

## ORAL INFLAMMATORY LESIONS.

### o Aphthous Ulcers (Canker Sores)

These common superficial mucosal ulcerations affect up to 40% of the population. It may be associated disease (IBD), inflammatory bowel and Behçet disease. Lesions can be solitary or multiple; typically, they are shallow hyperemic ulcerations covered by a thin exudate and rimmed by a narrow zone of erythema. In most cases they resolve spontaneously in 7 to 10 days but can recur.

inflammatory bowel  
Disease.

### o Herpes Simplex Virus Infections.

\* If the patient has Multiple Aphthous Ulcers → we should think about another causes



Such as ; Bowel Disease - Behçet Disease \* (ulcer of the mouth) \*

\* If the blister is large ⇒ Pemphigus

\* unusual circumstances that help in causes of 28/03/2021

Thrush → immuno Compromised Patient [due to chemo therapy, organ transplant, AIDS Patient] \* Candida albicans will

Progress to infection \*

## 1 ORAL CANDIDIASIS (THRUSH).

- Candidiasis is the most common fungal infection of the oral cavity.
- Candida albicans is a normal component of the oral flora and only produces disease under unusual circumstances.
- The three major clinical forms of oral candidiasis are pseudomembranous, erythematous, and hyperplastic. The pseudomembranous form is most common and is known as thrush.
- This condition is characterized by a superficial, curdlike, gray to white inflammatory membrane composed of matted organisms enmeshed in a fibrinosuppurative exudate.
- In mildly immunosuppressed or debilitated individuals, such as diabetics, the infection usually remains superficial, but can spread to deep sites in association with more severe immunosuppression, including that seen in organ or hematopoietic stem cell transplant recipients, as well as patients with neutropenia, chemotherapy-induced immunosuppression, or AIDS.

← Grassy  
منه المريضي  
لثورتها

## 2] PROLIFERATIVE LESIONS OF THE ORAL CAVITY

- **Pyogenic granulomas** are pedunculated masses usually found on the gingiva of children, young adults, and pregnant women.
- These lesions are richly vascular and typically are ulcerated, which gives them a red to purple color. However, histologic examination demonstrates a dense proliferation of immature vessels similar to that seen in granulation tissue.
- Pyogenic granulomas can regress, mature into dense fibrous masses, or develop into a peripheral ossifying fibroma.
- Complete surgical excision is definitive treatment

\*Pyogenic granulomas → granulation tissue formation  
→ Pedunculated Mass \*



## NEOPLASTIC LESIONS OF THE ORAL CAVITY

→ Proceed Formation of Malignancy \* [Pre-Cancerous]

1. **Leukoplakia** is defined by the World Health Organization as "a white patch or plaque that cannot be scraped off and cannot be characterized clinically or pathologically as any other disease."

\* بقعة بيضاء، لا يتقشر  
\* تشابهاً

Leukoplakia includes a spectrum of histologic features ranging from **hyperkeratosis overlying a thickened, acanthotic**, but orderly mucosal lesions with **marked dysplasia** that sometimes merges with **carcinoma in situ**.

2. The most severe dysplastic changes are associated with **erythroplakia**, and more than 50% of these cases undergo malignant transformation. With increasing dysplasia and anaplasia.

\* Red in color \*

A majority of oral cavity cancers are **squamous cell carcinomas**.

associated with

Oral squamous cell carcinomas are classically linked to tobacco and alcohol use, but the incidence of HPV associated lesions is rising.

Smoking

\* Erythroplakia is More severe than Leukoplakia \*

\* Leukoplakia → - Normal skin with hyperkeratotic superficial layer \*  
- Dysplasia.  
- Carcinoma in situ

\* Risk Factor of skin (squamous cell carcinoma) →

- UV light  
- Sun exposure

**Leukoplakia**, the lesion is smooth with well-demarcated borders and **minimal elevation**. B.

# Leukoplakia\*

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Leukoplakia. the lesion is smooth with well-demarcated borders and minimal elevation. B, Histologic appearance of leukoplakia showing dysplasia, characterized by nuclear and cellular pleomorphism and loss of normal maturation.

Variation ←  
in cells, nuclei



\* Slightly elevated



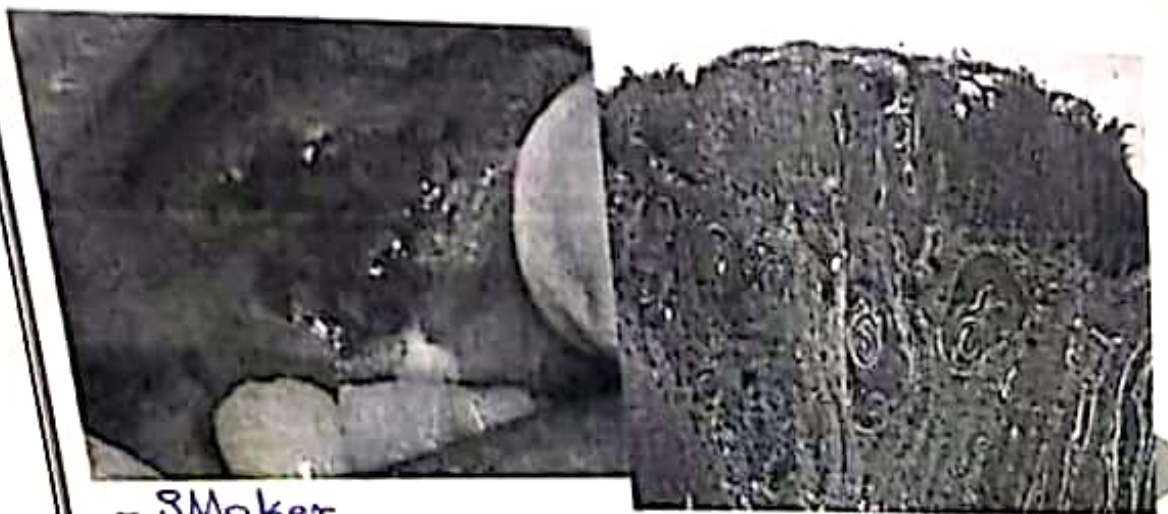
\* Dysplasia.  
[Loss of Normal Configuration].



\* Most common type of Malignancy in oral Mucosa is  
Squamous Cell Carcinoma

28/03/2021

Clinical appearance demonstrating ulceration and induration of the oral mucosa. Histologic appearance demonstrating numerous nests and islands of malignant keratinocytes invading the underlying connective tissue stroma.



- Smoker.
- non-discovered ulcer

\* Squamous Keratin Pearls

Invasion in deep sub mucosal layer \*

- Smoker.

- non-disluded Ulcer

\* Squamous Keratin Pepr

Invasion in deep submucosal layer

Salivary gland ←  
Can't produce  
Saliva.

أكثر شيوعاً في كبار السن.

## \* DISEASES OF SALIVARY GLANDS.

1- **Xerostomia**: is defined as a dry mouth resulting from a decrease in the production of saliva. It is caused by:

It is a major feature of the **autoimmune disorder Sjögren syndrome**, in which it usually is **accompanied by dry eyes**. **Radiation therapy**.

**Medications**. Complications of xerostomia include **increased rates of [1] dental caries and candidiasis**, as well as difficulty in swallowing and speaking. [2] [3]

2- **Sialadenitis**, or **inflammation of the salivary glands**, may be induced by trauma, viral or bacterial infection, or autoimmune disease.

The most common form of **viral sialadenitis is mumps** which may produce **enlargement of all salivary glands** but predominantly involves the **parotids**. While mumps in children is most often a self-limited benign condition, in adults it can cause **pancreatitis or orchitis**; the latter sometimes causes **sterility**.

3- **Duct obstruction by stones (sialolithiasis)** is a common antecedent to infection.

4- The **mucocele** is the **most common inflammatory lesion of the salivary glands**, and results from **either blockage or rupture of a salivary gland duct**.

Mucocele typically manifests as a **fluctuant swelling of the lower lip**.





Histologic examination demonstrates a **cystlike space lined by inflammatory granulation tissue or fibrous connective tissue that is filled with mucin and inflammatory cells, particularly macrophages.**

\* ال Parotid و ال Salivary gland يصير فيها tumor ، لكن نسبة ال Malignancy تكون أعلى بال glands الأخرى [Sub Lingual + Submandibular]

مهم جداً

### SALIVARY GLAND TUMORS

- Salivary gland tumors are relatively uncommon and represent less than 2% of all human tumors.
- Approximately 65% to 80% arise within the **parotid**, 10% in the submandibular gland. Approximately 15% to 30% of tumors in the parotid glands are malignant. 70% to 90% of sublingual tumors are cancerous.
- Salivary gland tumor is malignant is inversely proportional roughly, to the size of the gland. Malignancy تقل الحجم
- Salivary gland tumors usually occur in adults, with a slight female predominance.

ال Malignancy أعلى من ال Parotid

Table 14-1 Histopathologic Classification and Prevalence of the Most Common Benign and Malignant Salivary Gland Tumors

Benign	Malignant
	Mucinous cystadenocarcinoma (15%)



that is filled with much and inflammatory cells, macrophages.

\* ال Parotid تكثر في Salivary gland بغيرها tumor ، لكن نسبة malignancy تكون أعلى في الغدد الأخرى - [Sub Lingual + Submandibular]

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← Malignancy تزداد في ال Parotid

Table 14-1 Histopathologic Classification and Prevalence of the Most Common Benign and Malignant Salivary Gland Tumors

Benign	Malignant
Pleomorphic adenoma (50%)	Mucoepidermoid carcinoma (15%)
Warthin tumor (5%)	Acinic cell carcinoma (6%)
Oncocytoma (2%)	Adenocarcinoma NOS (6%)
Cystadenoma (2%)	Adenoid cystic carcinoma (4%)
Basal cell adenoma (2%)	Malignant mixed tumor (3%)

NOS, not otherwise specified.  
Data from: Lee CL, Auclair PL, Grossi DH. Surgical Pathology of the Salivary Glands. Vol 25. Major Problems in Pathology Philadelphia: WB Saunders, 1991.

\* Most common type in Benign:

Pleomorphic adenoma

\* Most common Malignant:

Mucoepidermoid Carcinoma

\* Most of the Salivary gland tumors are arising in the **Parotid** up to **80%** , but usually it is not Malignant \*

\* Malignancy of Salivary gland tumors associated with the size → the larger the gland the less the Malignancy \*

## PLEOMORPHIC ADENOMA

\* associated with Recurrence \*

- Pleomorphic adenomas present as painless, slow-growing, mobile discrete masses.
- They represent about 60% of tumors in the parotid.
- Pleomorphic adenomas recur if incompletely excised: Recurrence rates approach 25% after simple enucleation of the tumor, but are only 4% after wider resection.
- Carcinoma arising in a pleomorphic adenoma is referred to variously as a carcinoma ex pleomorphic adenoma or malignant mixed tumor.

↳ it contains: Epithelial and Myoepithelial and Chondromyxoid Matrix.

Pleomorphic adenomas typically



adenoma or malignant (mixed tumor).

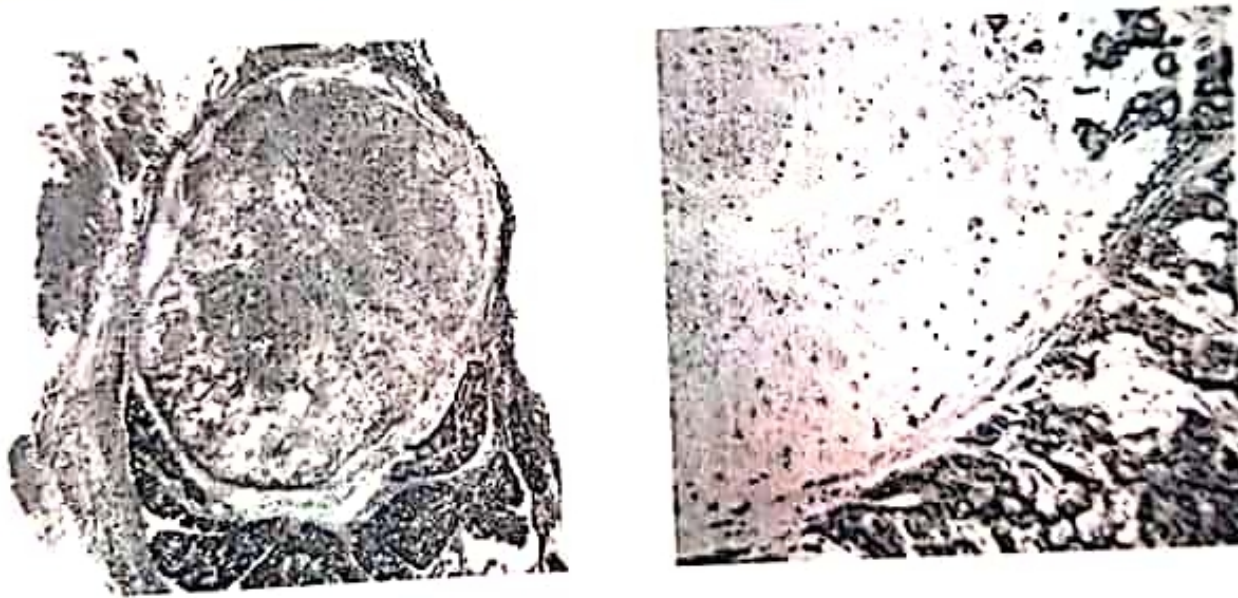
It contains: Epithelial and Myoepithelial and Chondromyxoid Matrix.

**Macroscopically:** Pleomorphic adenomas typically manifest as rounded, well-demarcated masses rarely exceeding 6 cm in the greatest dimension. The cut surface is gray-white and typically contains myxoid and blue translucent chondroid (cartilage-like) areas.

Mixed tumor.

**Microscopically:** The most striking histologic feature is their characteristic heterogeneity. Epithelial elements resembling ductal or myoepithelial cells are arranged in ducts, acini, irregular tubules, strands, or even sheets. These typically are dispersed within a mesenchyme-like background of loose myxoid tissue containing islands of chondroid and, rarely, foci of bone. In other instances there may be strands or sheets of myoepithelial cells.

- Low-power view showing **awell-demarcated tumor** with adjacent normal salivary gland parenchyma. **B**, High-power view showing **epithelial cells** as well as **myoepithelial cells** within **chondroid matrix material**.





## \* MUCOEPIDERMOID CARCINOMA

Most  
Common  
type

- These neoplasms represent about 15% of all salivary gland tumors, and while they occur mainly (60% to 70%) in the parotids.
- **Mucoepidermoid** carcinoma is the most common form of primary *malignant* tumor of the salivary glands.
- **Macroscopically:** they lack well-defined capsules and often are infiltrative. The cut surface is pale gray to white and frequently demonstrates small, mucinous cysts.
- On histologic examination, these tumors contain **CORDS, SHEETS, OR CYSTS LINED BY SQUAMOUS, MUCOUS, OR INTERMEDIATE CELLS**. The latter is a hybrid cell type with both squamous features and mucus-filled vacuoles, which are most easily detected with mucin stains.

- The jaws are a common site of epithelium-lined cysts derived from odontogenic remnants.
- The odontogenic keratocyst is locally aggressive, with a high recurrence rate. (Benign lesion).
- The periapical cyst is a reactive, inflammatory lesion associated with caries or dental trauma.
- The most common odontogenic tumors are ameloblastoma and odontoma.  
Most common.



## ESOPHAGUS



\* Barrett's esophagus

" Most common type of Metaplastic  
Changes in the body "

## OBSTRUCTIVE DISEASES

### o Mechanical Obstruction:

1- Stenosis most often is due to inflammation and scarring, which may be caused by chronic gastroesophageal reflux, irradiation, or caustic injury. \* decrease of surface area of lumen due to scarring \*

#### Esophageal stenosis

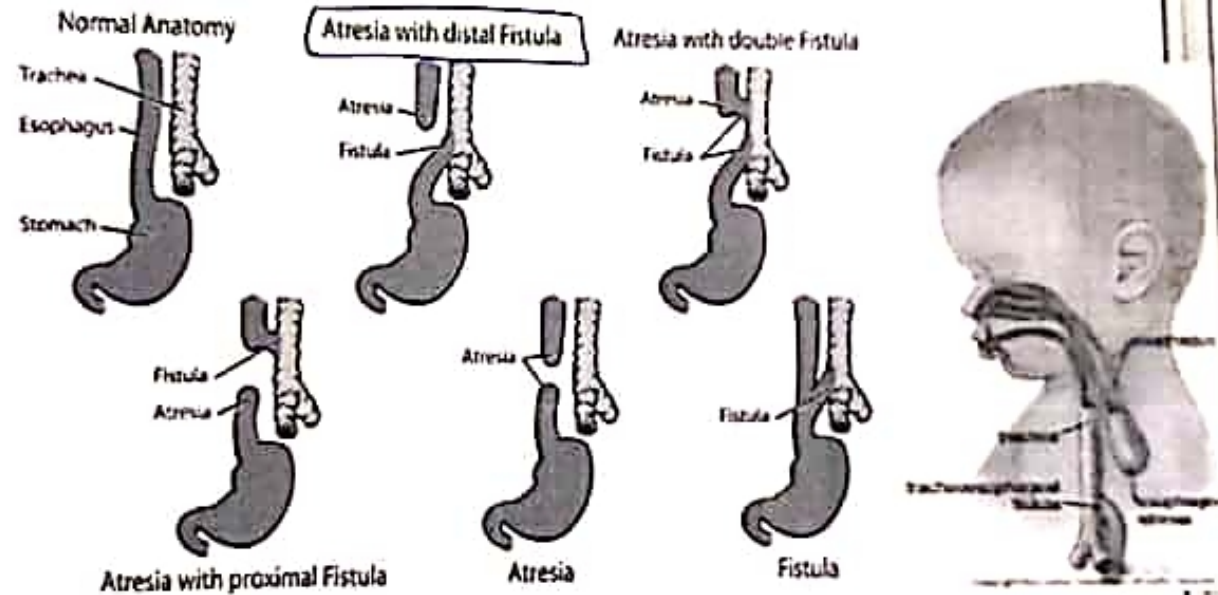
- Acquired >>> Congenital.
- Fibrous thickening of the submucosa & atrophy of the muscularis propria.
- Due to inflammation and scarring
- Causes: Chronic GERD, Irradiation and Ingestion of caustic agents.
- Clinical presentation: Progressive dysphagia and difficulty eating solids that progresses to problems with liquids. Started .

2- Absence, or agenesis, of the esophagus is extremely rare.

3- Atresia, in which a thin, noncanalized cord replaces a segment of esophagus. Clinical presentation:  Shortly after birth: regurgitation during feeding  Needs prompt surgical correction (rejoin).  Complications if w/ fistula:  Aspiration  Suffocation  Pneumonia  Severe fluid and electrolyte imbalances. Due to repetitive vomiting.



\* Fistula → Lumen attach to Canal,



- Pneumonia.
  - Dehydrated + small in size + electrolytes imbalance.
- [Due to Vomiting].


**FUNCTIONAL OBSTRUCTION:**

## FUNCTIONAL OBSTRUCTION:

- Efficient delivery of food and fluids to the stomach requires coordinated waves of peristaltic contractions.
- **Esophageal dysmotility**: dis-coordinated peristalsis or spasm of the muscularis. \* abnormal peristalsis contraction
- **Achalasia**: the most important cause.
  - Achalasia is characterized by the triad of incomplete LES relaxation, increased LES tone, and esophageal aperistalsis. → Loss of Peristalsis.
  - Caused by Degenerative changes in neural innervation.
  - Can be **primary** or **secondary**.
  - **Clinical presentation**: Difficulty in swallowing, Regurgitation and sometimes chest pain

\* Achalasia — { Primary  
Secondary → associated with Chagas Disease. (Affect Nerves which associated with peristalsis movement). 11





\* Esophageus is not associated with stomach due to abnormal Relaxation of sphincter \*

o **Esophageal Varices** Due to increase portal circulation in Liver

- Portal hypertension induces development of collateral channel that enlarge the subepithelial and submucosal venous plexi within the distal esophagus.
- Develop in 90% of cirrhotic patients, most commonly in association with alcoholic liver disease. Worldwide, hepatic schistosomiasis is the second most common cause of varices.
- Varices often are asymptomatic, but their rupture can lead to massive hematemesis and death.
- **Diagnosis by:** endoscopy or angiography.

2<sup>nd</sup> Most Common type of Varices ←

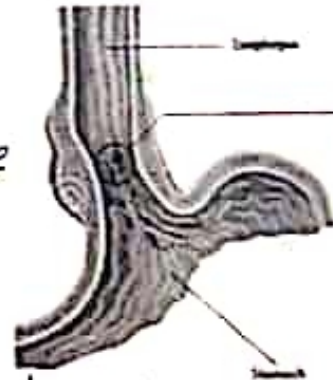
\* All of the GI circulation go to portal circulation in Liver → Deep circulation → inferior vena cava \*



\* Dilated blood vessels  
in the lower  $\frac{1}{3}$

Due to the increase  
of portal circulation  
of liver \*

in Alcoholic liver + hepatic  
schistosomiasis.



ESOPHAGEAL VARICES





## LACERATIONS [ قطع ]

- The most common esophageal lacerations are <sup>[1]</sup> *Mallory-Weiss tears*, which are often associated with severe retching or vomiting.

- By contrast, <sup>[2]</sup> *Boerhaave syndrome*, characterized by transmural esophageal tears and mediastinitis, occurs rarely and is a catastrophic event. **Linear lacerations longitudinally oriented, Cross the GEJ, Superficial and Heal quickly, no surgical intervention**



[Mallory-Weiss]

(Abnormal) \* Due to Repetitive Vomiting → Relaxation of Lower sphincter → sever tear in Lower sphincter \*

\* Boerhaave Syndrome, if the tear reach Serosa → transmural esophageal tears → Catastrophic even \*

## ESOPHAGITIS

[Mallary-Weiss]  
(Abnormal)

\* Due to Repetitive Vomiting → Relaxation of Lower sphincter → severe tear in lower sphincter \*

\* Boerhaave Syndrome, if the tear reach serosa → transmural esophageal tears → Catastrophic even \*

2nd

## ESOPHAGITIS

### 1- Chemical and Infectious Esophagitis

- > Medicinal pills may lodge and dissolve in the esophagus, rather than passing into the stomach intact, resulting in a condition termed **pill-induced esophagitis**. associated with **Vital Pills**.
- > Esophagitis due to chemical injury generally causes only self-limited pain, particularly **odynophagia** (pain with swallowing). Hemorrhage, stricture, or perforation may occur in severe cases.
- > **Iatrogenic esophageal injury** may be caused by cytotoxic chemotherapy, radiation therapy, or graft-versus-host disease.
- > **Candidiasis** is characterized by adherent, graywhite pseudomembranes composed of densely matted fungal hyphae and inflammatory cells covering the esophageal mucosa.

Diagnosis | بالنظر

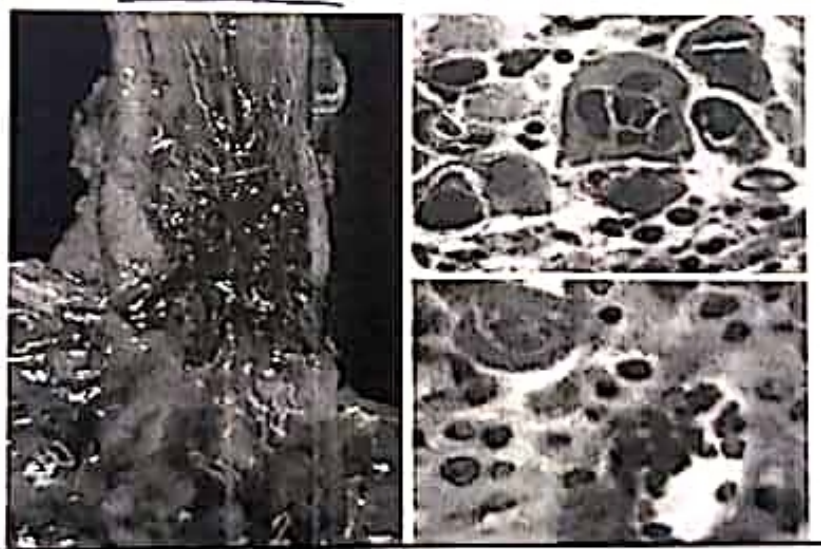


\* immunocompromised patient viral infected \*

**Herpesviruses** typically cause punched-out ulcers and histopathologic analysis demonstrates nuclear viral inclusions within a rim of degenerating epithelial cells at the ulcer edge).  
وجوده هون

**CMV** causes shallower ulcerations and characteristic nuclear and cytoplasmic inclusions within capillary endothelium and stromal cells.

أماكن وجوده.



\* inclusions within Epithelial cells → Herpesviruses.  
\* inclusions within Capillary + stromal endothelium cells → CMV