

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

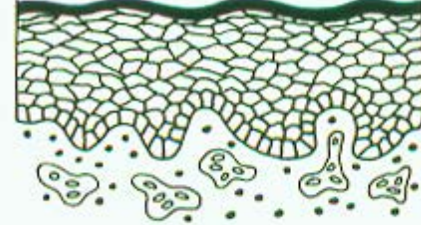
normal



Atrophy



Inflammation



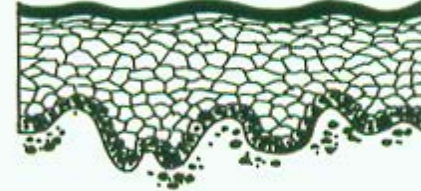
Vascular proliferation



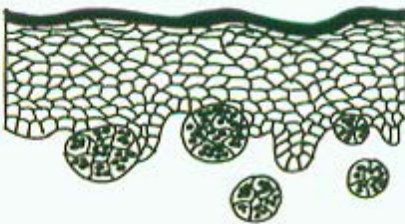
Basilar melanosis



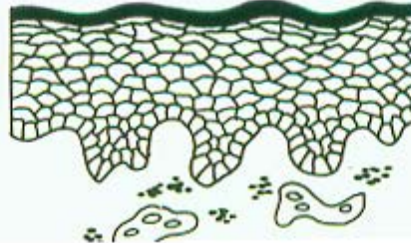
Melanin incontinence



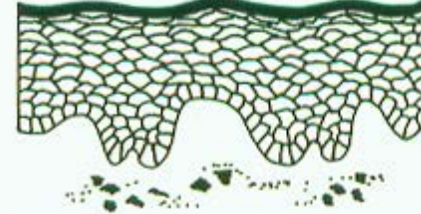
Melanocyte proliferation



Hemosiderin



Extrinsic



Classification of Pigmented Lesions

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

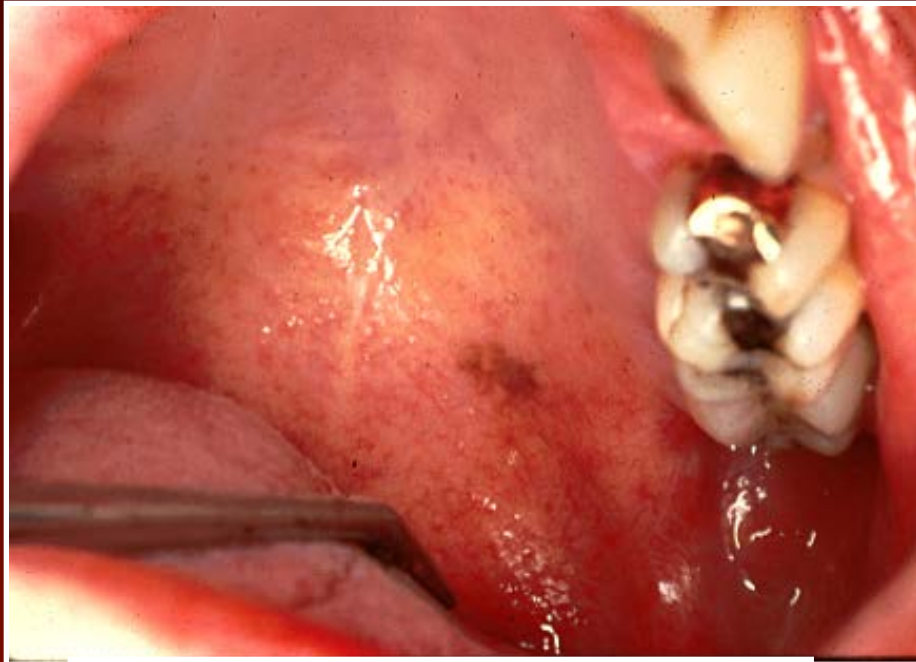
Focal Macular Pigmentations

- **Brown**
 - Ephelis, Melanotic Macule
 - Junctional Nevus
 - Melanoacanthoma
 - Ecchymosis
- **Black, Gray**
 - Tattoo (Amalgam, Graphite)
- **Blue, Purple**
 - Varix
 - Ecchymosis

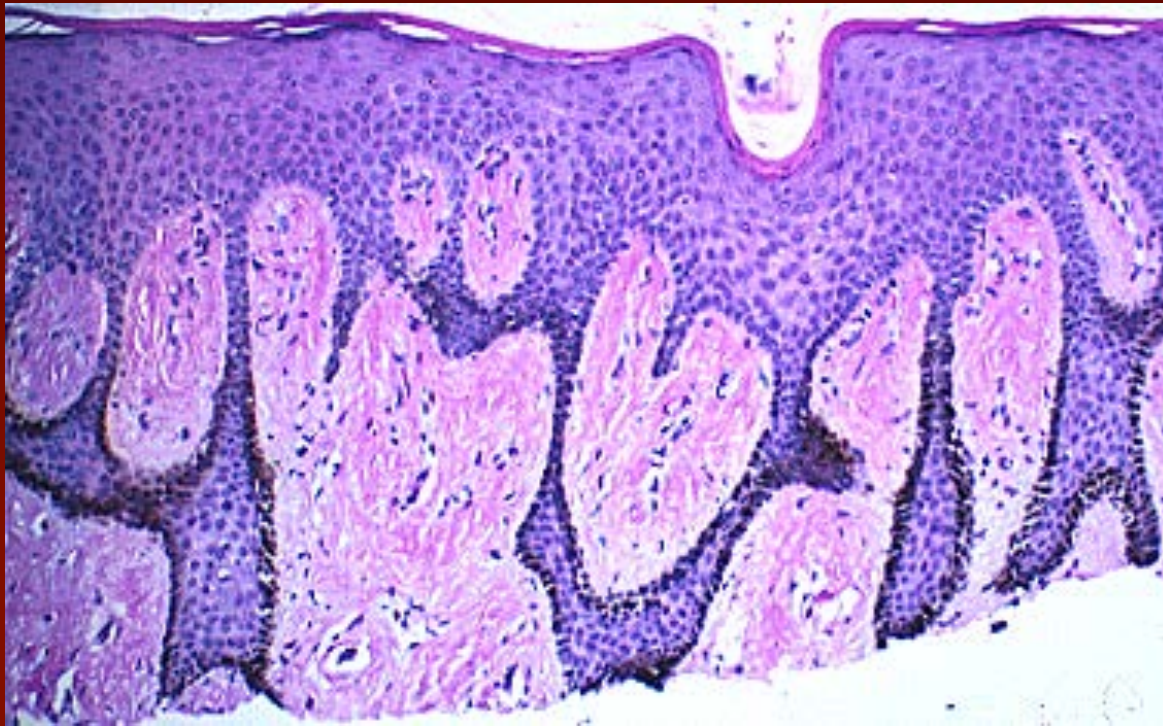
Oral Melanotic Macule

- 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

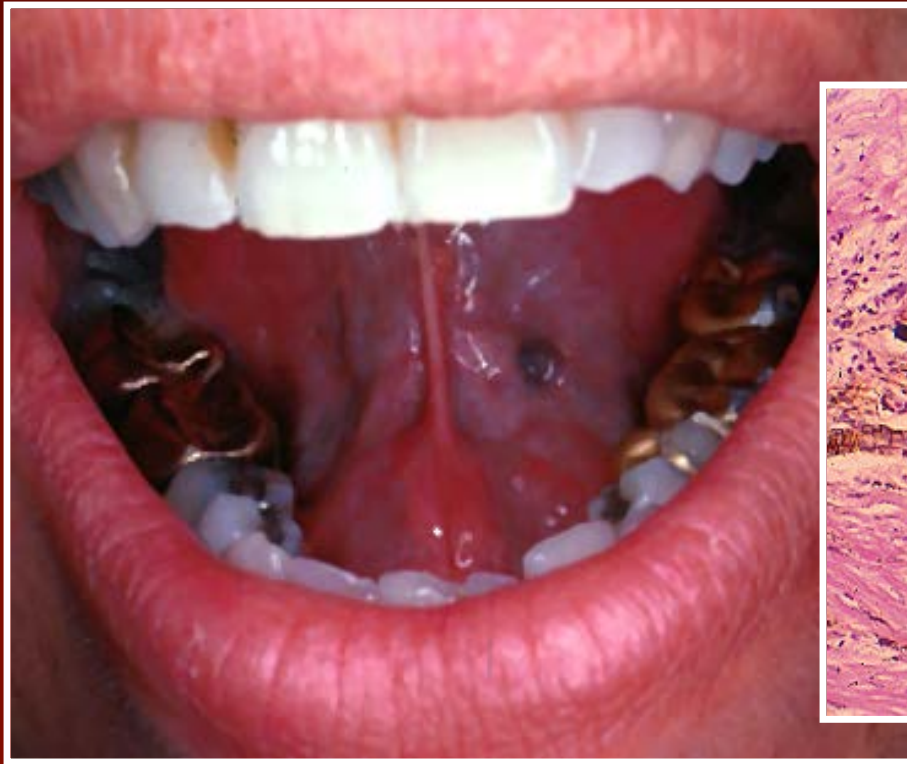


Tattoos

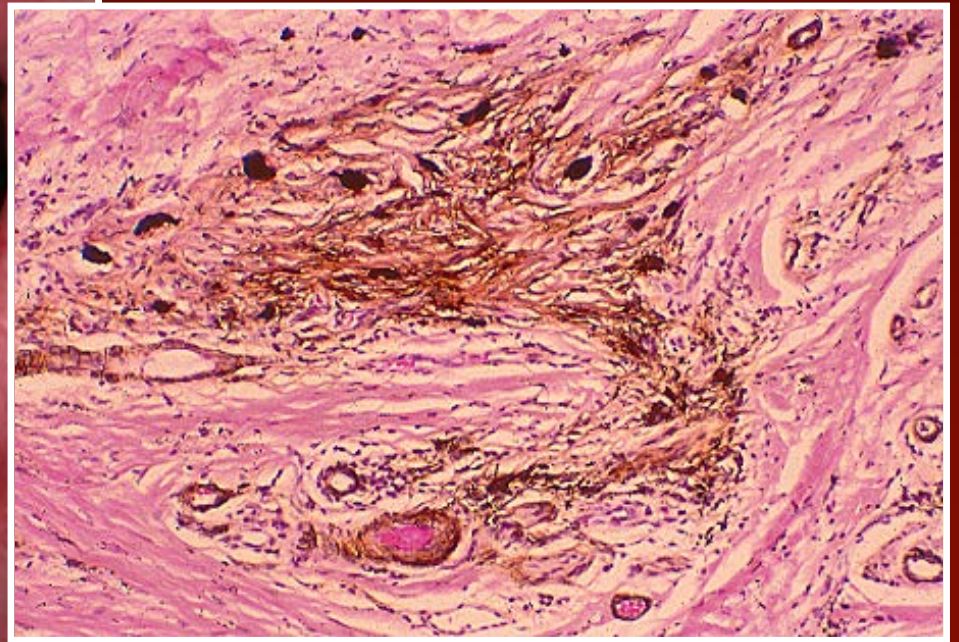
- **Amalgam**
 - Operative Dentistry
 - Apical Retrofill
- **Graphite**
 - Lead Pencil Injury
- **Intentional Tattooing**
 - Various Inks

Amalgam Tattoo

- Clinical



- Histology



Graphite Tattoo

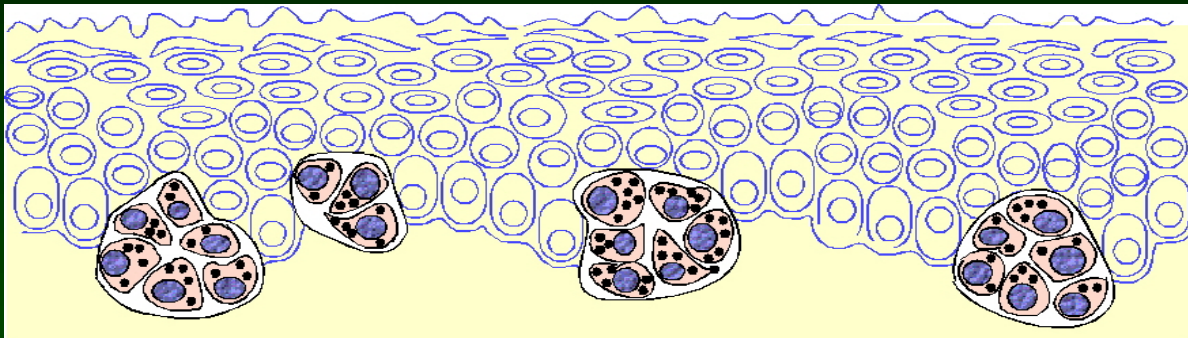


Focal Nodular Pigmentations

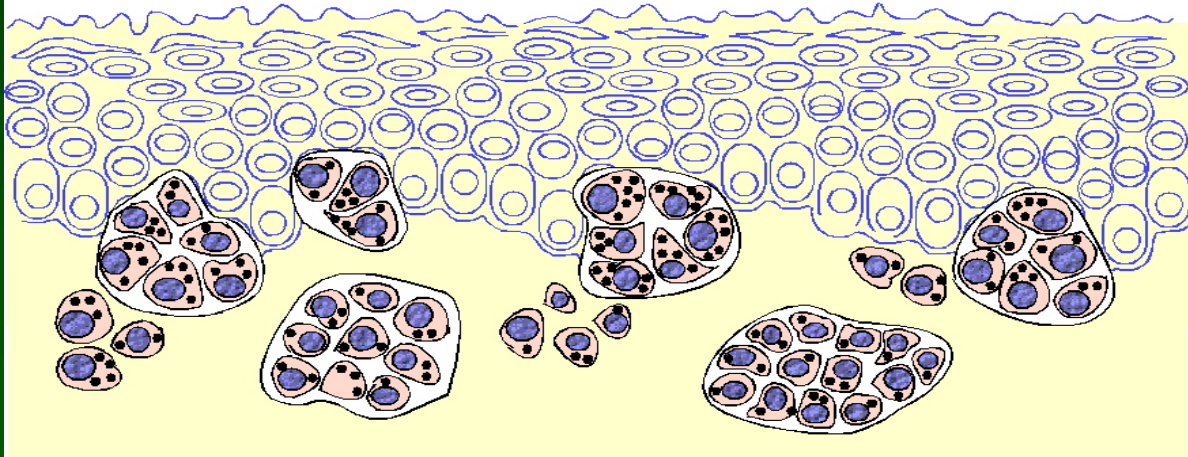
- **Brown**
 - Compound, Intradermal Nevi
 - Ecchymosis (Hematoma)
 - Melanoma
 - Pigmented Neuroectodermal Tumor of Infancy (Progonoma)
- **Black, Gray**
 - Tattoo
 - Melanoma
- **Blue, Purple**
 - Blue Nevus
 - Vascular Proliferation
 - Ecchymosis (Hematoma)

Melanocytic Nevi

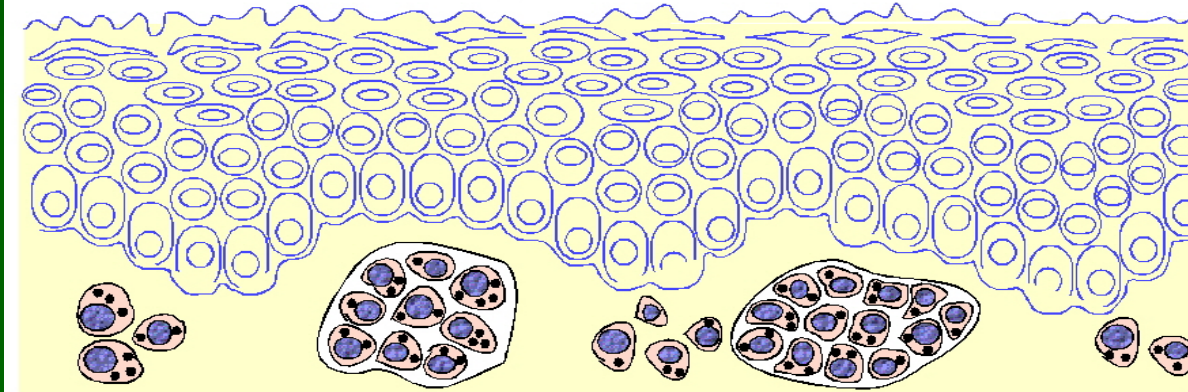
- Junctional>>>Compound
 - >>>Intradermal/mucosal
- Facial Skin
- Palate, Gingiva
- Adults
- No Malignant Potential



Junctional Nevus



Compound Nevus

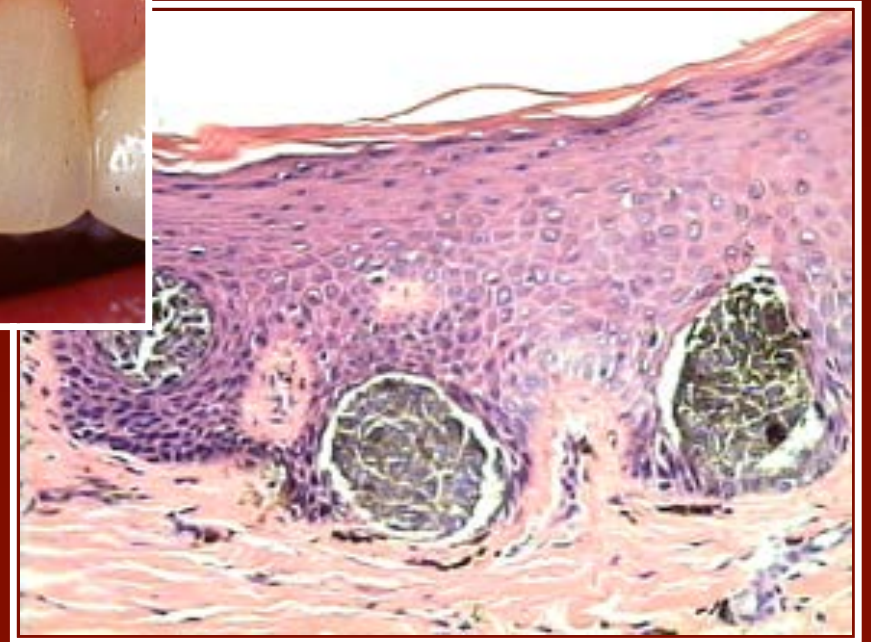


Intramucosal (dermal) Nevus

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

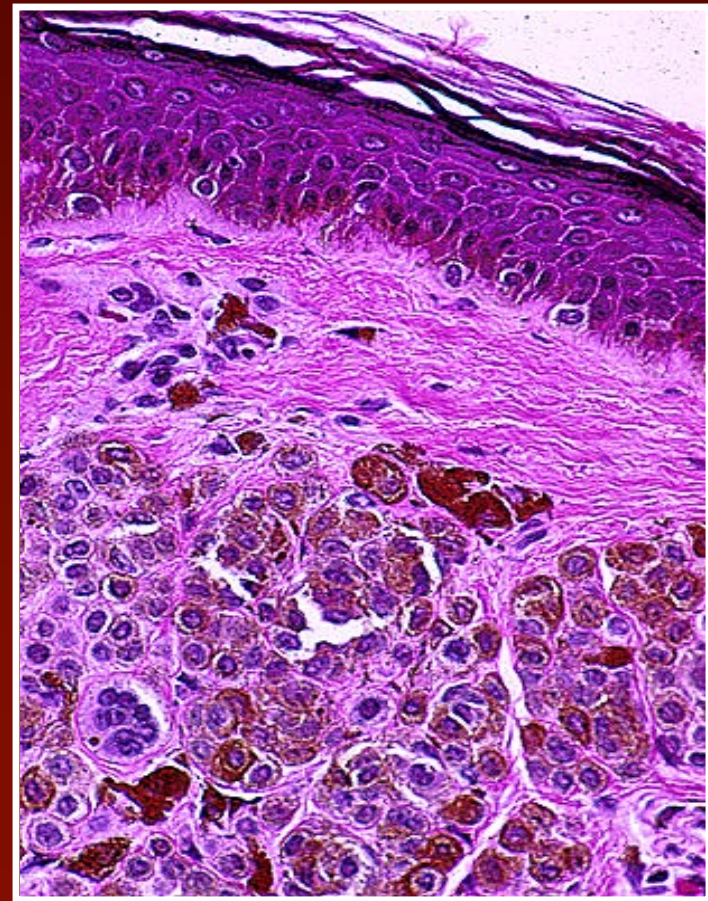
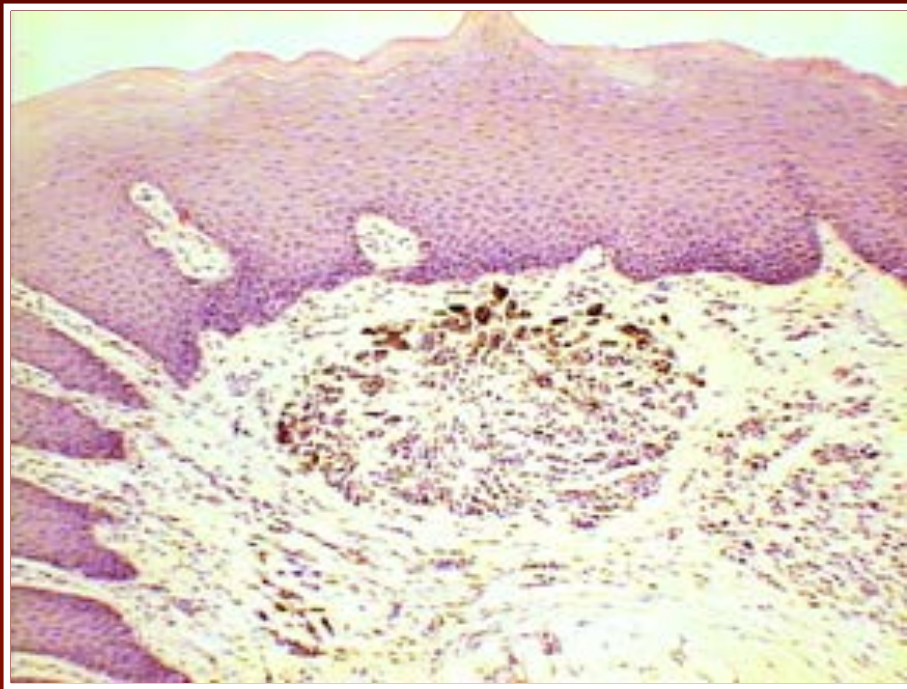


Nevi

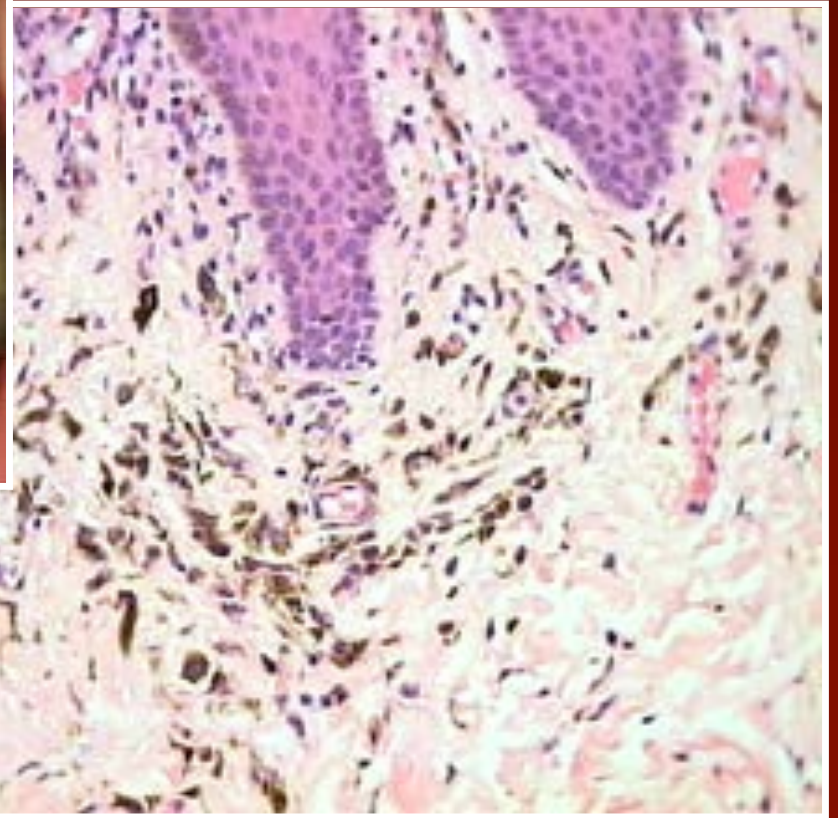


Nevi

- Intramucosal



Blue Nevus



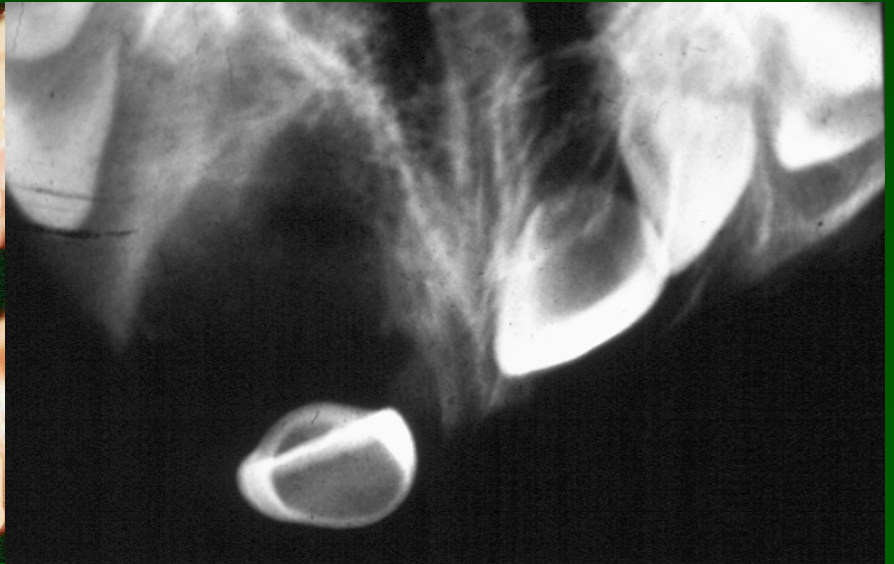
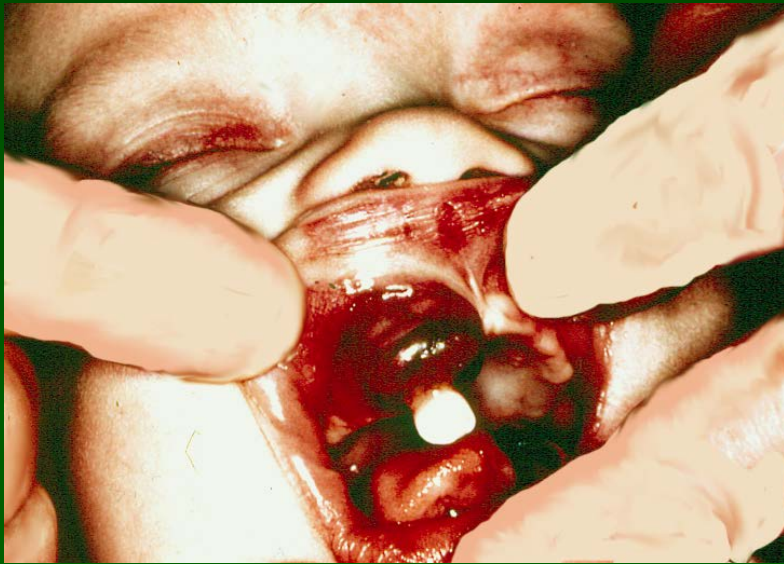
Superficial Spreading Melanoma



Nodular Melanoma

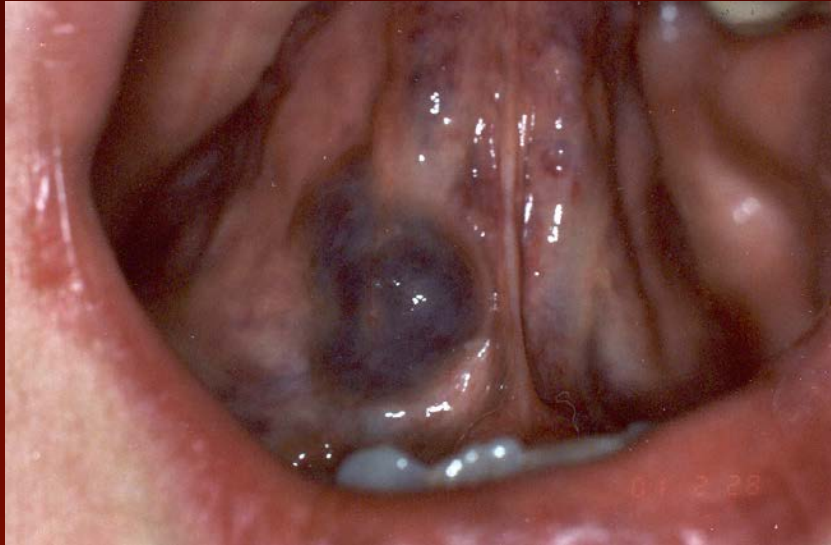


Pigmented Neuroectodermal Tumor of Infancy (Progonoma)

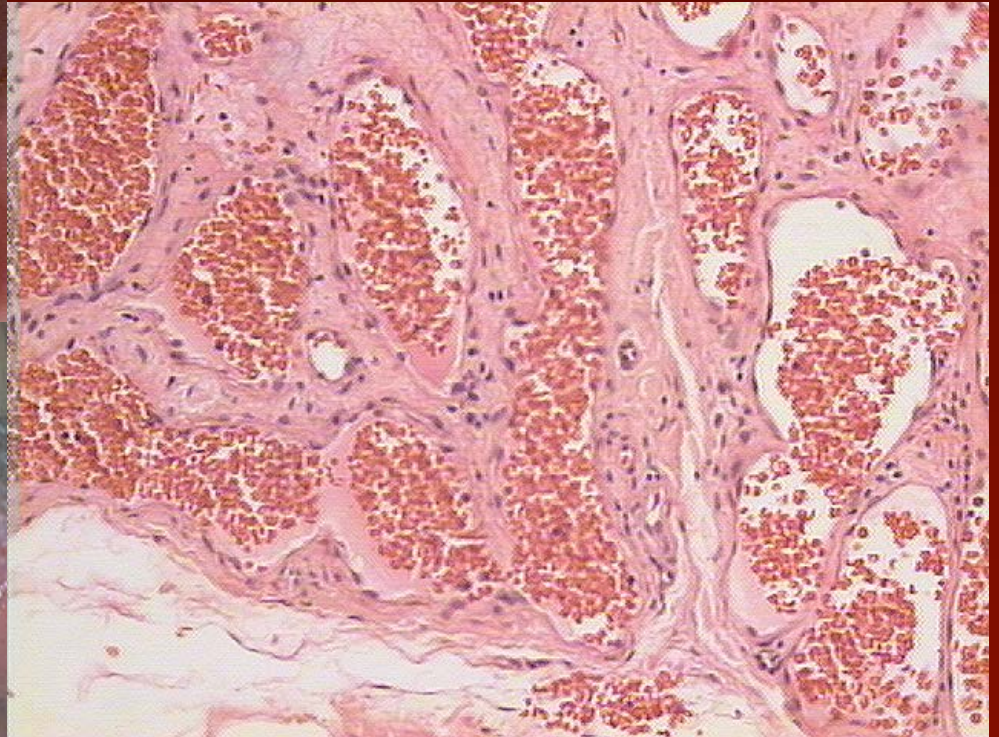


Vascular Proliferations

- Varix (adult onset)

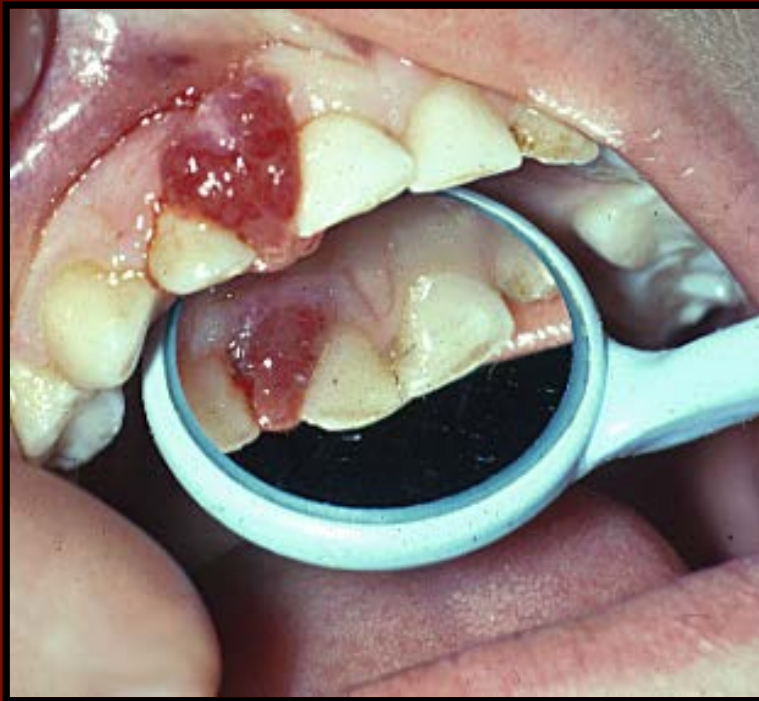


- Hemangioma (childhood onset)



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

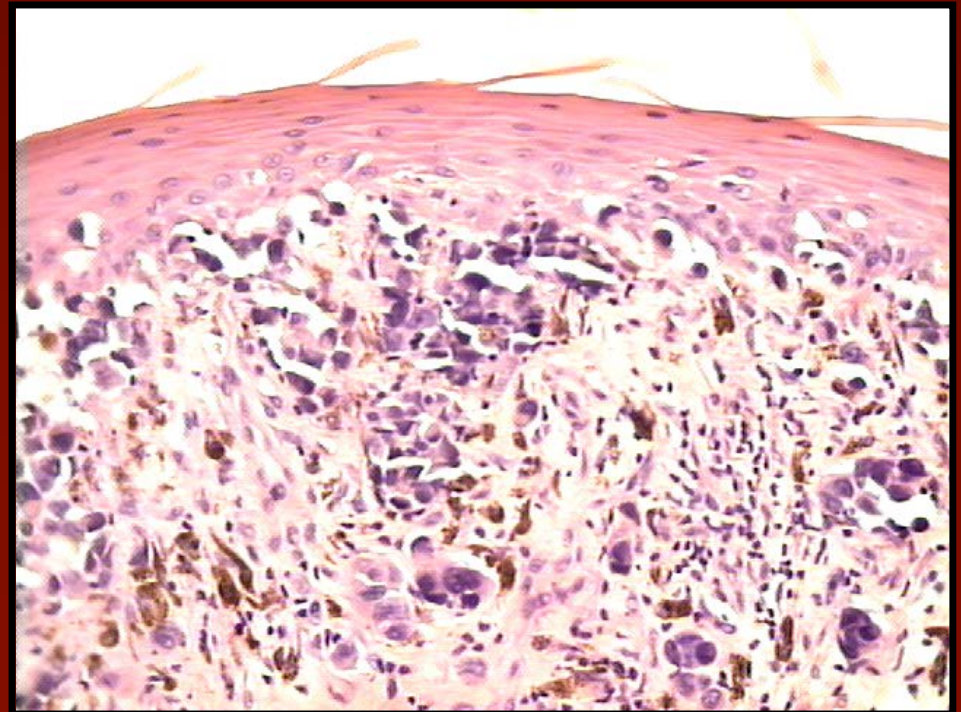
Pigmented LP



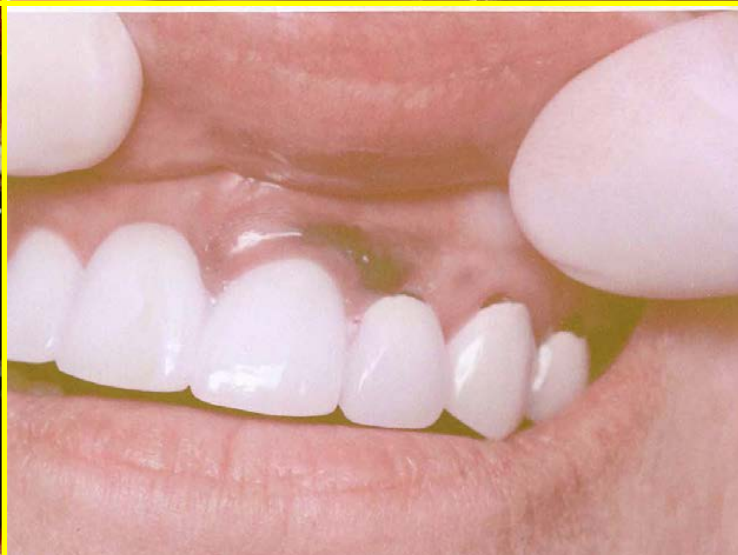
Superficial Spreading Melanoma

- 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

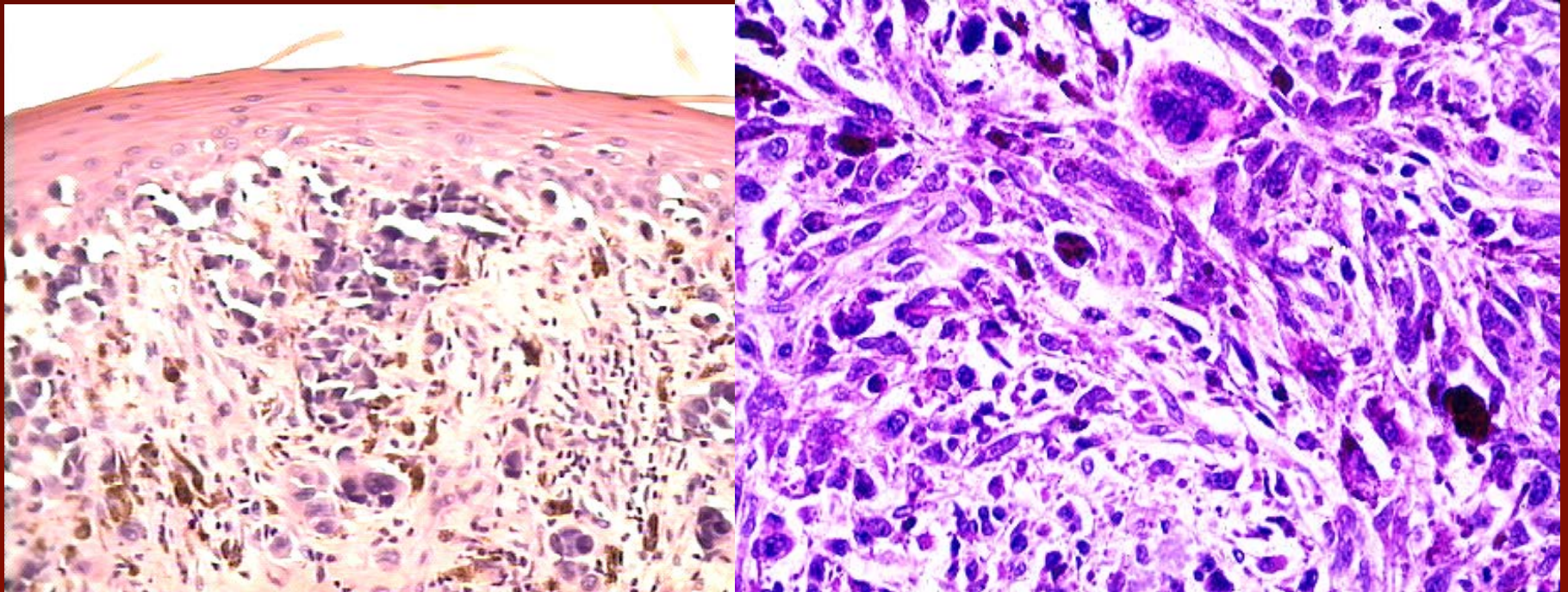


Oral Melanomas



Superficial Spreading Melanoma

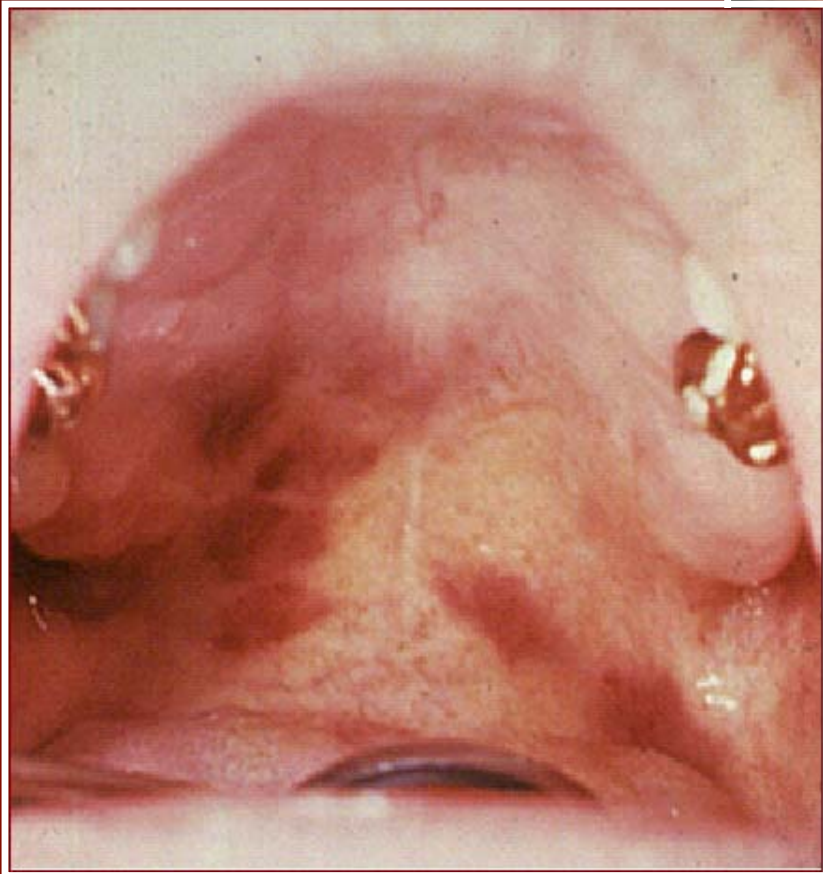
- Melanoma in situ,
Atypical Melanocytic
hyperplasia
- Melanoma



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



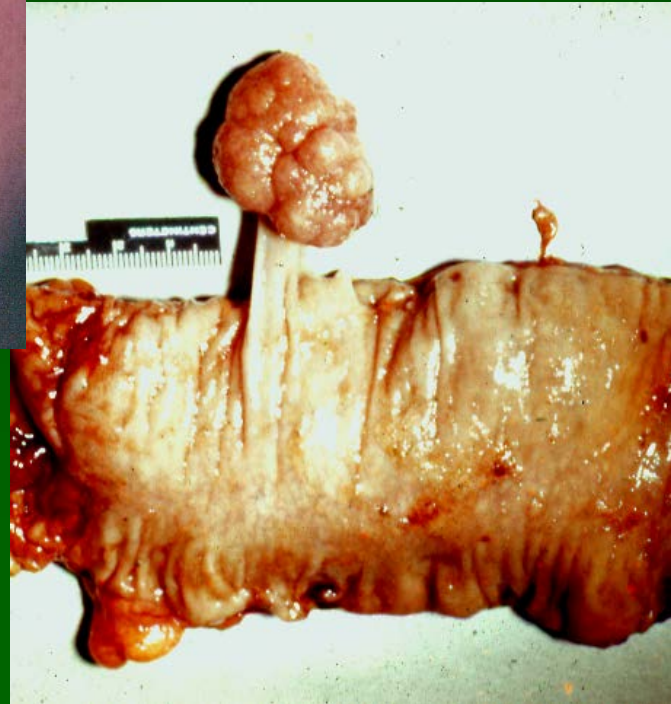
Ecchymosis



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
- Minocycline Palatal Melanosis
- Smoker's Melanosis
- Addison's Disease
- Café-au-lait Pigmentation

Racial Pigmentation



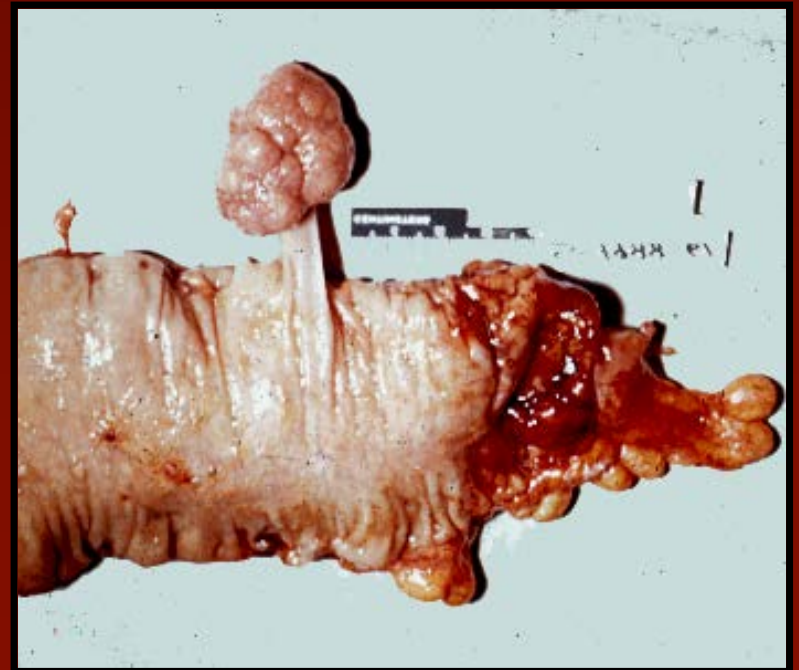
Chloasma



Putz-Jehger Syndrome

- Intestinal Polyposis
- Hyperplastic Polyps
- No malignant potential
- Perioral Freckling
- Focal pigmentations on the palms

Putz-Jehger Syndrome



Minocycline Induced Pigmentation



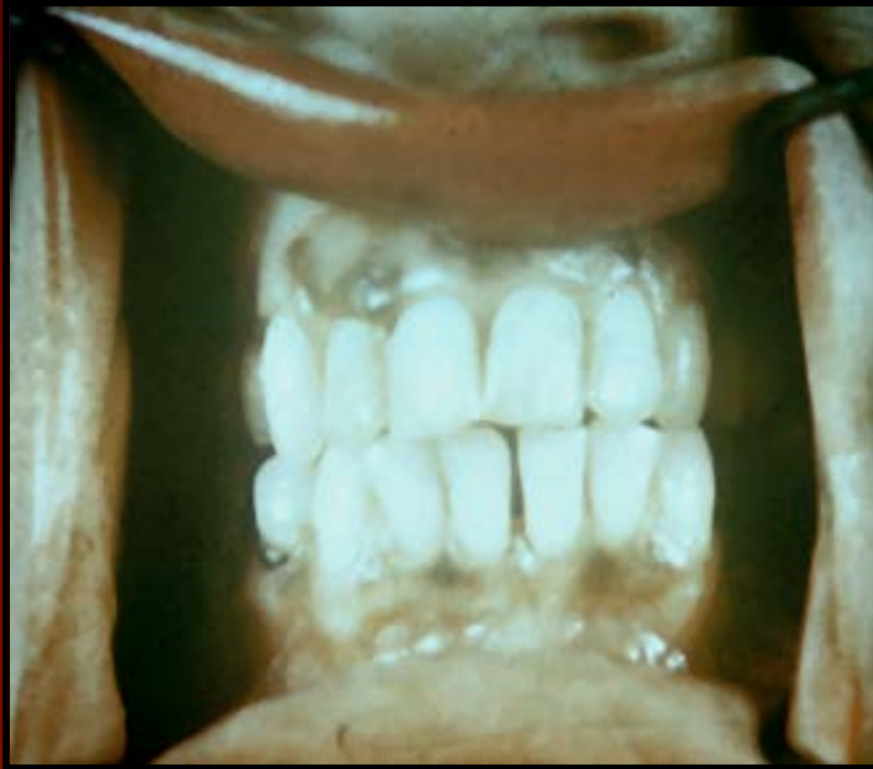
Smoker's Melanosis



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
(vonRecklinghausen's)
 - NF gene mutation
- McCune Albright Syndrome
 - G protein mutations

Café au Lait Spot in Neurofibromatosis