DIFFERENTIAL DIAGNOSIS OF PIGMENTED LESIONS
Pigmented Lesions

- Blue
- Black
- Grey
- Brown
Pigments

• **Endogenous**
  – Hemoglobin,
  – Hemosiderin
  – Bilirubin
  – Melanin

• **Exogenous**
  – Amalgam
  – Graphite
  – Other Tattoos
Color and Source

- **Black, Gray**
  - Melanin, Amalgam, Graphite
- **Blue, Purple**
  - Hemoglobin
- **Brown**
  - Hemosiderin, Melanin
Oral-Facial Pigmentations

- normal
- Atrophy
- Inflammation
- Vascular proliferation
- Basilar melanosis
- Melanin incontinence
- Melanocyte proliferation
- Hemosiderin
- Extrinsic
Classification of Pigmented Lesions

- Focal Macular
- Focal Nodular
- Multifocal/Diffuse Macular
- Multifocal/Diffuse Nodular
Focal Macular Pigmentation

- **Brown**
  - Ephelis, Melanotic Macule
  - Junctional Nevus
  - Melanoacanthoma
  - Ecchymosis

- **Black, Gray**
  - Tattoo (Amalgam, Graphite)

- **Blue, Purple**
  - Varix
  - Ecchymosis
Oral Melanotic Macule

- Lips, Gingiva and Palate
- Adults
- Etiology? Trauma?
- Basilar Melanosis
- Melanin Incontinence
- No Malignant Potential
Oral Melanotic Macule
Melanotic Macule
Pigment Synthesis
Melanoacanthoma

- Black Patients
- Buccal Mucosa, Lips
- Rapid Onset
- Basilar Melanosis
- Acanthosis
- Dendritic Melanocytes in spinous layer
Melanoacanthoma
Ecchymosis

- Traumatic Hemorrhage
- PT (INR), PTT, Clotting Time
- Coagulopathies
  - Drug induced (Coumadin)
  - Heritable Factor Deficiencies
  - Liver Disease
  - Malabsorption Syndromes
Ecchymosis from Trauma
Tattoos

• Amalgam
  – Operative Dentistry
  – Apical Retrofill

• Graphite
  – Lead Pencil Injury

• Intentional Tattooing
  – Various Inks
Amalgam Tattoo

- Clinical
- Histology
Graphite Tattoo
Focal Nodular Pigmentations

- **Brown**
  - Compound, Intradermal Nevi
  - Ecchymosis (Hematoma)
  - Melanoma
  - Pigmented Neuroectodermal Tumor of Infancy (Progonoma)

- **Black, Gray**
  - Tattoo
  - Melanoma

- **Blue, Purple**
  - Blue Nevus
  - Vascular Proliferation
  - Ecchymosis (Hematoma)
Melanocytic Nevi

- Junctional >>>> Compound
  - >>>> Intradermal/mucosal
- Facial Skin
- Palate, Gingiva
- Adults
- No Malignant Potential
Junctional Nevus

- Childhood Onset
- Destined to Progress to Intradermal
- Proliferation of Melanocytes
  - Within Basal Cell Layer
  - Junction with Connective Tissue
- Adults with Junctional Activity
  - Reassess for Atypical Melanocytic Hyperplasia
Junctional Nevus
Nevi
Nevi

- Intramucosal
Blue Nevus
Superficial Spreading Melanoma
Nodular Melanoma
Pigmented Neuroectodermal Tumor of Infancy (Progonoma)
Vascular Proliferations

- Varix (adult onset)

- Hemangioma (childhood onset)
Reactive Vascular Proliferations

Pyogenic Granuloma

Peripheral Giant Cell Granuloma
Diffuse/Multifocal Macular Lesions

• **Black, Gray**
  – Pigmented Lichen Planus
  – Superficial Spreading Melanoma
  – Multiple Tattoos

• **Blue, Purple**
  – Kaposi’s Sarcoma

• **Brown**
  – Ecchymosis
  – Peutz-Jehger syndrome
  – Basilar Melanosis
Pigmented Lichen Planus

• A rare variant of LP in which white lesions are accompanied by grey/black pigmentation

• Basilar melanosis with melanin incontinence and a lichenoid infiltrate
Pigmented LP
Superficial Spreading Melanoma

- Lentigo Maligna Melanoma
- Hutchinson’s Freckle
- Variegated
- Irregular Margins (coast of Maine)
- Skin – neck, forehead, malar
- Radial Growth along basement membrane
- Good Prognosis: 1-2 cm. margins
Superficial Spreading Melanoma
Oral Melanomas
Superficial Spreading Melanoma

- Melanoma in situ, Atypical Melanocytic hyperplasia
- Melanoma
Kaposi’s Sarcoma

- Early lesions are macular
- Hard and Soft Palate
- HIV seropositive
- CD4 Counts are below 300
- Herpes Virus 8
- Progress to nodular phase
Kaposi’s Sarcoma
Ecchymosis
Peutz Jegher Syndrome

• Intestinal polyposis, benign hyperplastic polyps without a proclivity for malignant change
• Autosomal Dominant
• Perioral pigmentation
• Intestinal polyps
Peutz Jegher Syndrome
Diffuse Lesions, Basilar Melanosis

- Racial Pigmentation
- Cloasma, Malasma
- Putz-Jehger Syndrome
- Minocyline Palatal Melanosis
- Smoker’s Melanosis
- Addison’s Disease
- Café-au-lait Pigmentation
Racial Pigmentation
Chloasma
Putz-Jehger Syndrome

- Intestinal Polyposis
- Hyperplastic Polyps
- No malignant potential
- Perioral Freckling
- Focal pigmentation on the palms
Putz-Jehger Syndrome
Minocycline Induced Pigmentation
Smoker’s Melanosis
Addisonian Pigmentation

• Adrenal Cortical Insufficiency
  – Infections of the cortex
  – Idiopathic cortical atrophy

• Low corticosteroid output

• ACTH is elevated due to negative feedback loop perturbation

• ACTH has melanocyte stimulating activity akin to MSH

• ACTH secreting tumors may also induced mucocutaneous pigment
Addison’s Disease
Café au Lait

- Diffuse macular lesions
- Multifocal
- Neurofibromatosis (von Recklinghausen’s)
  - NF gene mutation
- McCune Albright Syndrome
  - G protein mutations
Café au Lait Spot in Neurofibromatosis