

 Definitions 1) Potentially Malignant Disorder

→ A disease or condition associated with a greater-than-normal risk of developing malignancy.

 2) Precancerous Lesions

→ A morphologically altered tissue that has a greater than normal risk of malignant transformation.

→ These tissues show signs of **epithelial dysplasia**.

 3) Precancerous Condition

→ A disease or patient habit that doesn't necessarily alter the clinical appearance of local tissue

← But is associated with a greater than normal risk of:

- Precancerous lesion
- Cancer development in that tissue

 Oral Premalignancy Premalignant Lesions

- Idiopathic leukoplakia
- Candidal leukoplakia
- Erythroplakia
- Syphilitic leukoplakia (3rd stage)
- White lesions associated with smokeless tobacco
- Solar (actinic) cheilitis

 Premalignant Conditions

- Oral submucous fibrosis
- Kelly–Paterson syndrome (Plummer–Vinson Syndrome)
- Lichen planus
- Discoid lupus erythematosus
- Xeroderma pigmentosa
- Dyskeratosis congenita

 Idiopathic Leukoplakia Definition

Idiopathic leukoplakia (leuko = white; plakia = patch)

“A white patch or plaque that cannot be characterized clinically or pathologically as any other disease”



Important Points:

- ➡ The term is **clinical**
- ➡ Does NOT indicate a specific histopathologic tissue alteration
- ➡ Diagnosis depends on **exclusion** of other lesions that appear as oral white plaques.

 **Etiology**

- ◆ Unknown — but certain factors may be considered:

1 Tobacco

2 Ultraviolet Radiation ➡ Causative factor for leukoplakia of the lower lip vermillion

3 Microorganisms

- Candidal leukoplakia / candidal hyperplasia
- Human papilloma virus (HPV) — especially subtypes 16 & 18

 **Clinical Features**

| Feature | Description |
|--|---|
|  Age | Middle-aged and older population |
|  Sex | Males > Females |
|  Site | Buccal mucosa, mandibular mucosa, lip vermillion, floor of mouth, retromolar area, tongue |
|  Behavior | Lesions vary in appearance and tend to change over time |

 **Clinical Types of Leukoplakia**

Lesions have increasing malignant transformation potential as appearance progresses ➡ ➡

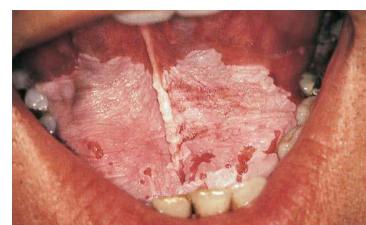
**1 Mild / Thin Leukoplakia** **Early lesions**

- Flat or slightly elevated
- **Color:** Grayish white, somewhat translucent
- **Consistency:** Soft
- **Borders:** Sharply demarcated

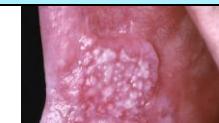


2 Homogeneous / Thick Leukoplakia

- **Size:** Slowly extends laterally
- **Color:** White
- **Appearance:** Thicker, fissures deepen and increase
- **Consistency:** Leathery to palpation

**3 Granular / Nodular Leukoplakia**

- Increased surface irregularities

**4 Verrucous / Verruciform Leukoplakia**

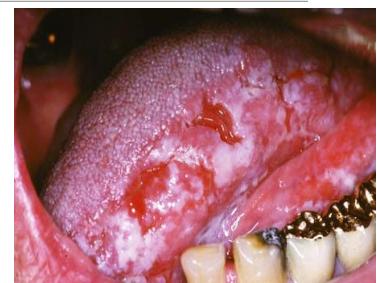
- Sharp pointed projections

**● Proliferative Verrucous Leukoplakia (PVL)**

- A. Large, diffuse, corrugated white lesions of buccal mucosa and tongue
B. Extensive thickened and fissured alteration of the tongue

**● ○ Erythro-leukoplakia (Speckled Leukoplakia)**

- Intermixed red and white lesion
→ Red areas represent sites where epithelial cells are immature or atrophic and cannot longer produce keratin

**✿ Histopathologic Features (Leukoplakia)**

- Most lesions show **no dysplasia** on biopsy
- Characterized by **hyperkeratosis** ± acanthosis
- Keratin layer may be:
 - Parakeratin
 - Orthokeratin
 - Combination of both

**✿ Dysplasia present in 5% – 25% of cases When present:**

- Mild
- Moderate
- Severe

- Full thickness involvement = **Carcinoma in situ**

- Chronic inflammatory cells seen in underlying connective tissue



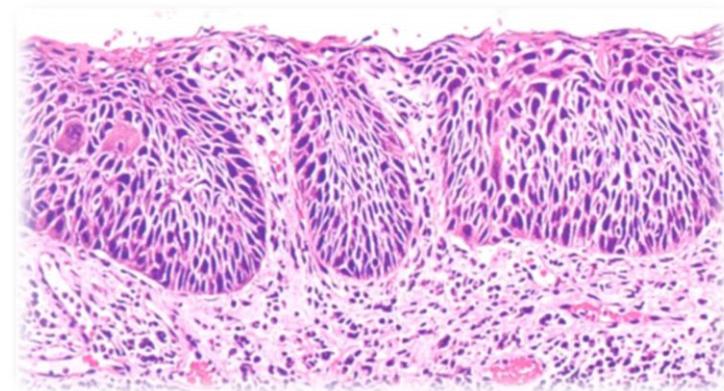
Epithelial Dysplasia

Architectural Changes (Histopathologic Sections Only)

1. Drop-shaped epithelial rete processes
2. Irregular epithelial stratification
3. Basilar hyperplasia
4. Loss of basal cell polarity

Cellular Changes (Seen in Cytological Smears)

1. Cellular pleomorphism
2. Nuclear hyperchromatism
3. Enlarged nucleoli
4. Increased nuclear–cytoplasmic ratio
5. Individual cell keratinization within spinous layer
6. Increased normal and abnormal mitoses
7. Reduction or loss of cellular adhesion

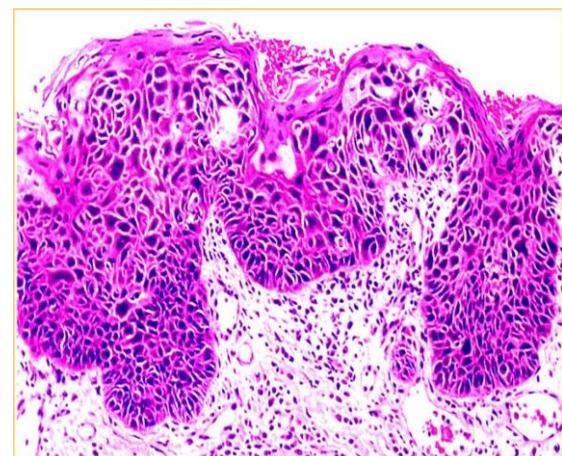


Degree of Epithelial Dysplasia

| Degree | Extent of Involvement | |
|------------|--|--|
| ● Mild | Basal & parabasal layers | |
| ● Moderate | From basal layer to mid spinous layer | |
| ● Severe | From basal layer to above midpoint of epithelium | |

Carcinoma in Situ

- Full thickness dysplastic change
- “Top-to-bottom change”
- No invasion
- Irreversible lesion
- May take years before invasion occurs



Erythroplakia

◆ Definition

A red patch that cannot be clinically or pathologically diagnosed as any other condition.

- Less common than leukoplakia
- More serious
- Higher percentage of malignancy

Usually demonstrates:

- Severe epithelial dysplasia
- Carcinoma in situ
- Invasive squamous cell carcinoma



👤 Clinical Features

| Feature | Description |
|--------------|---|
| 👉 Age | Older men |
| 📍 Site | Floor of mouth, tongue, soft palate |
| 👀 Appearance | Well demarcated red patch with soft velvety texture |
| 👀 S&S | Asymptomatic |



May be associated with leukoplakia → **Erythroleukoplakia**

👉 **Etiology** The causes are similar to those responsible for oral cancer.

→ Most of lesions represent either

- Severe epithelial dysplasia.
- Carcinoma in situ.
- invasive SCC.

Similar to oral cancer causes---- Underlying connective tissue shows chronic inflammation

Plummer–Vinson Syndrome

◆ Rare condition composed of:

- Iron deficiency anemia
- Glossitis
- Dysphagia

Syndrome:

Set of signs or symptoms occurring together but not related to each other



⚠ Associated Risk

↑ Increased risk of squamous cell carcinoma of:

- Esophagus
- Oropharynx
- Posterior mouth

👤 Clinical Features

| Feature | Description |
|-------------|--|
| 👶 Age | 30–50 years |
| 👩 Sex | More common in females |
| 🔥 S&S | Burning sensation of tongue and oral mucosa |
| 👅 Dysphagia | Due to esophageal web (thin membrane causing stenosis) |
| 😩 General | Fatigue, weakness, shortness of breath |
| 💅 Nails | Brittle, spoon-shaped |



🔬 Histopathological Features

- Epithelial atrophy with dysplastic features
- Chronic inflammation in connective tissue

KOILONYCHIA

Koilonychia, also known as spoon nails, is a nail disease that can be a sign of hypochromic anemia, especially iron-deficiency anemia. It refers to abnormally thin nails (usually of the hand) which have lost their convexity, becoming flat or even concave in shape.

