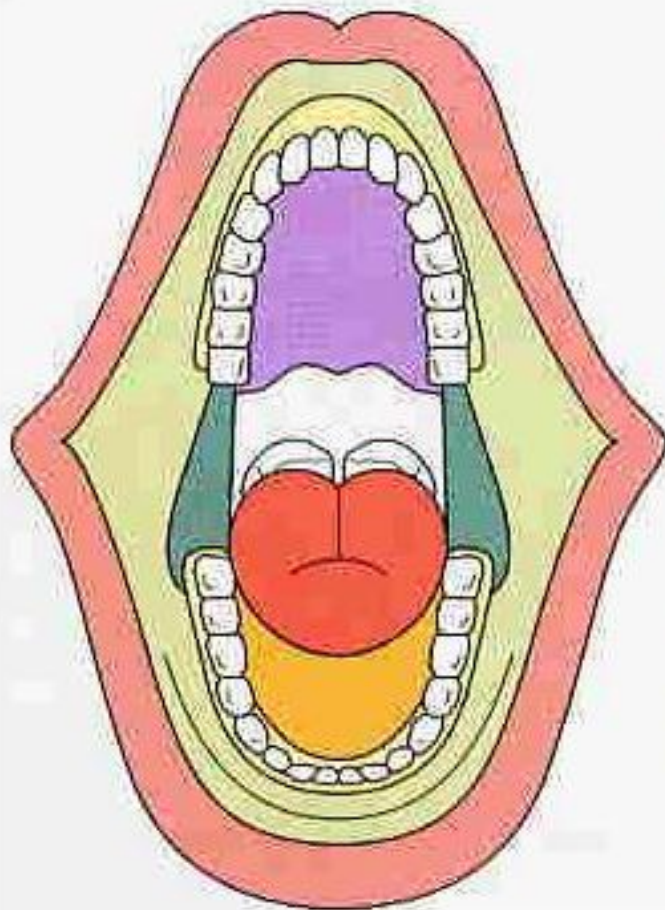


ORAL CANCER

Wirisma Arif Harahap
Konsultan Bedah Tumor
FK - UNAND



- Lip (upper and lower)
- Tongue (anterior 2/3rds)
- Floor of mouth
- Gingiva (upper and lower)
- Buccal mucosa
- Retromolar trigone
- Hard palate

What is oral cancer?

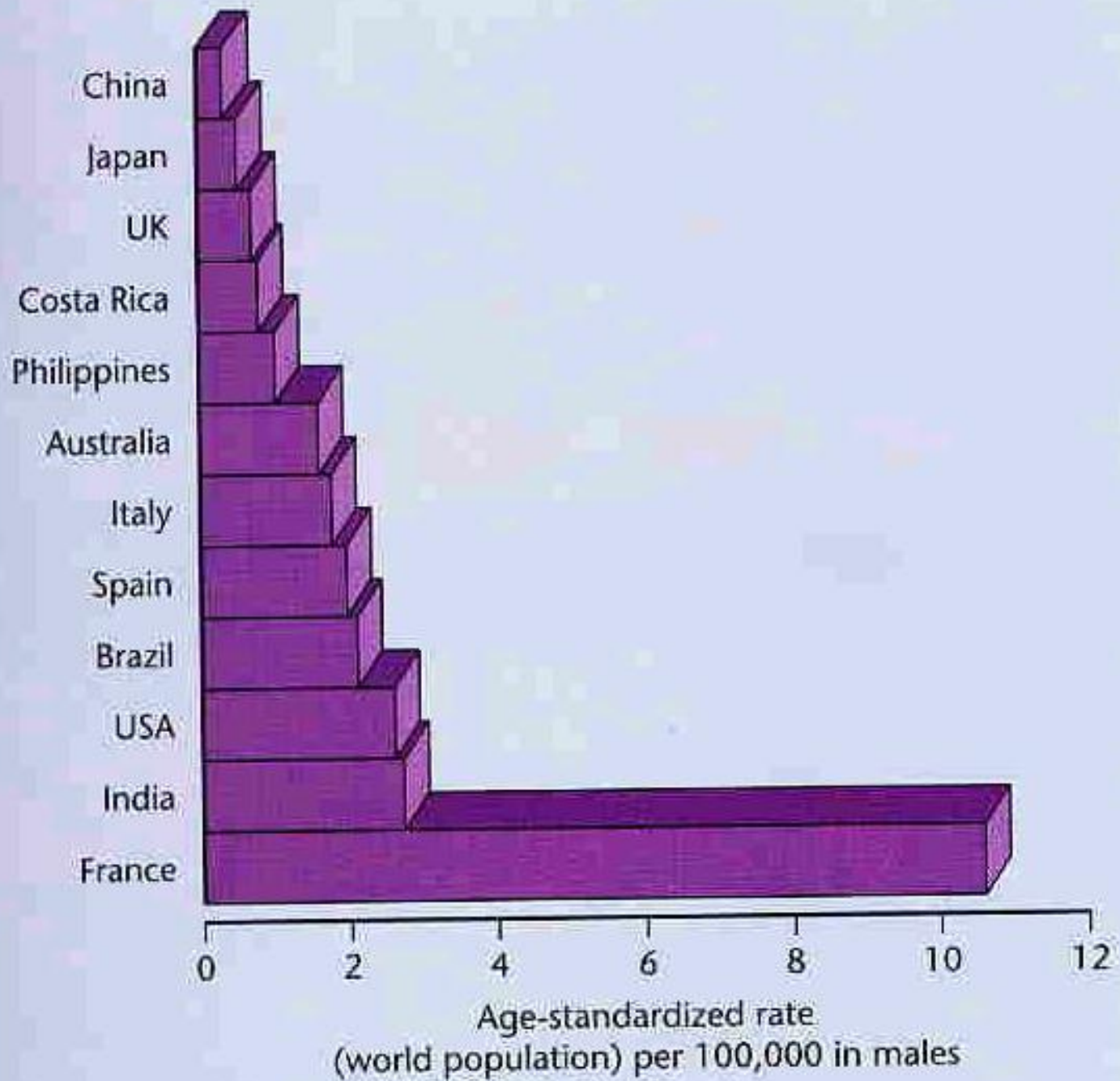
- Usually squamous cell (epithelial)
- Abnormal neoplasm of the mouth
- Found in most cases by a dentist or the person themselves.

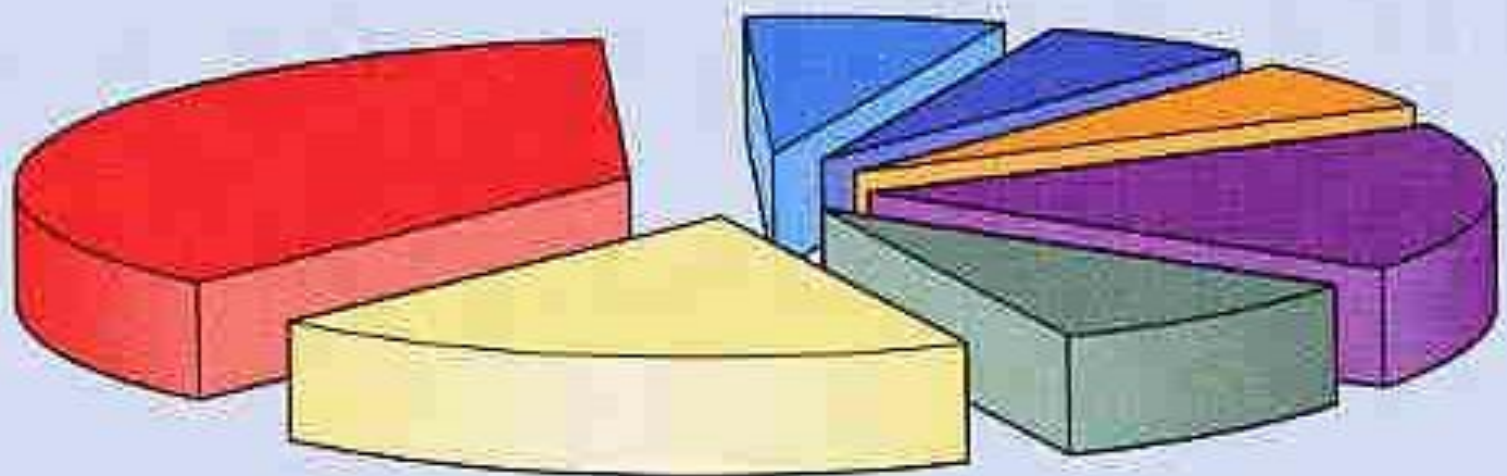
Statistics

- 30,000 people a year diagnosed
- 8,000 deaths
- Higher than:
 - Cervical cancer
 - Hodgkin's disease
 - Brain cancer
 - Liver cancer
 - Testicular cancer
 - Kidney cancer
 - And malignant skin cancer

Statistics on Oral Cancer

- Accounts for 2% of all cancers
- 40 years of age and older are at a higher risk
- Over 35,000 people will be diagnosed
- Over 7,600 will die from the disease
- Mortality Rate Is Higher Than Other Cancers





■ Tongue

■ Floor of mouth

■ Cheek

■ Gum

■ Retromolar Trigone

■ Lip

■ Hard palate

Relative Locations of **Intraoral** Cancers by Percentage

Tongue

50%

Floor of the mouth

25%

Soft palate and oropharynx

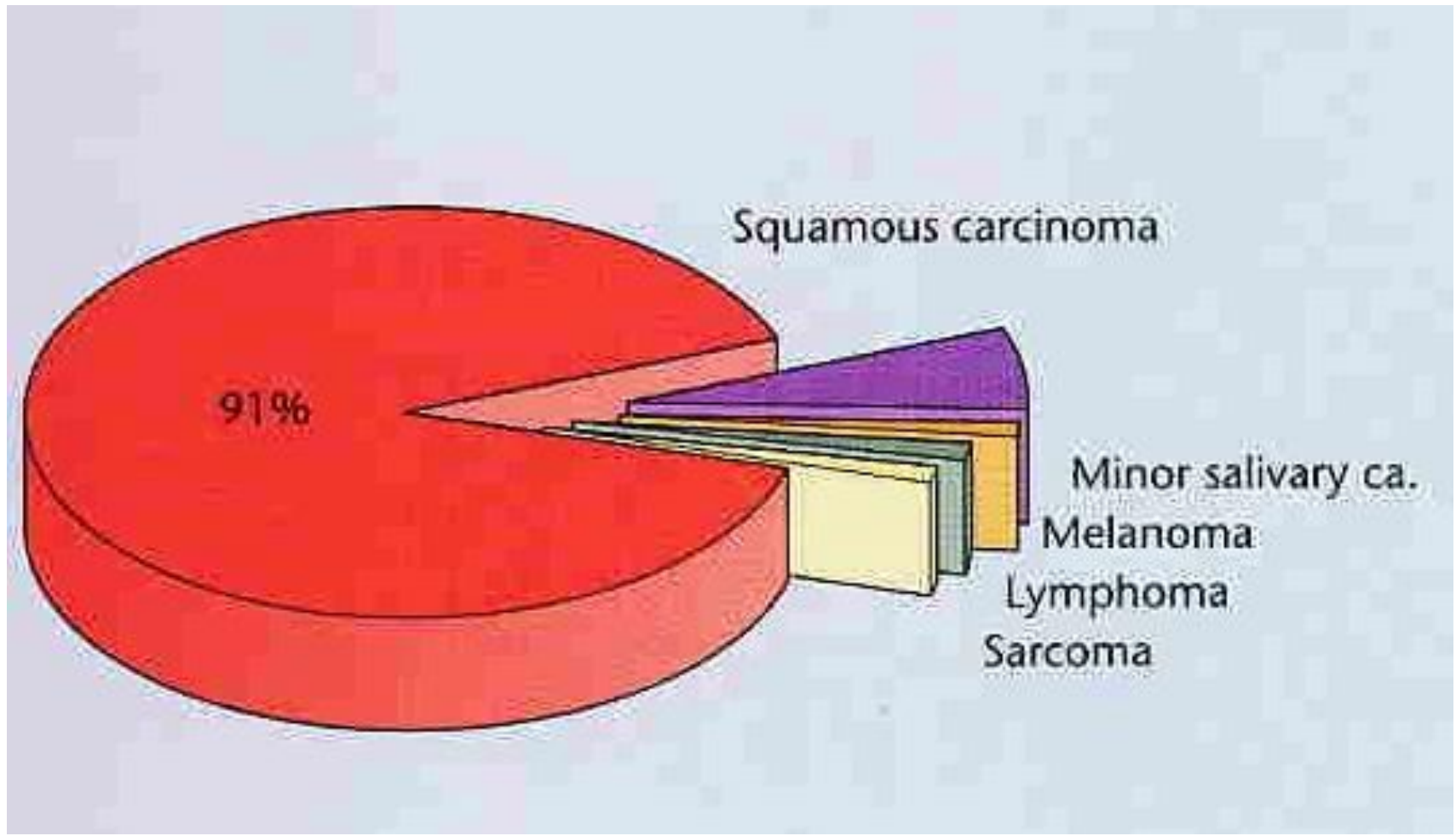
15%

Gingiva

5%

Buccal mucosa

5%



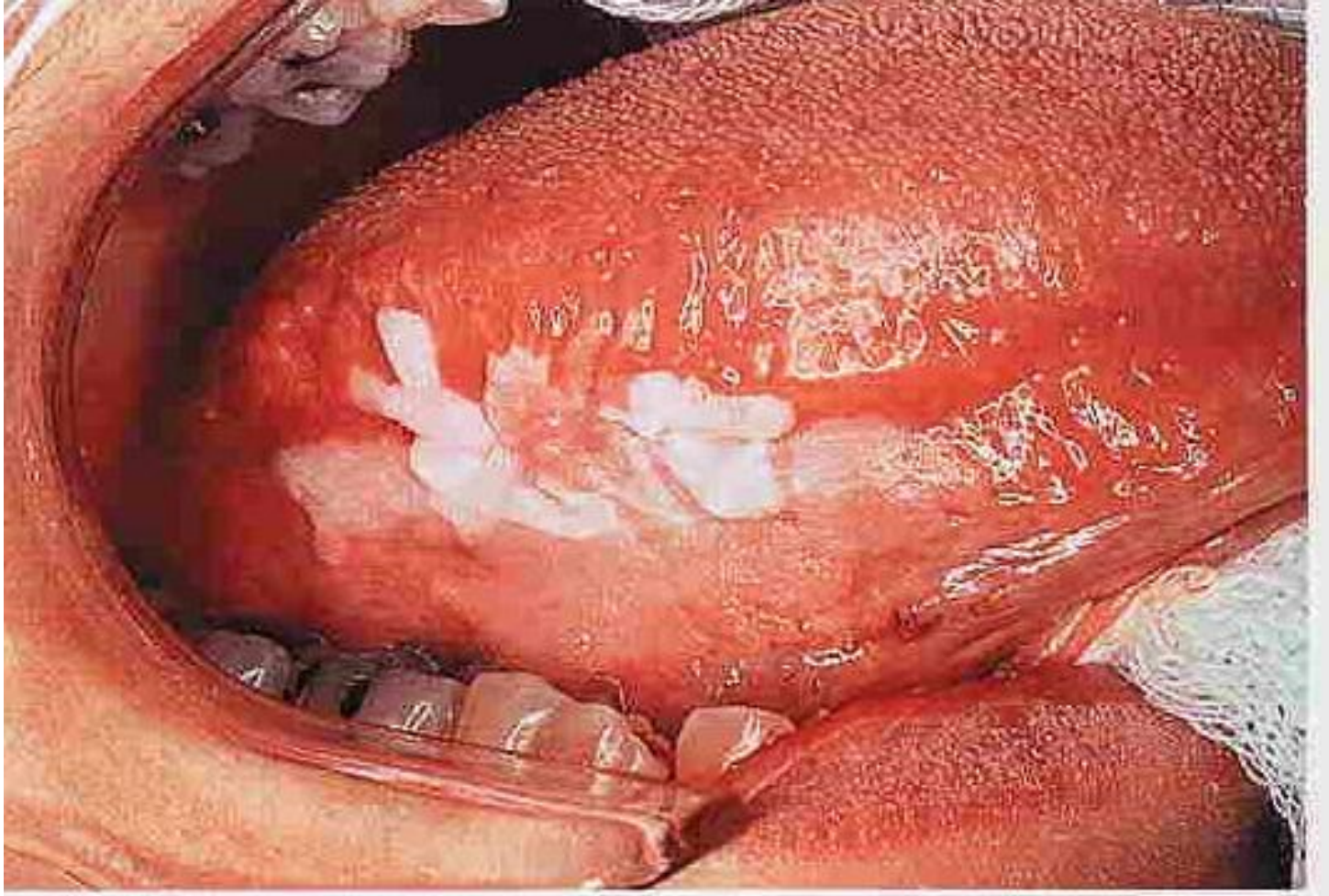
Who is at risk?

- People over the age of 40
 - Men vs. Women
 - Ethnicity
 - Socioeconomic Status (SES)
- Being a heavy smoker and drinker
- Chronic irritation
- People with HPV-16 and HPV-18 are at slightly higher risk

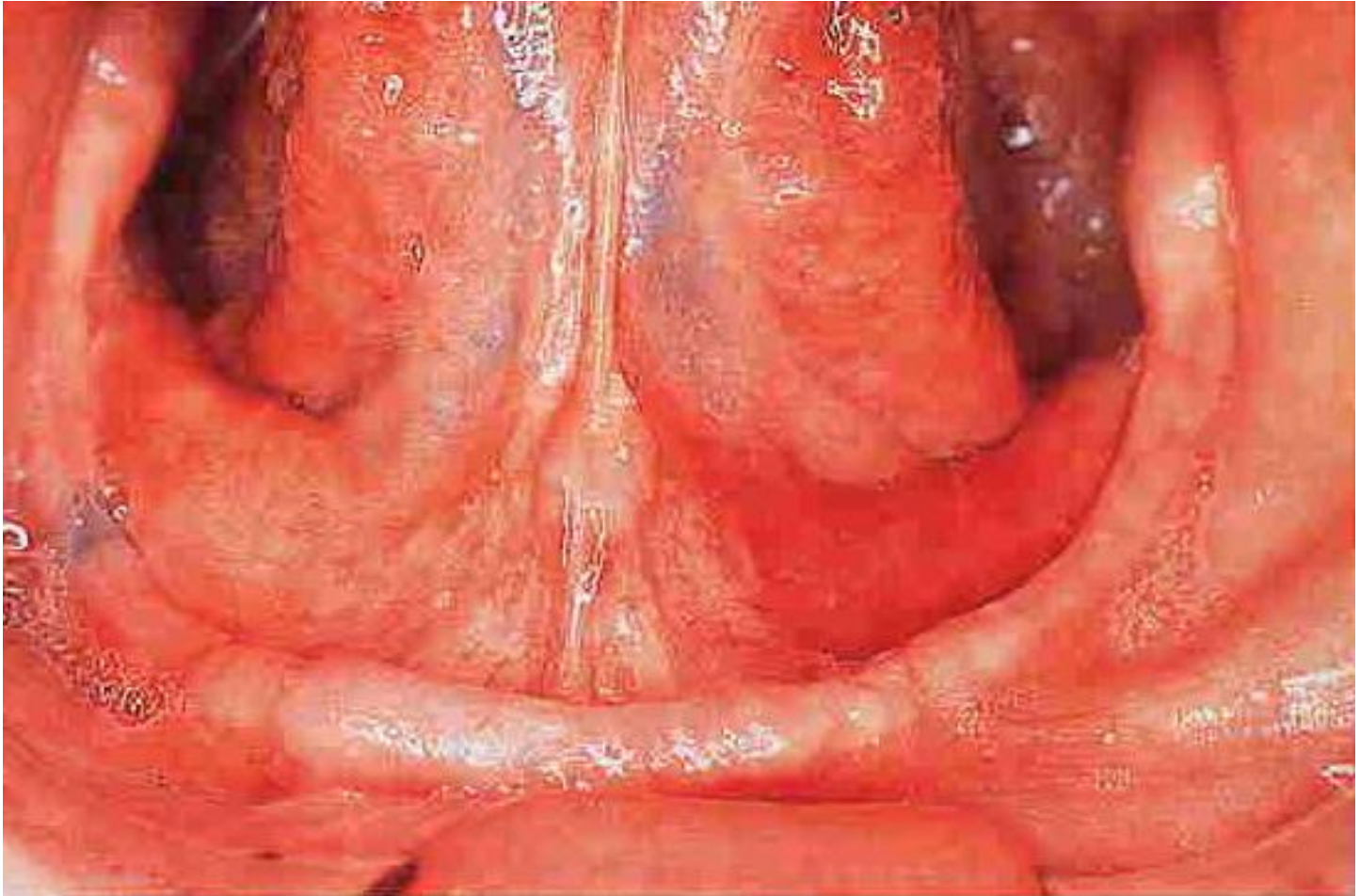
HPV and oral cancer

- 1% of oral cancer is linked to HPV
- HPV infects epithelial cells
- On a cellular level the mouth is similar to the vagina and cervix
- Smoking and drinking alcohol can promote HPV invasion

Precancer : leukoplakia



Precancer : eritroplakia



Tissue of Origin	Benign Tumors	Malignant Tumors
Epithelium		
Squamous cells	Papilloma	Squamous cell carcinoma
Basal cells		Basal cell carcinoma
Glands or ducts	Adenoma	Adenocarcinoma
Neuroectoderm		
Melanocytes	Nevus	Melanoma
Connective tissue		
Fibrous	Fibroma	Fibrosarcoma
Cartilage	Chondroma	Chondrosarcoma
Bone	Osteoma	Osteosarcoma
Fat	Lipoma	Liposarcoma
Endothelium		
Blood vessels	Hemangioma	Angiosarcoma
Lymphatic vessels	Lymphangioma	Lymphangiosarcoma
Muscle		
Smooth muscle	Leiomyoma	Leiomyosarcoma
Striated muscle	Rhabdomyoma	Rhabdomyosarcoma

Adapted from Table 7-2 Names of Tumors in Ibsen & Phelan, *Oral pathology for the dental hygienist* (4th ed.). St. Louis: Mosby, p. 259.

Signs and symptoms

- Sores or lesions that won't heal
- Lump or thickening in the cheek
- White or red patches on the gums, tonsils, or mouth
- Chronic sore throat
- Difficulty swallowing
- Difficulty moving mouth or tongue
- Numbness in any area of the mouth
- Swelling of the jaw

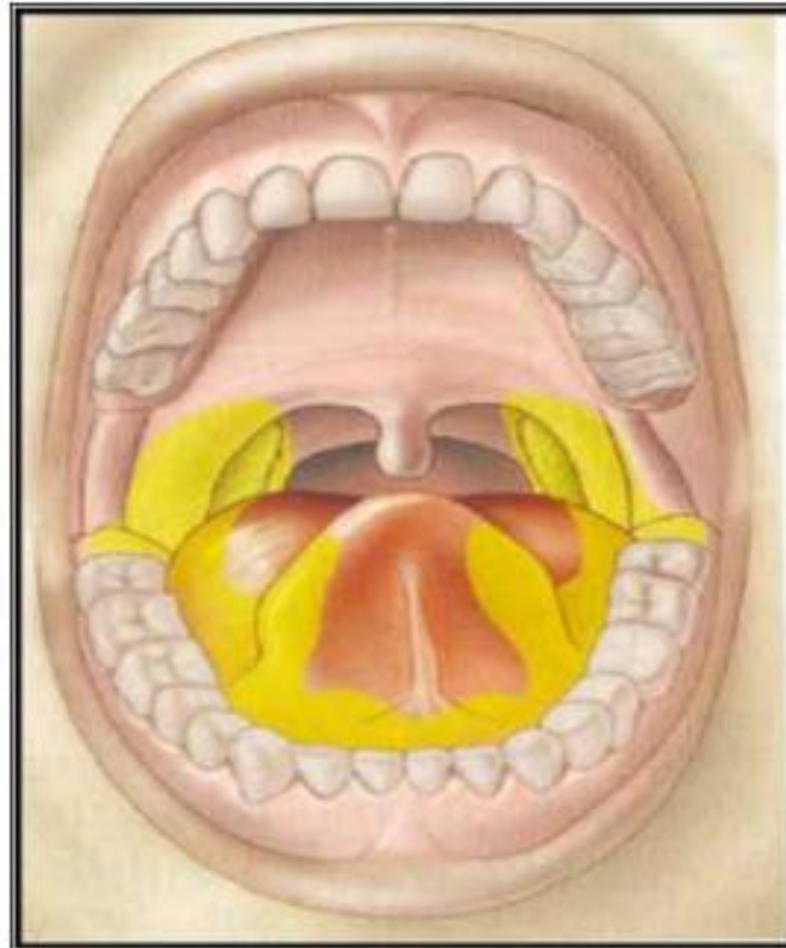
Tongue cancer



Gingival Cancer



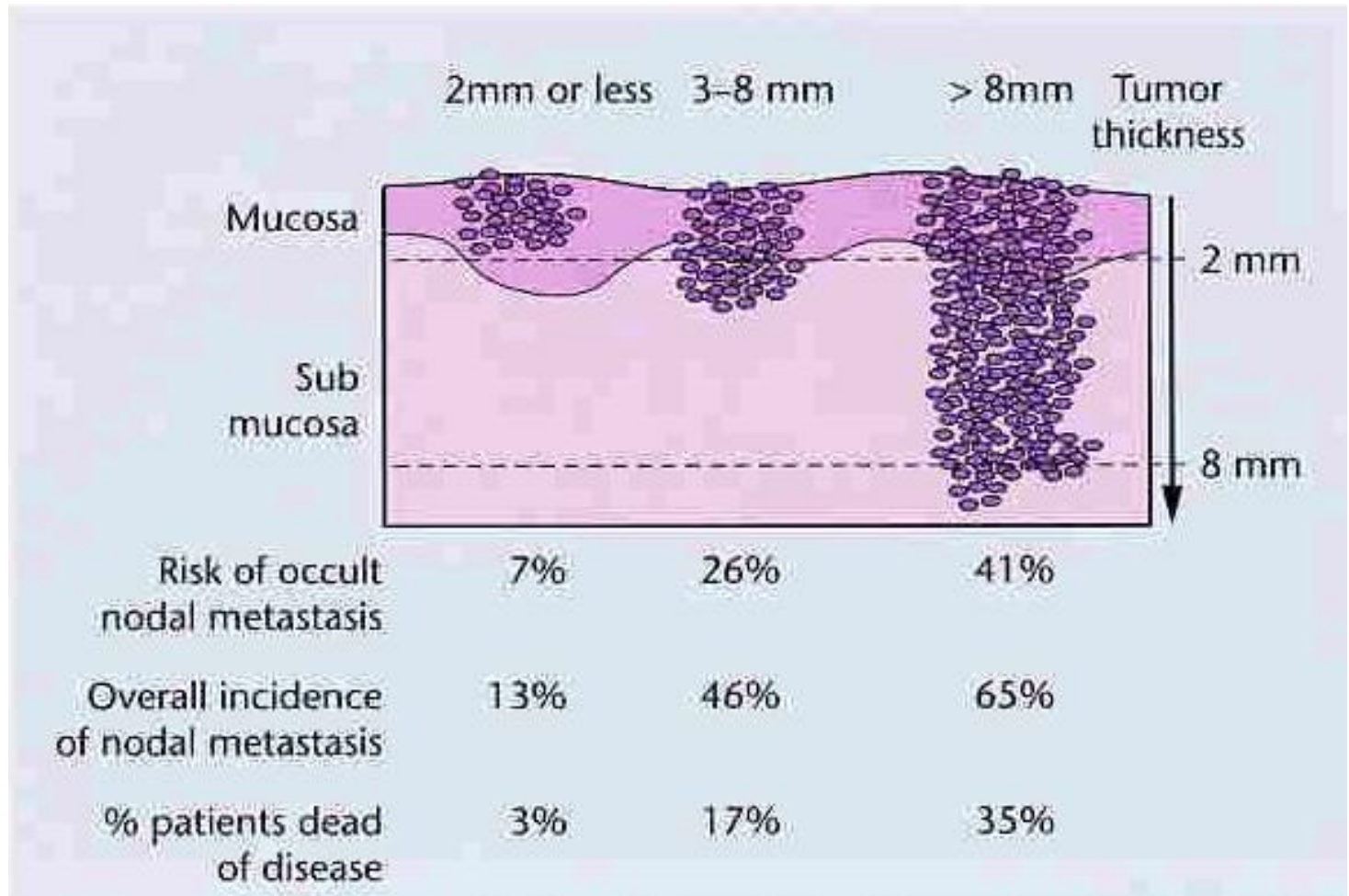
Common Location



Staging

- TNM

Prognosis



Treatment

In order to achieve these goals, the currently available therapeutic modalities include:

- Surgery
- Radiotherapy
- Chemotherapy
- Combined modality treatments
- Primary and secondary prevention strategies including lifestyle changes and chemoprevention.

Tumor Factors

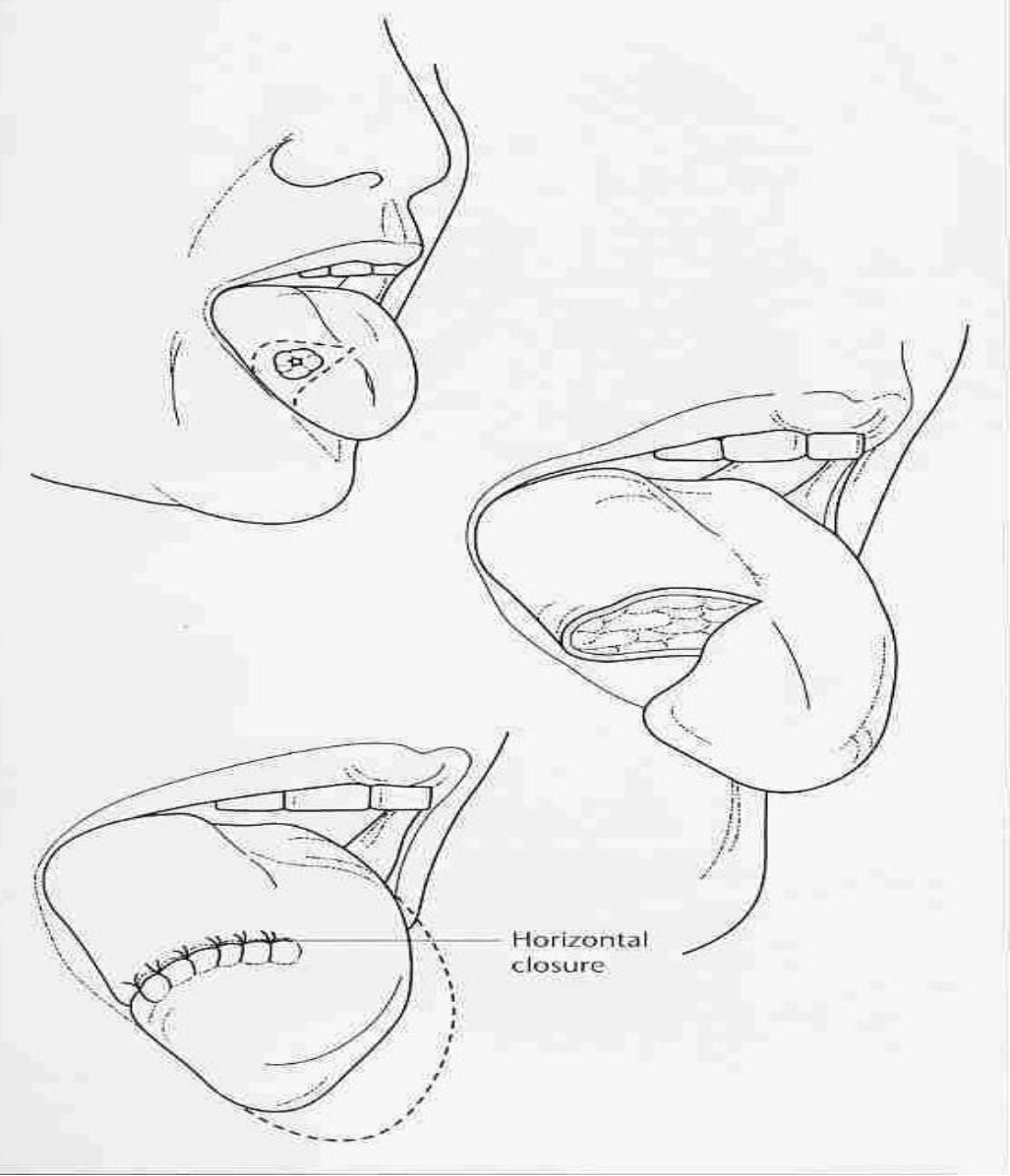
- Site
- Size (T-stage)
- Location (anterior versus posterior)
- Proximity to bone (mandible or maxilla)
- Status of cervical lymph nodes
- Previous treatment
- Histology (type, grade, and depth of invasion).

Patient Factors

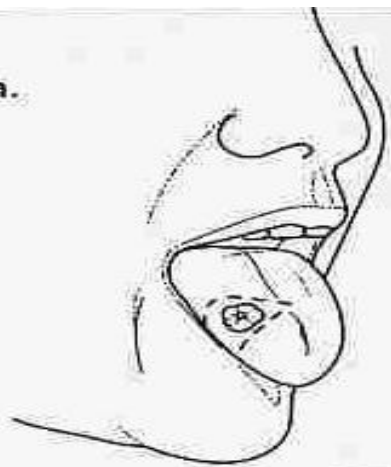
- Age
- General medical condition
- Tolerance
- Occupation
- Acceptance and compliance
- Life style (smoking/drinking)
- Socio-economic considerations.

Physician Factors

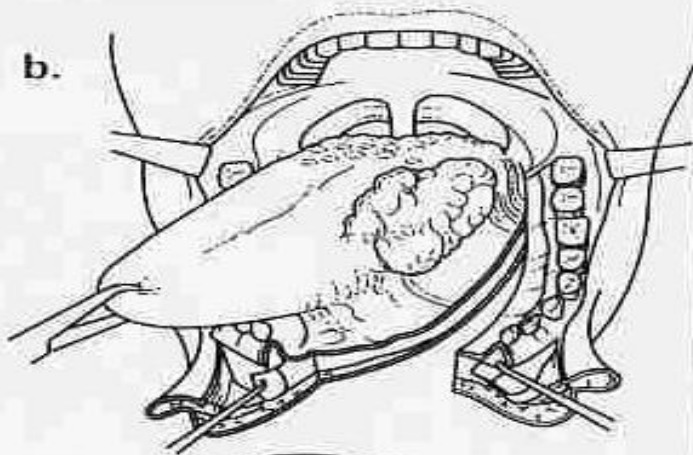
- Surgical
- Radiotherapy
- Chemotherapy
- Rehabilitation services
- Dental
- Prosthetics
- Support services.



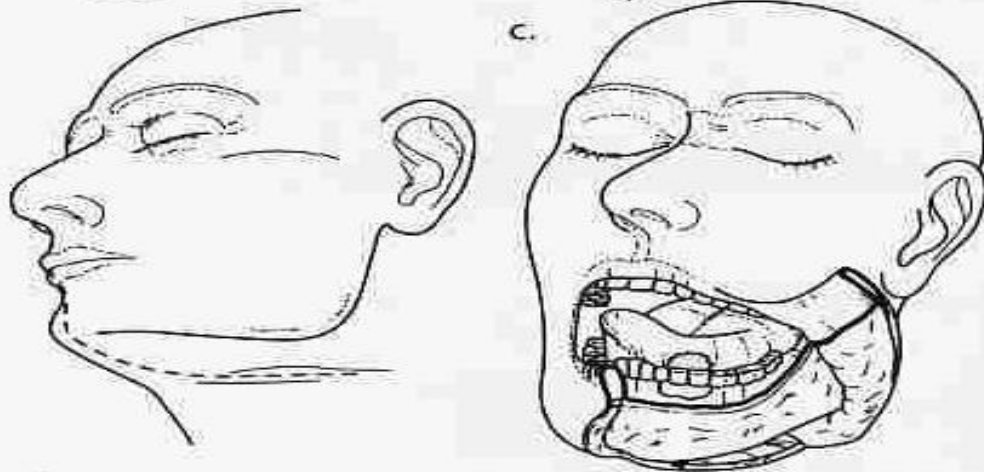
a.



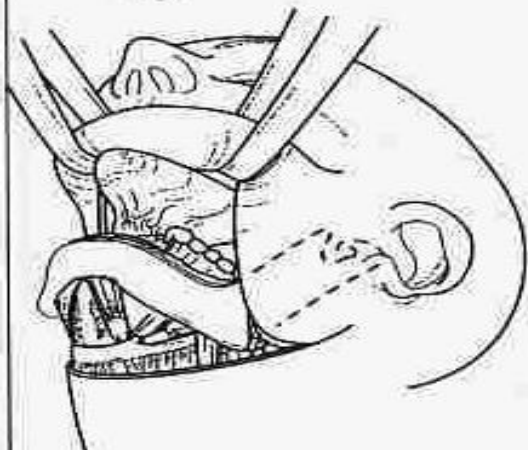
b.



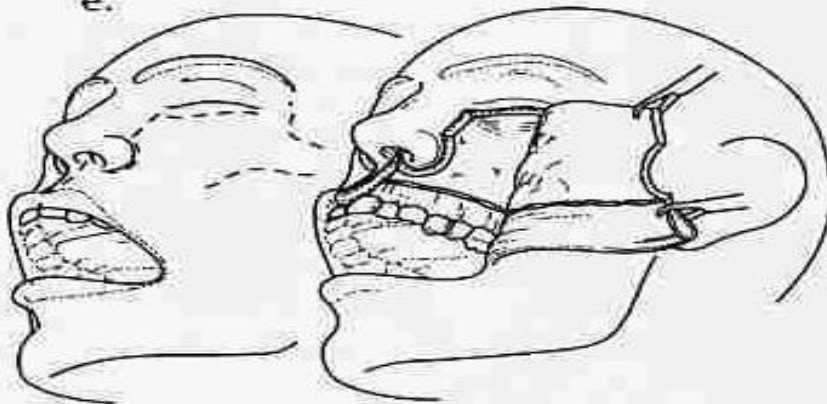
c.



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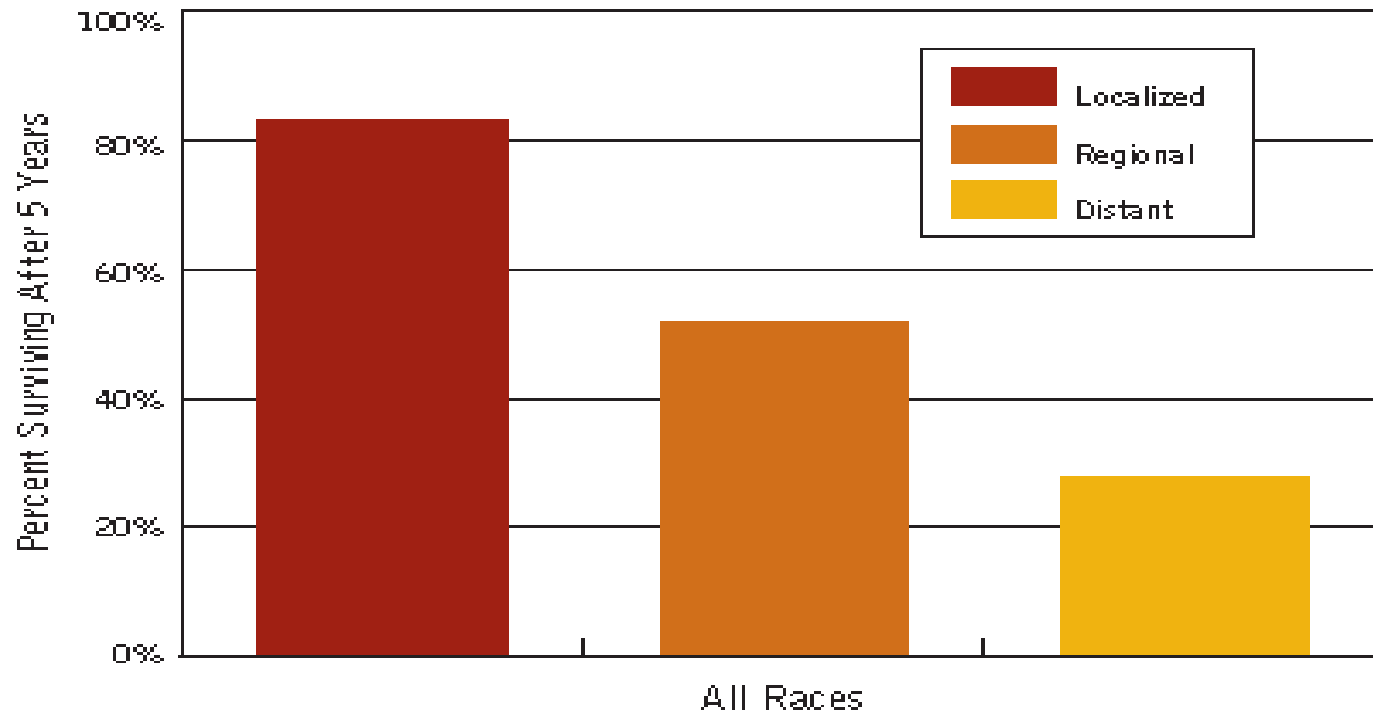
e.



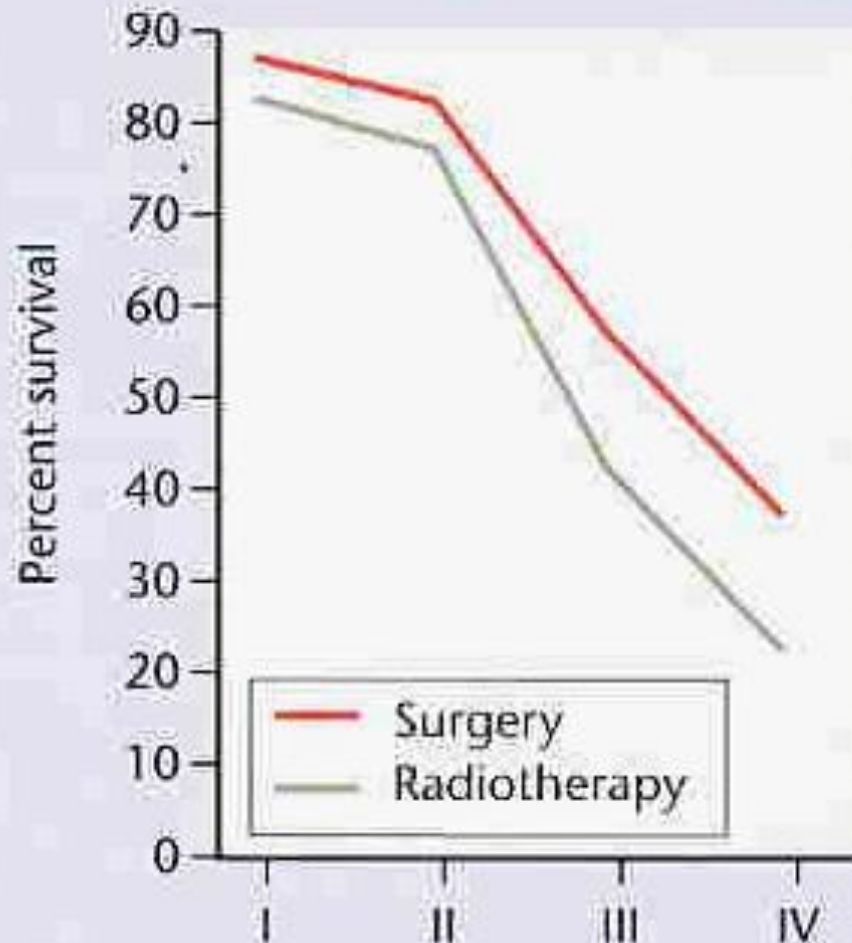
Survival Rate by Stage of Diagnosis

Oral Cancer 5-Year Relative Survival Rate by Stage at Diagnosis

Source: Cancer Statistics Review 1975-2005
Surveillance, Epidemiology, and End Results (SEER) Program, National Cancer Institute
SEER 17, Diagnosis Years 2000-2004 and SEER 13, Diagnosis Years 1996-2004



Survival with single modality treatment



Choice of treatment depends upon:

- Site
- Location
- Stage
- Histology
- Node status

and also

- Complications
- Compliance
- Convenience
- Cost
- Competence

Side Effects of Treatment

- Swelling
- Sore mouth
- Difficulty chewing, swallowing, or talking
- Changes to appearance
- Weight loss
- Inability to wear dentures for a period of time
- Fatigue
- Lowered immune system
- Nausea
- Vomiting
- Mouth sores
- Lost of appetite

Linkage to Oral Cancer

- Persistent gum disease can lead to oral cancer and other potential life threatening conditions like:
 - Heart Disease
 - Stroke
 - Diabetes
 - Chronic Kidney Disease (CDK)
 - Preterm Birth
 - Human Papilloma Virus (HPV)

Health Disparities

- Health Disparities are differences in health conditions or outcomes among specific population groups in the United States.
 - Some include:
 - Environmental factors – rural and urban poor
 - Economical factors – working poor
 - Cultural factor – language barrier
 - Accessibility to care
 - Quality of care

Prevention

- Ways To Educate People
 - Advertising & Visuals
 - Developing Culturally Appropriate Messages
 - Educate in local schools, colleges, health clinics, churches, and community centers
- Why It Is Important
 - Early Detection
 - Decrease Mortality Rate