of Problem



Contributing factors: detection bias, aging population, recreational patterns

Risk Factors for Malignant Melanoma

- Prior history of melanoma
- Family history
- Sun exposure
 - 5 sunburns doubles your risk
 - Cumulative, intermittent sun exposure
 - Tropical climate/high altitude
- Age
- Tanning bed use
- Precursor lesions

Additional Risk Factors for Melanoma

- Fair skin
- >3 years outdoor occupation during childhood
- Immunosuppression

Source: Balch, et al, 1992.

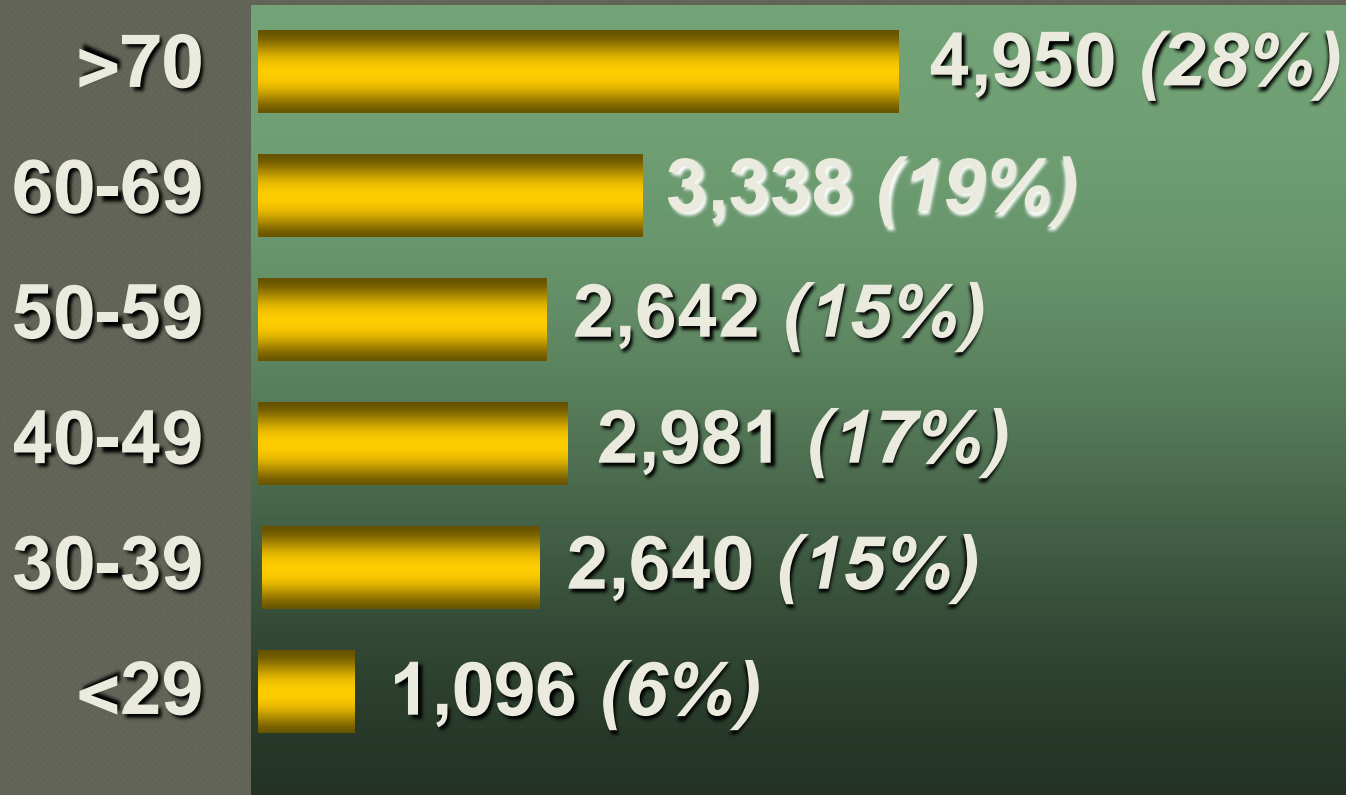
Previous Skin Cancers as a Risk Factor for Melanoma

History of Skin Cancer	Relative Risk
Previous melanoma	9
Previous nonmelanoma skin cancer or precancer	4

Source: Balch, et al, 1992; Rhodes, 1987.

Age as a Risk Factor

Number of Cases



Source: National Cancer Database. Demographic characteristics of patients diagnosed with Malignant Melanoma of the skin, 1994

Precursor Lesions as a Risk Factor for Melanoma

Precursor Lesions	Relative Risk
Changing mole	>400
Dysplastic mole/ familial melanoma	148
Dysplastic mole/ no familial melanoma	27
Congenital mole	21
Lentigo maligna	10

Source: Balch, et al., 1992; Rhodes, 1987.

Tanning Salon



Tanning Salons

- 40-50% of 16-17 year old girls
- 2.3 millions adolescents yearly
- More tanning salons per city then Starbucks or McDonalds
- Increase risk of melanoma - 75%
- Legislation was passed NJ April 1, 2013
 - Banning tanning under age 17

Primary Prevention of Skin Cancer

Avoid Exposure to Ultraviolet Radiation

- Use sunscreen \geq SPF 30 or higher
- Wear hats and other sun protective clothing
- Schedule outdoor activities before 10am and after 4pm
- Avoid all indoor tanning

Primary Prevention of Skin Cancer

Proper Use of Sunscreens

- Apply generously and evenly
- Reapply every 2 hours
 - if perspiring
 - if swimming
- Consider water resistant or waterproof formulas

Sun Protective Clothing



Secondary Prevention of Skin Cancer

Screening and Early Detection

- Inspect for new moles
- Inspect existing moles for changes
- Watch for the “ugly duckling”
- Determine the signature mole pattern
- Remove suspicious moles

Recommendations for Skin Cancer Screening

- **Skin examinations by a physician, as part of every cancer-related checkup**
- **Monthly self-examinations are recommended for persons with:**
 - **personal history of skin cancer**
 - **family history of skin cancer**
 - **precursor lesions**
 - **sun damaged skin**

Screening

- American Cancer Society
 - Every 3 years between 20-40 years
 - Every year over 40 year

Screening Examination for Skin Cancer

- **Source of bright light**
- **Examination table**
- **Magnifying lens**
- **Hand-held blow dryer**
- **Dermatoscope**
- **Photography**

Melanoma ABCDE's

Asymmetry

Benign Mole — Symmetrical



Melanoma Asymmetrical



Melanoma — Asymmetrical



Border

Benign Mole — Even Edges



Melanoma — Uneven Edges



Melanoma — Uneven Edges



Color

Benign Mole — One Shade



Melanoma — Two or More Shades



Melanoma — Two or More Shades

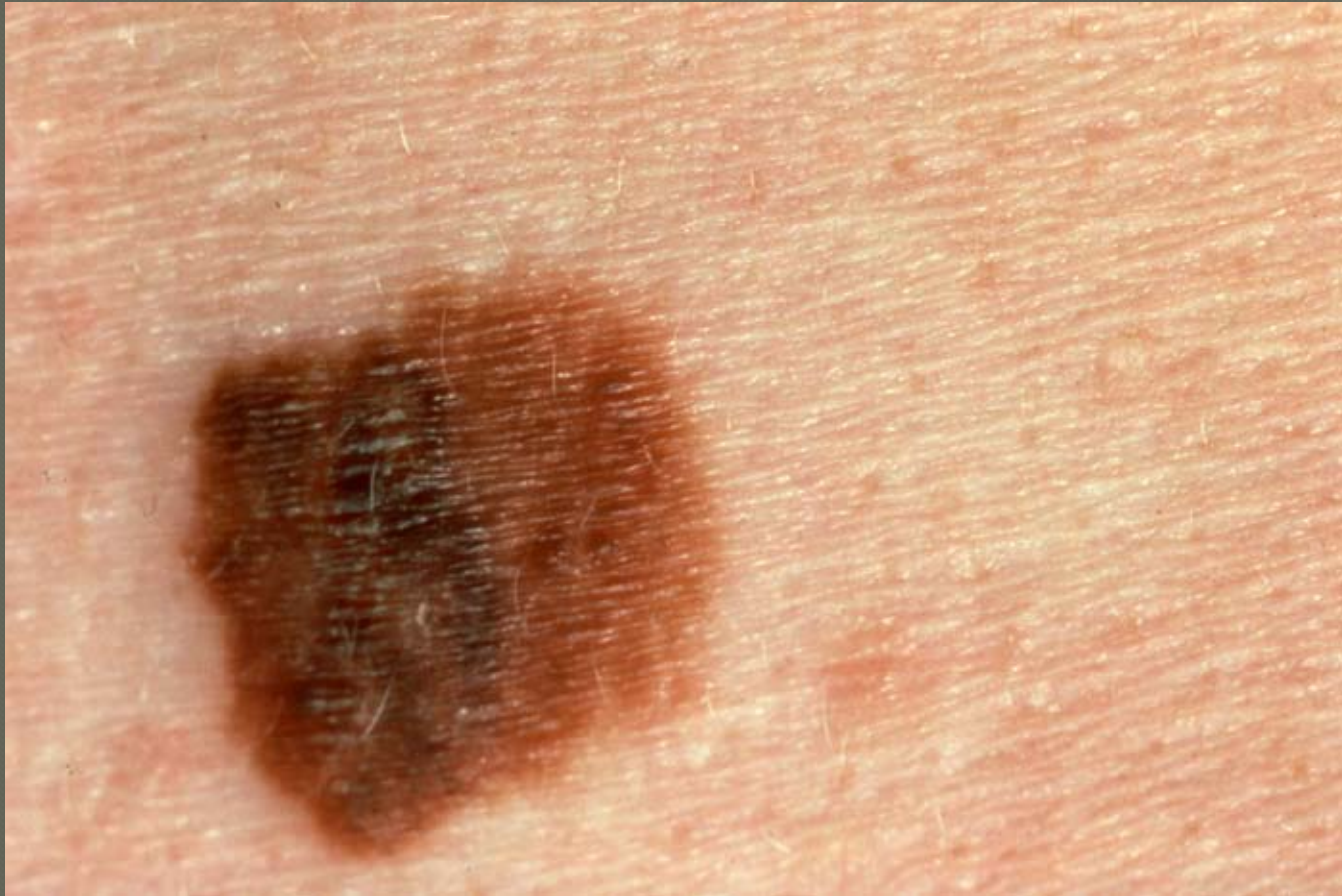


Diameter

Benign Mole — 6mm or Smaller



Melanoma — Larger than 6mm



Melanoma — Larger than 6mm

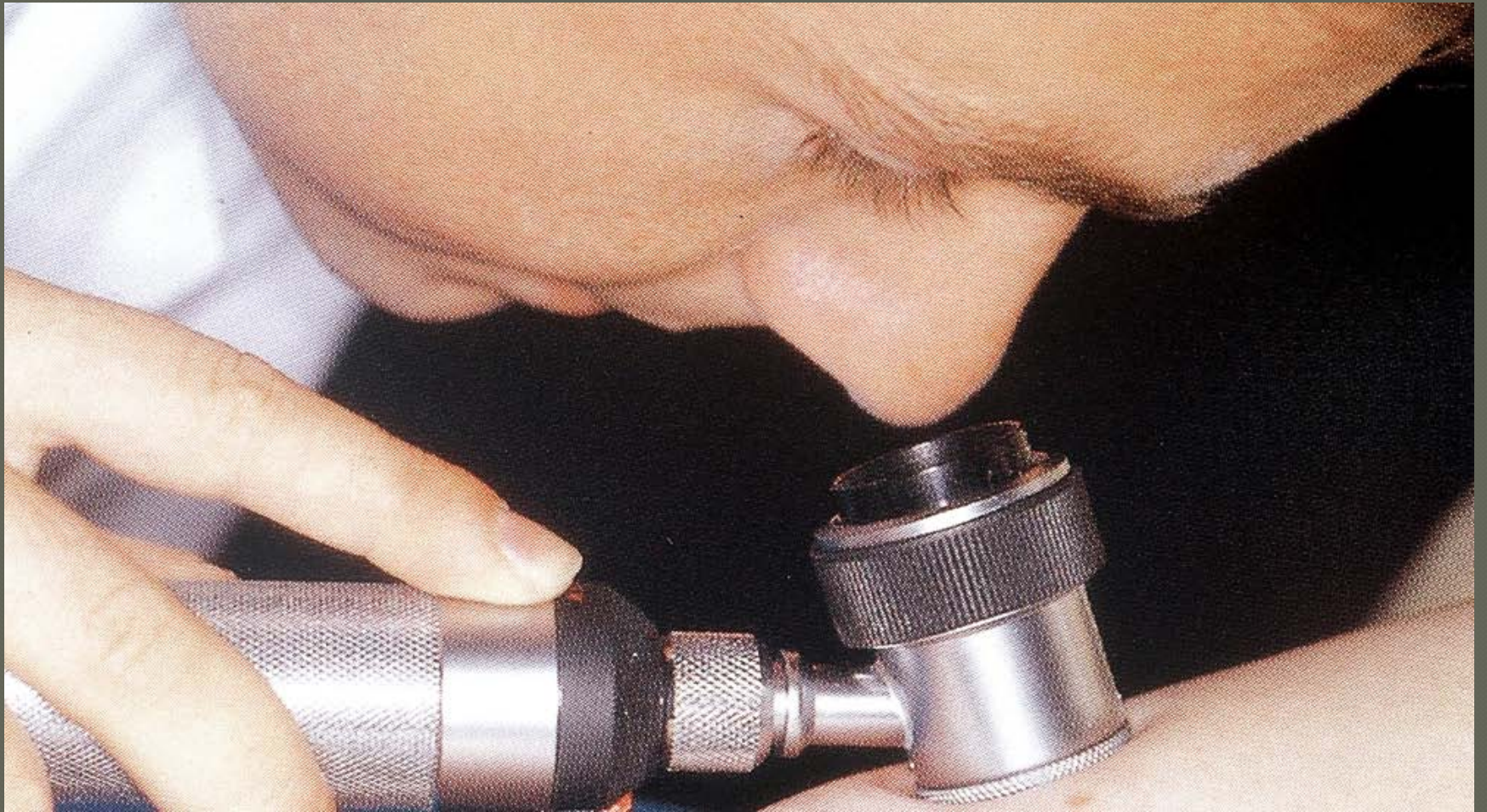


Evolving

Melanoma — a Mole that Changes



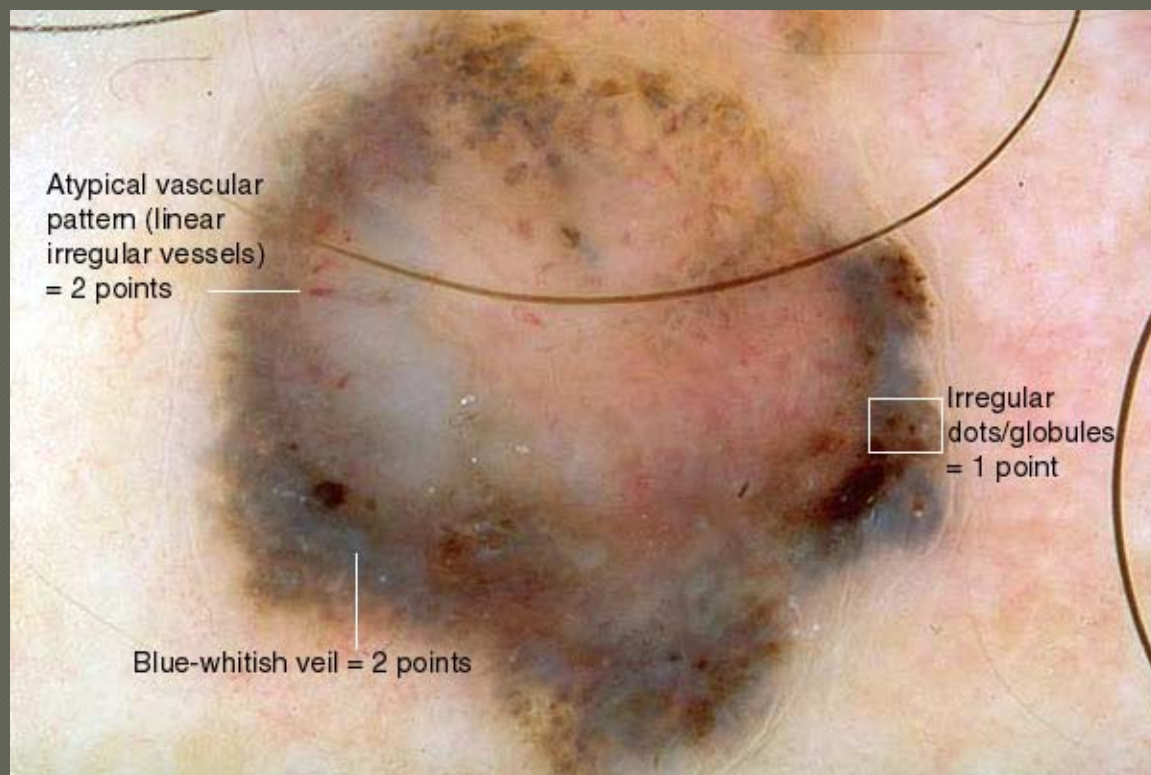
Dermatoscopy



Dermoscopy



Dermoscopy



Biopsy for Malignant Melanoma

- Incisional
 - Face/acral areas
 - Large lesion
 - Low suspicion lesion
- **Narrow excisional**
 - Standard of care
 - 1-3 mm margin
- Avoid shave biopsies
 - Exception - lentigo maligna

Establishing Prognosis in Melanoma

- ① Thickness of tumor
- ① Location of tumor
- ① Ulceration
- ① Clark Level IV/V

Types of Melanoma

Superficial Spreading Melanoma

- Most common type (60-70%)
- Ages 30-50
- Occurs on any site but most frequently seen on the trunk of men and the legs of women
- Regression is often observed
- Up to 1/2 may arise from a pre-existing nevus



Nodular Melanoma

- Second most common type (15-30%)
- 6th decade of life
- Occurs on any body site but is most frequently seen on the trunk, head, and neck
- M>F
- Vertical growth phase
- Poorer prognosis



























































