

# Collecting Cancer Data: Lip and Oral Cavity

## NAACCR 2016-2017 Webinar Series

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### ●●● Q&A

- Please submit all questions concerning webinar content through the Q&A panel.
- Reminder:
  - If you have participants watching this webinar at your site, please collect their names and emails.
  - We will be distributing a Q&A document in about one week. This document will fully answer questions asked during the webinar and will contain any corrections that we may discover after the webinar.



## ●●● Fabulous Prizes



NAACCR  
NATIONAL ASSOCIATION OF  
CANCER REGISTRY PROGRAMS

## ●●● Agenda

- Overview
  - Anatomy
  - MP/H
- Staging
  - Quiz
- Treatment
  - Quiz
- Case Scenarios

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NATIONAL ASSOCIATION OF  
CANCER REGISTRY PROGRAMS

## ●●● Risk Factors

- Tobacco
- Heavy alcohol
- Natural or artificial sunlight
- Male
- Older than 55
- HPV positive

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## ●●● Signs/Symptoms

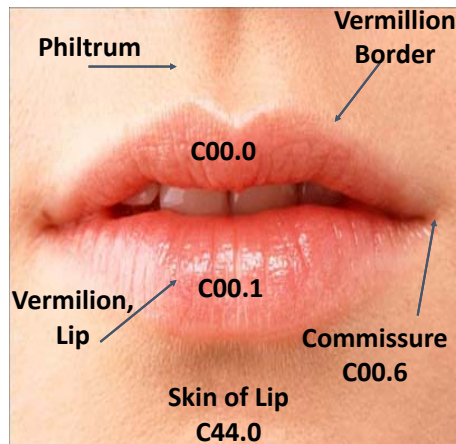
- Non-healing sore on lip
- Lump or thickening of lips, gums, or in mouth
- White or Red patches
- Bleeding, pain, or numbness
- Loose teeth or dentures no longer fit well
- Trouble chewing or moving jaw/tongue
- Swelling of jaw

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## ●●● Anatomy

- **Lip vs. Skin of Lip**
  - Red/Pink area (lipstick area) – lip
  - Hair-bearing area – skin of lip
  - BCC is rarely arises on the lip
- Lip C00.0-C00.9 excludes skin of lip



<http://www.kamdora.com/wp-content/uploads/2014/08/Best-Makeup-Tips-For-Different-Lip-Shapes-on-Kamdora.com-Kamdora.jpg>

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## ●●● Anatomy

- **Buccal Mucosa**
  - Inner surface of cheeks and lips
  - Line of attachment of mucosa of alveolar ridge and pterygomandibular raphe
  - Comprised of non-keratinized squamous epithelium

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## ●●● Anatomy



Alveolar mucosa

<http://content.answcdn.com/main/content/img/elsevier/dental/f0022-01.jpg>

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### • Lower and Upper Alveolar Ridge

- Contains tooth sockets (alveoli)
- Mucosa overlies the alveolar process

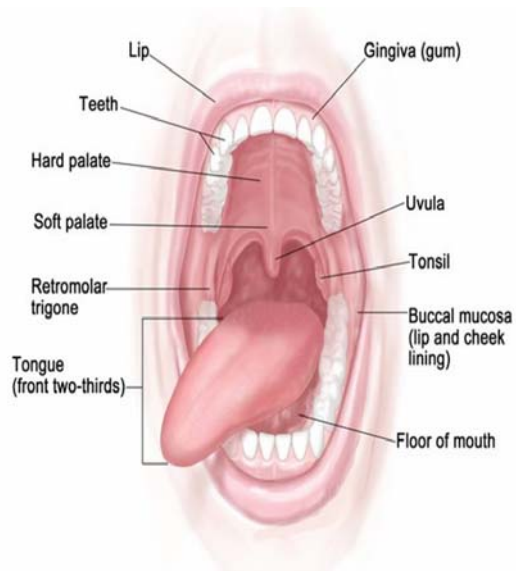
## ●●● Anatomy

### • Gingiva

- Fibrous tissue covered by mucous membrane
- Provides a seal around teeth

### • Retromolar Gingiva (Trigone)

- Behind the molars
- Covers retromolar pad



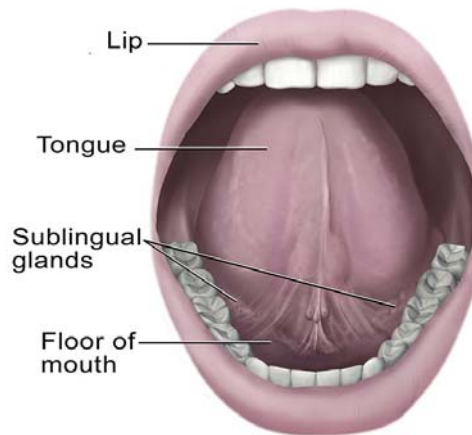
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●●● Anatomy

• **Floor of the Mouth**

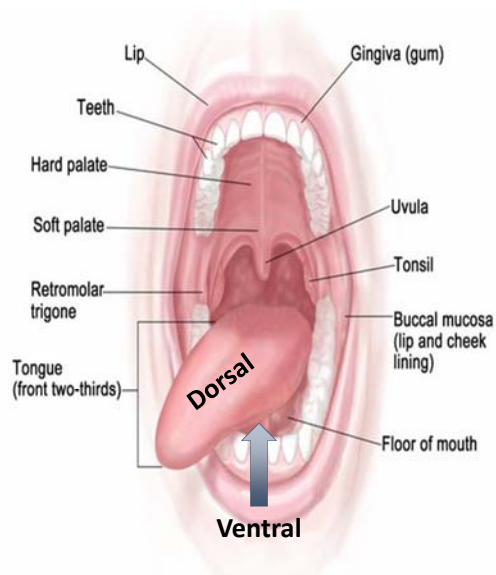
- Inferior limit of oral cavity
- Wharton’s duct
- Sublingual gland ducts



National Cancer Institute

NCI, Alan Hoofring (Illustrator)

●●● Anatomy



• **Hard Palate**

- Separates oral cavity from nasal cavities

• **Oral Tongue – Anterior 2/3**

- 3 surfaces:
  - Tip
  - Body
  - Base
- Muscles:
  - Extrinsic – alter position
  - Intrinsic – shapes tongue

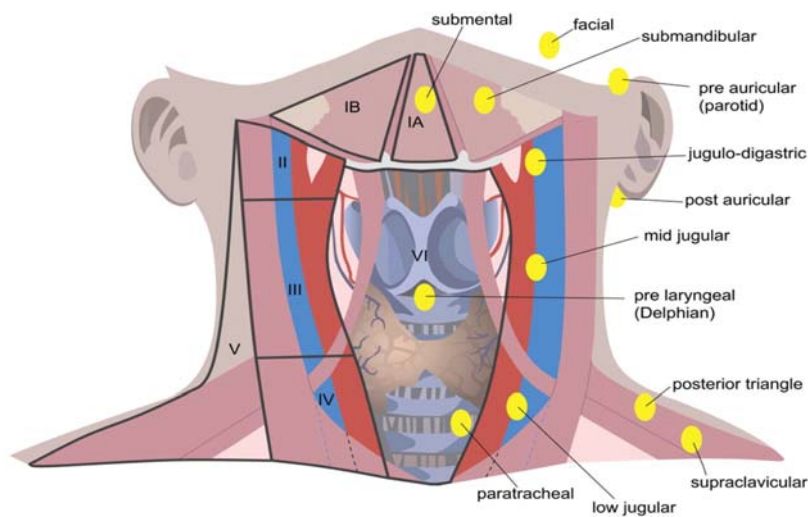
## ●●● Anatomy – Lymph Nodes

Level and Nodal Groups	Cancer Sites of Lymphatic Spread
I A– Submental IB - Submandibular	Lip; anterior tongue; floor of mouth; gingiva; buccal mucosa; anterior alveolar ridge
II – Upper Jugulo-digastric	Oral cavity; hard palate; alveolar ridge; anterior tongue
III – Middle jugular	Oral cavity; hard palate; alveolar ridge
IV – Inferior jugular	
V – Posterior Triangle (supraclavicular)	
VI – Anterior compartment (Delphian, paratracheal)	
VII – Superior mediastinal	

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## ●●● Anatomy – Lymph Nodes



<http://anatomydiagram.info/wp-content/uploads/2015/11/anatomy-of-the-throat-glands-lymph+neck.jpg>

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## ●●● Lymph Nodes

- Approximately 30% of oral cavity primaries present with LN mets
- 50-60% anterior tongue primaries present with LN mets
- Lip, Hard palate, and Alveolar ridge rarely have LN mets

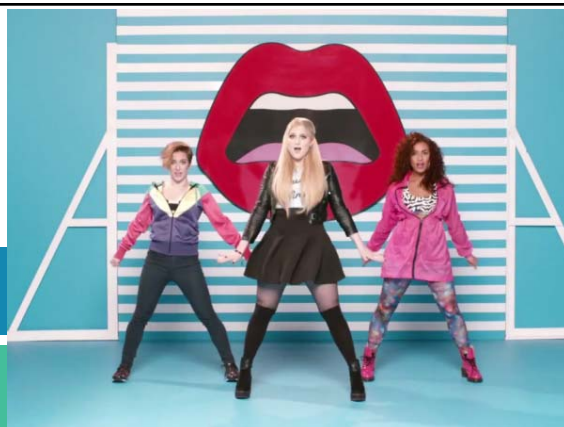
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Epi Moment

Oral

Theme song:





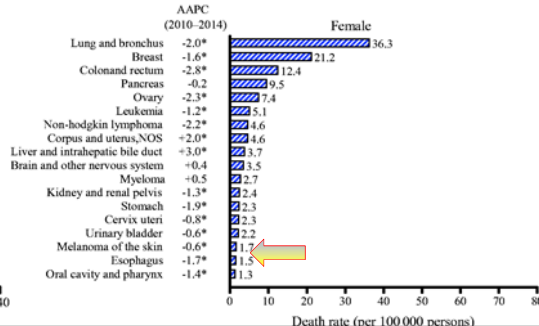
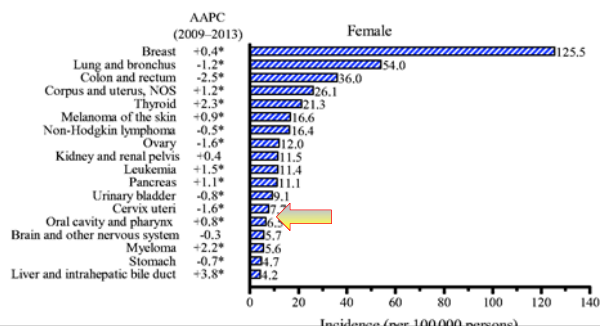
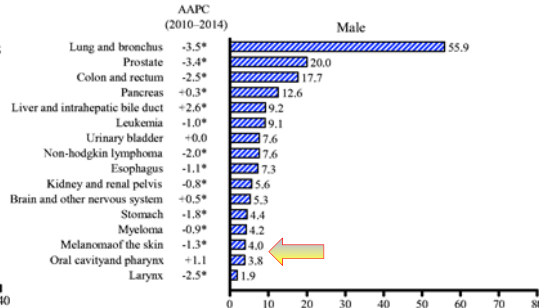
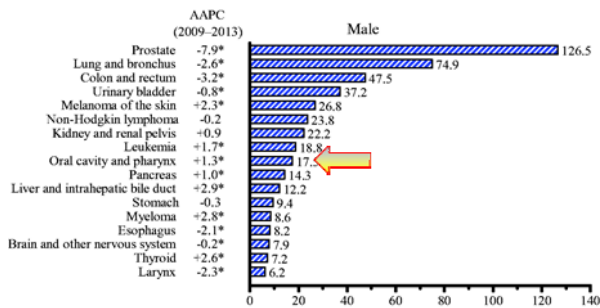
## Epidemiology of oral cancer



- Analysis groups
  - Oral vs Head & Neck
    - Laryngeal (respiratory) & esophageal (digestive) due to related etiology
      - Obesity-related
    - Salivary gland, nasopharynx, & hypopharynx etiologically distinct (10% of oral cancers)
      - Tobacco-related, Alcohol-related, HPV-related
- 3% of all cancers in US
  - more common outside US; leading cause of death
  - India--#1, Australia, France, Brazil, S. Africa
- 95% 45+, median age 63
  - 2:1 M:F
    - Highest among NH Whites (18.5 M; 6.7 F)
      - Whites(17.6 M; 6.4 F); AI/AN (15.6 M; 5.8 F); Blacks (14.7 M; 5.1 F); API (10.9 M; 4.9 F); Hispanics (10.8 M; 4.1 F)
- Main histology: 90-95% squamous

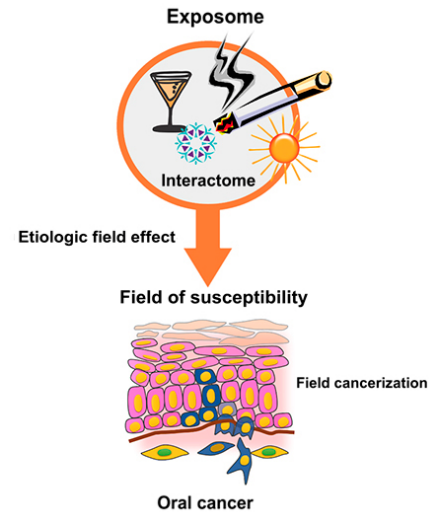


## Oral cancer trends, 2009-2013



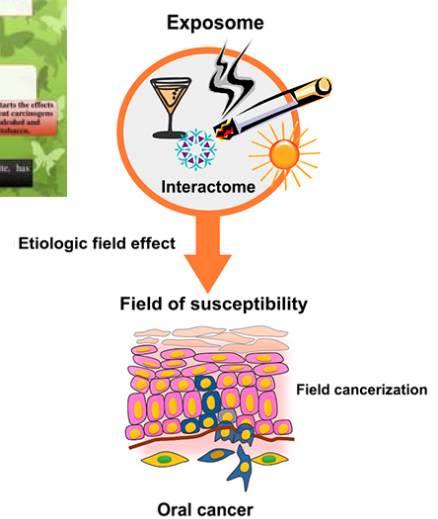
### ●●● Risk factors for oral cancers

- Tobacco
  - Betel Quid
- Alcohol
- Viral infections
  - HPV, EBV, HIV
- Bacterial infection
  - Syphilis (tx related)
- Fungal infection
  - Candida
- Diet
  - Salted Fish (Chinese-style), Hot Mate
  - Iron deficiency

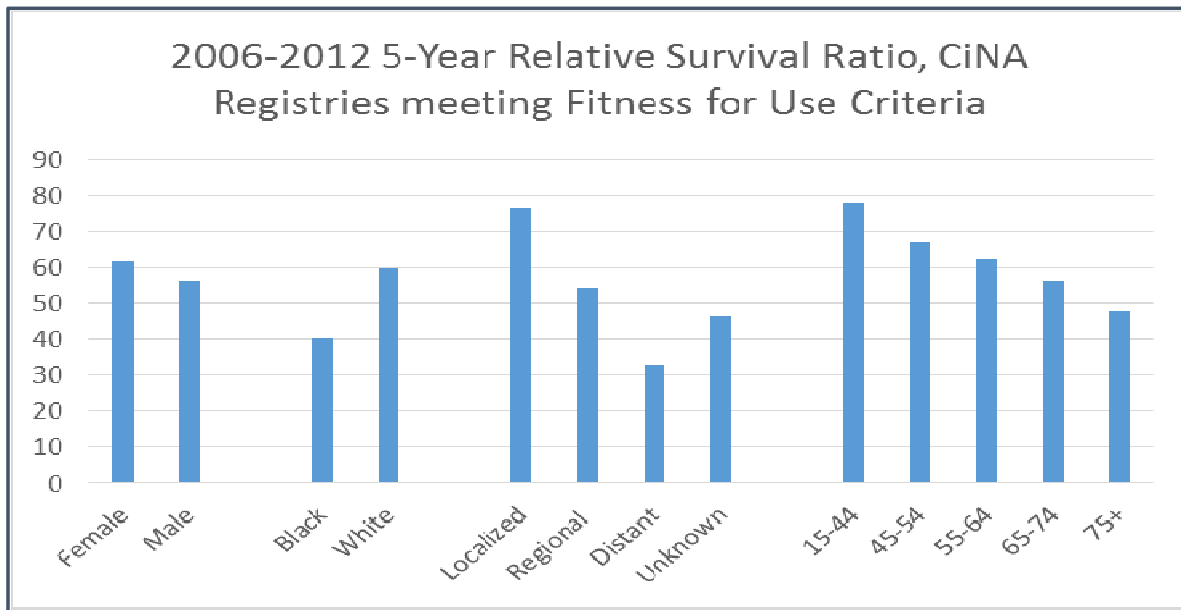


### ●●● More risk factors for oral cancers

- SES, Hygiene
- Probable:
  - Radiation: UV (sun exposure) & TX
  - Asbestos
  - Printing Processes/Inks Occupational Exposures
- Protective (probable or limited evidence)
  - Non-starchy veggies & fruits; Vit C, green tea, calcium supplements, coffee, physical activity

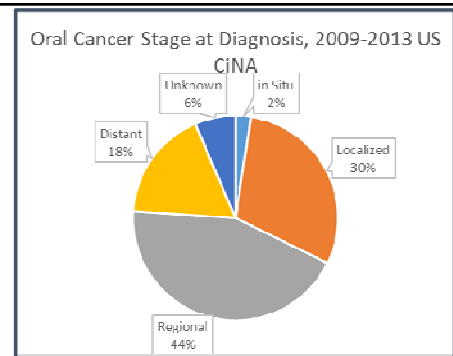


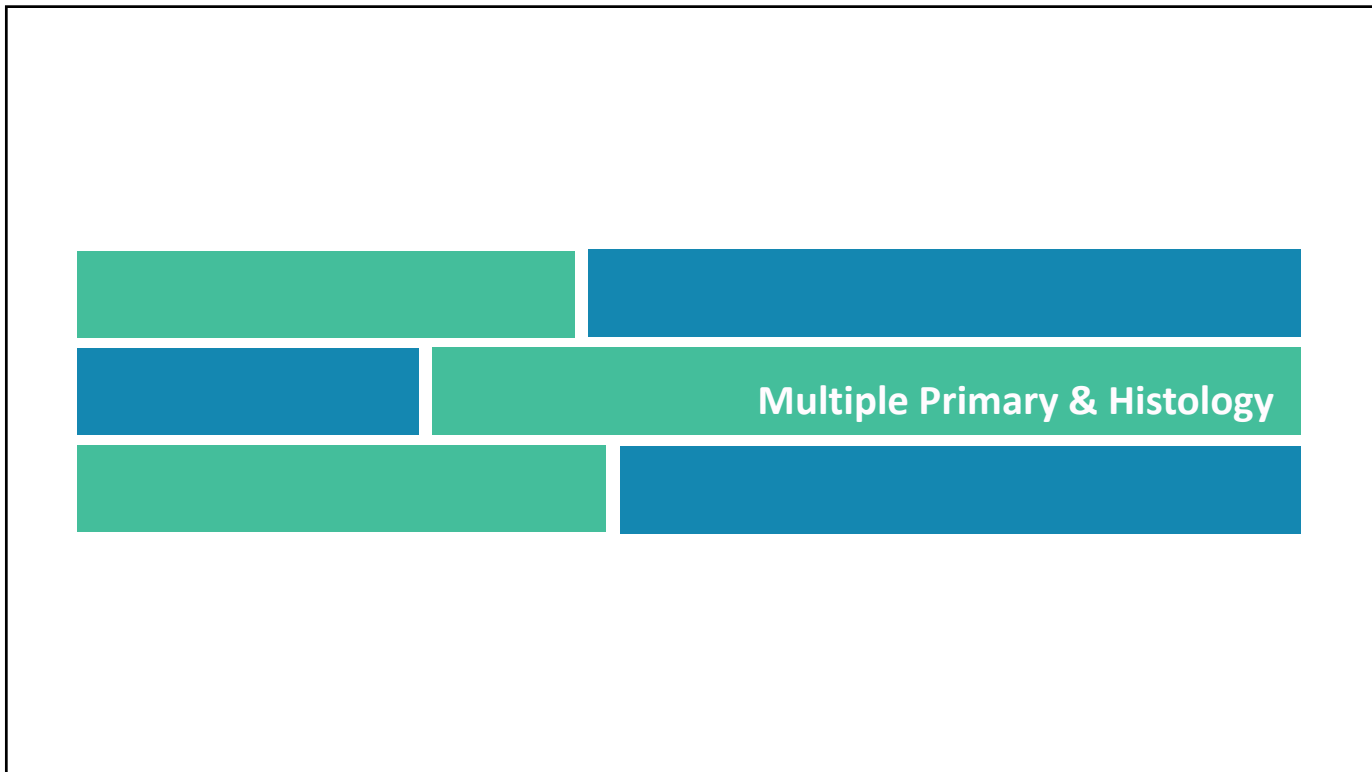
●●● Oral cancer survival: 58% 5- year RSR overall



●●● Oral cancer screening

- USPSTF 2013 Grade I
  - Insufficient evidence to assess effectiveness
  - No population-based screening
  - Systemic clinical examination
  - Inspection and palpitation of oral cavity; dental check-ups
    - Dyes, laser light, rinse with acetic acid & special light
    - If abnormal area found, brush biopsy/exfoliative cytology
  - 2% diagnosed at *in situ*
- Delay in diagnosis
  - Early stages asymptomatic
  - Symptoms often mistaken for other health issues (toothache)





### ●●● Primary Site – Priority Order

- Tumor Board
- Staging physician's site assignment
- Total resection of primary tumor
  - Surgeon's statement from operative report
  - Final diagnosis from pathology
- Biopsy **ONLY**
  - Endoscopy
  - Radiation Onc
  - Diagnosing physician
  - Primary Care physician
  - Other physician
  - Radiologist impression from imaging
  - Physician state on PE

## ●●● Primary Site

- **Overlapping sites:**

- C02.8 (overlapping tongue)
- C06.8 (overlapping other and unspecified parts mouth)
- C08.8 (overlapping major salivary glands)
- C14.8 (overlapping lip, oral cavity, and pharynx)

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## ●●● Primary Site

- **Paired Sites:**

- Parotid Glands (C07.9)
- Major Salivary glands (C08.0, C08.1)
- Tonsils (C09.0, C09.1, C09.8, C09.9)
- Nasal Cavity (C30.0)
- Accessory Sinuses (C31.0, C31.2)
- Middle Ear (C30.1)

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## ●●● MPH – Multiple Tumors

- **M3** – Bilateral involvement paired sites – Multiple
- **M4** – Upper Lip and Lower Lip – Multiple
- **M5** – Upper gum and Lower gum – Multiple
- **M7** – Topography codes different at second and/or third character – Multiple

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## ●●● MPH – Multiple Tumors

- **M9** – More than 5yr apart – Multiple
- **M10** – Non-specific histology w/ a more specific – Single
  - Adenocarcinoma, NOS and another specific adenocarcinoma
- **M11** – Histology codes different at first, second, or third number – Multiple

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## ●●● Histology

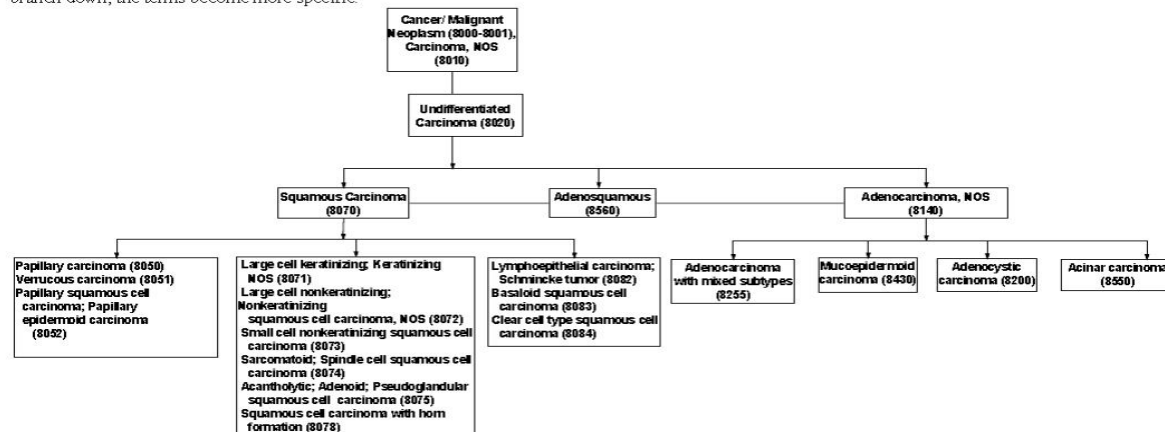
- Squamous Cell Carcinoma, NOS
  - Acantholytic squamous cell carcinoma
  - Basaloid squamous cell carcinoma
  - Papillary squamous cell carcinoma
  - Spindle cell squamous cell carcinoma
  - Verrucous carcinoma
- Adenosquamous carcinoma
- Mucosal Melanoma
- Sarcomas

## ●●● MPH – Chart 1

### Chart 1 – Head and Neck Histology Groups and Specific types

*Note:* Greater than 85% of cancers in the Head and Neck are squamous cell carcinoma

*Chart Instructions:* Use this chart with the histology rules to code the most specific histologic term. The tree is arranged in descending order. Each branch is a histology group, starting with the NOS or group terms and descending into the specific types for that group. As you follow the branch down, the terms become more specific.



## ●●● MPH – Histology Single Tumor

- **H4** – Invasive and In-situ code the invasive histology
- **H5** – Multiple histologies on same branch Chart 1
  - Code the most specific
  - Terms: pattern (in-situ), architecture (in-situ), type, subtype, predominantly, with features of, major, or with \_\_\_\_ differentiation
- **H6** – None of the above (H1-H5)
  - Code highest ICD-O-3 histology code

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## ●●● MPH – Histology (Multiple Tumor –Single Abst)

- **H10** – Code most invasive histology
  - Equally invasive go to next rule
- **H11** – Multiple histologies all on same branch Chart 1
  - Code most specific using Chart 1
- **H12** – None of the above (H7-H11)
  - Code higher ICD-O-3 code

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## ●●● Pop Quiz!

- Patient has a history of SCC maxillary gingiva diagnosed on 1/13/11 and has remained disease free.
- 4/3/16 biopsy of maxillary gingiva was positive for invasive papillary carcinoma.
- 5/3/16 Radical excision w/ partial maxillectomy – 2.6cm Invasive papillary SCC, poorly diff and SCC in situ.

How many primaries?

**2, M9**

Primary 1:

**C030**

Histology 1:

**8070/39, H3**

Primary 2:

**C030**

Histology 2:

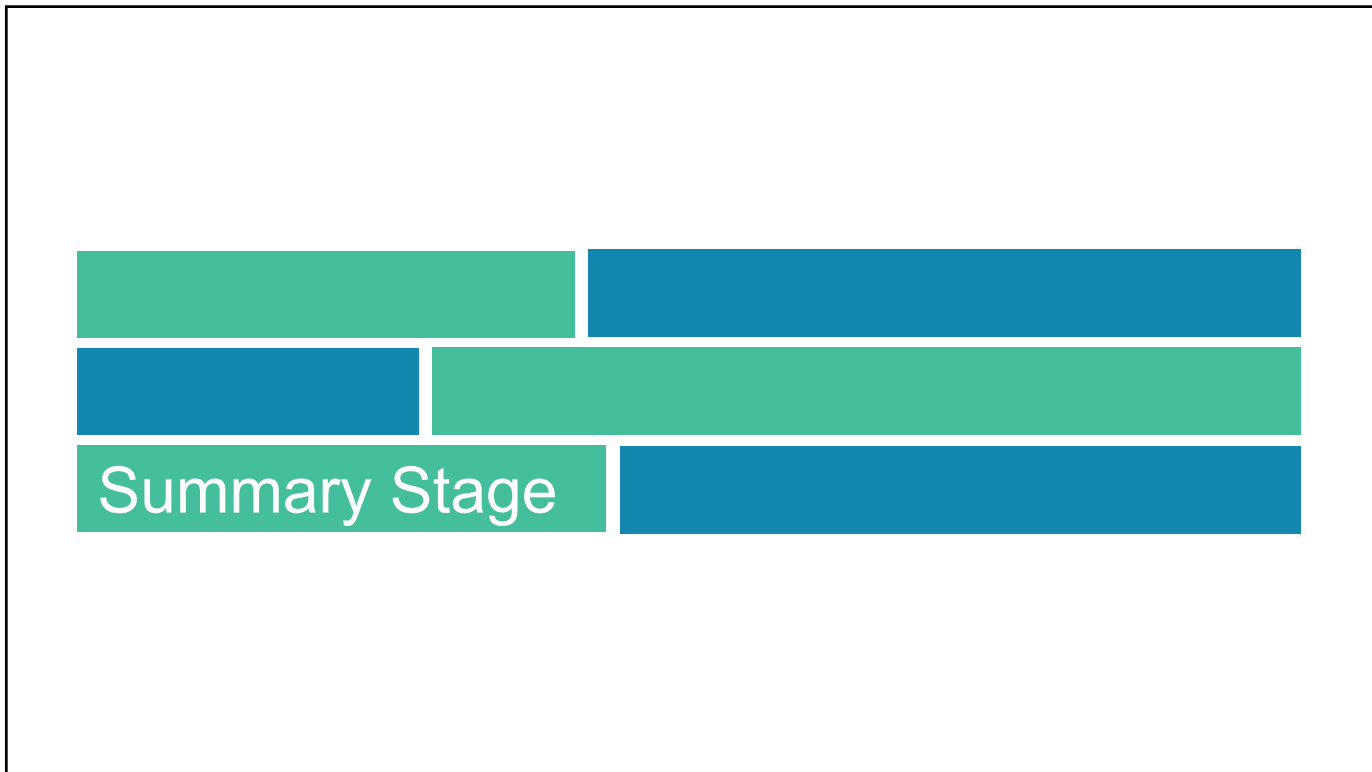
**8052/33, H4**

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Questions?

Quiz 1



### ●●● Summary Stage

- Review of manual

<https://seer.cancer.gov/tools/ssm/>

LIP AND ORAL CAVITY						
PRIMARY SITE	MUCOSA			SUBMUCOSA	MUSCULARIS PROPRIA	SEROSEA
	Epithelium	BASEMENT MEMBRANE	Lamina Propria			
Lip (C00._)	Yes		Yes	Yes	Yes	No
Tongue (C01._, C02._)	Yes		Yes	Yes	Yes	No
Gum (C03._, C06.2)	Yes		Yes (mucoperiosteum)	No	No	No
Floor of Mouth (C04._)	Yes		Yes	Yes	Yes	No
Buccal Mucosa (C06.0-C06.1)	Yes		Yes	Yes	Yes	No
Hard Palate (C05.0)	Yes		Yes	No	No	No
Soft Palate (C05.1-C05.2)	Yes		Yes	Yes	Yes	No
Other Mouth (C05.8-C05.9, C06.8-C06.9)	Yes		Yes	Yes	Yes	No

For lip, oral cavity, and pharynx, if a tumor is described as “confined to mucosa,” determine if it is limited to the epithelium (in situ) or if it has penetrated the basement membrane to invade the lamina propria.

<https://seer.cancer.gov/tools/ssm/headneck.pdf>

### ●●● DISTINGUISHING “IN SITU” AND “LOCALIZED” TUMORS FOR LIP, ORAL CAVITY, AND PHARYNX

- Historically, carcinomas described as “confined to mucosa” have been coded as localized. In order to provide greater specificity and to rule out the possibility of classifying noninvasive tumors in this category, abstractors should determine:
  - 1) if the tumor is confined to the epithelium, in which case it is in situ, OR
  - 2) if the tumor has penetrated the basement membrane to invade the lamina propria, in which case it is localized and is coded to invasion of the lamina propria





## Lip

### 1 Localized only

- Invasive tumor confined to:
  - Labial mucosa (inner lip)
  - Lamina propria
  - Multiple foci
  - Musculature##
  - Submucosa (superficial invasion)
  - Vermilion surface
- Superficial extension to:
  - Skin of lip
  - Subcutaneous soft tissue of lip
- Localized, NOS



## Lip

### 2 Regional by Direct Extension

- Extension to:
  - Buccal mucosa (inner cheek)
  - Commissure
  - Gingiva
  - Opposite (both) lip(s)
- **Lower lip/commissure:**
  - Mandible
- **Upper lip/commissure:**
  - Maxilla





## Lip

### 3 Regional Lymph Nodes

- Cervical, NOS
- Facial, NOS:###
  - Buccinators (buccal) **for upper lip**
  - Nasolabial **for upper lip**
- Internal jugular, NOS\*\*\*
- Deep cervical, NOS:
  - Lower, NOS:
    - Jugulo-omohyoid (supraomohyoid)
  - Middle
  - Upper, NOS:
    - Jugulodigastric (subdigastric)




## Lip

### Distant Metastasis

- Distant lymph node(s):
  - Mediastinal
  - Supraclavicular (transverse cervical)
  - Other distant lymph node(s)
- Extension to:
  - Cortical bone
  - Floor of mouth
  - Inferior alveolar nerve
  - Skin of face/neck
  - Tongue
- **Upper lip/commissure:**
  - Nose\*\*
  - Further contiguous extension
  - Metastasis



### ●●● Pop Quiz

- A patient presents with an ulcerating lesion on the lower lip. The tumor was excised and the pathology showed a 1x1 cm squamous cell carcinoma originating on the mucosal surface of the lower lip with superficial extension to the skin of the lip. No indication of any additional disease.
- What is Summary Stage?

1-Localized



### ●●● Pop Quiz

- A patient presented with a complaint of slurred speech and an indurated mass on the anterior portion of the of the mouth.
  - An MRI showed a 1.8cm tumor in the floor of the mouth. The tumor did not involve any of the surrounding structures or cross the midline. Two enlarged submental lymph nodes both measuring 2cm were highly suspicious for metastasis.
- The patient had surgery to excise the primary tumor and an ipsilateral neck dissection
  - Pathology showed a 2.1cm squamous cell carcinoma with extension mylohyoid muscle. 2 of 24 lymph nodes were positive for metastasis. The largest metastatic lymph node measured 1.7cm's.
- What is the summary Stage?

3-Regional to Lymph Nodes Only



Questions?

Lip  
AJCC Stage  
& Oral Cavity

## ●●● Rules for Classification

- Clinical Rules for Classification
  - Physical exam
  - Imaging
    - CT
    - MRI
  - Primary staging classification
- Pathologic Rules for Classification
  - Complete resection of the primary tumor
  - Pathologic confirmation of lymph node status

Pg 29



## ●●● Primary Tumor

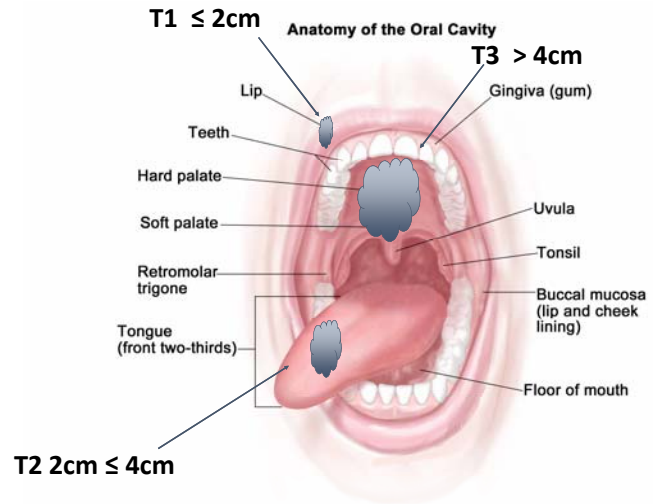
- If the patient is found to have metastasis and no primary tumor is found, a **T0** would be used if the physician believe the metastasis is from a lip or oral cavity primary.
- An in situ tumor is **pTis**





### Primary Tumor

- Tumor size dictates the T1-T3 values for invasive tumors that do not meet the criteria for T4.



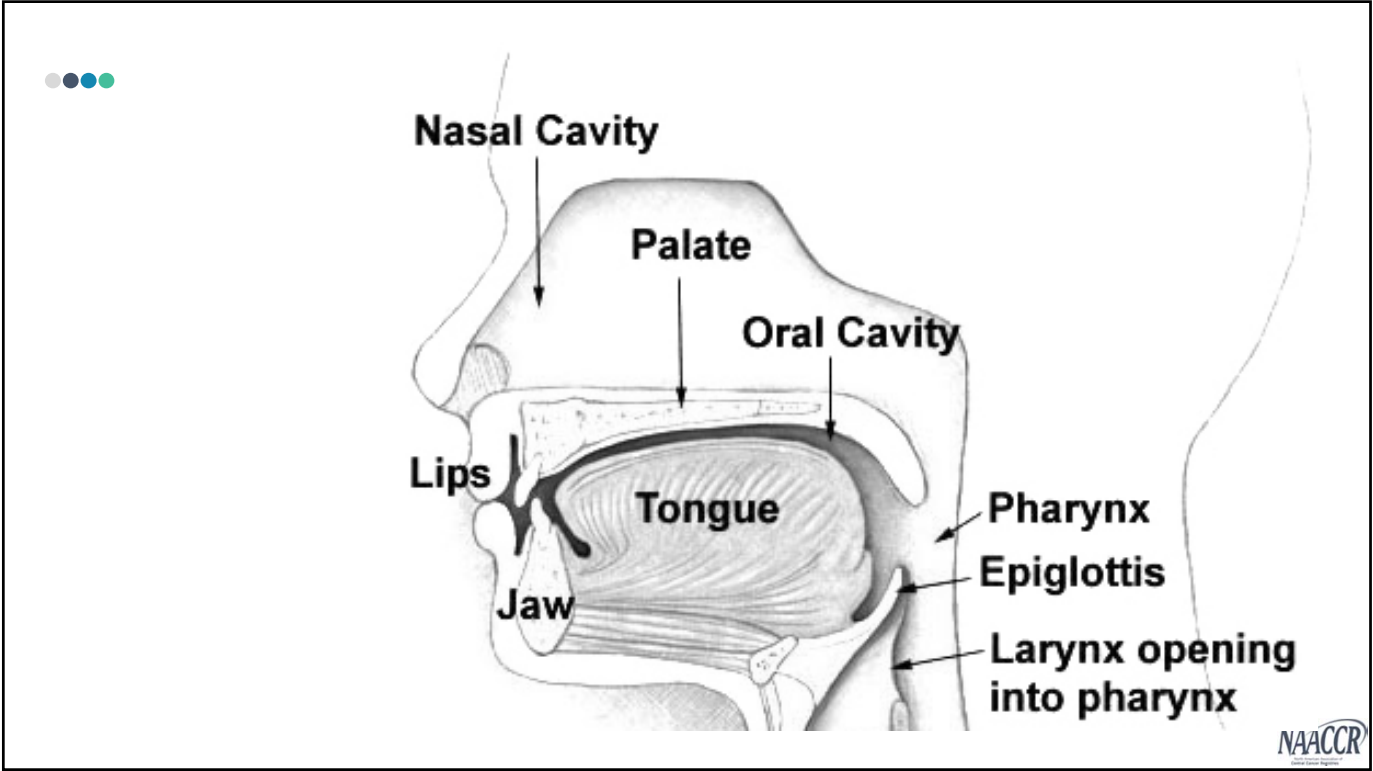
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### Pop Quiz

- 1/11/16 CT Scan of maxillofacial region:
  - Upper alveolar ridge soft tissue density measured 3.2 x 1 cm. The tumor is causing mucoperiosteal thickening of the right maxillary sinus, but no signs of definitive invasion.
  - No enlarged lymph nodes or indications of additional metastasis.
  - Biopsy confirmed squamous cell carcinoma
- Surgery was recommended, but patient refused any treatment.

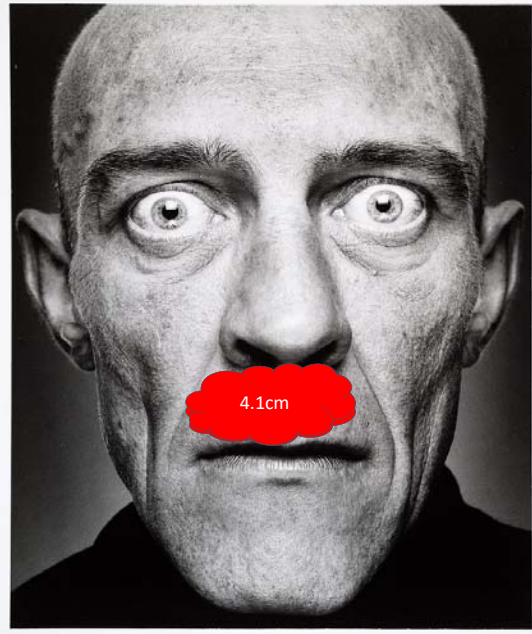
Data Item	Value
Clinical T	<b>cT2</b>
Clinical N	<b>cN0</b>
Clinical M	<b>cM0</b>
Clinical Stage	<b>2</b>
Pathologic T	
Pathologic N	
Pathologic M	
Pathologic Stage	<b>99</b>
Summary Stage	<b>1-Localized</b>





●●● Primary Tumor

4.1cm tumor arising on the vermilion surface of the lip and extending to the skin of the lip is a **T3**.



4.1cm tumor arising on the vermilion surface of the lip and extending to the skin of the face (not skin of the lip) is a **T4a**.

## ●●● Primary Tumor

Moderately advanced disease



Very advance local disease

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## ●●● Pop Quiz

- 1/11/16 CT Scan of maxillofacial region:
  - Upper alveolar ridge soft tissue density measured 2 x 2 cm. The tumor is causing mucoperiosteal thickening of the right maxillary sinus, but no signs of definitive invasion.
  - No enlarged lymph nodes or indications of additional metastasis.
  - Biopsy confirmed squamous cell carcinoma
- 1/22/16 Right maxillectomy:
  - 2 x 1 x 0.7 cm tumor of upper alveolar ridge, poorly differentiated squamous cell carcinoma, which infiltrates bone and mucoperiosteum of maxillary sinus.
  - Metastatic squamous cell carcinoma in 2 of 3 lymph nodes.

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## ●●● Pop Quiz

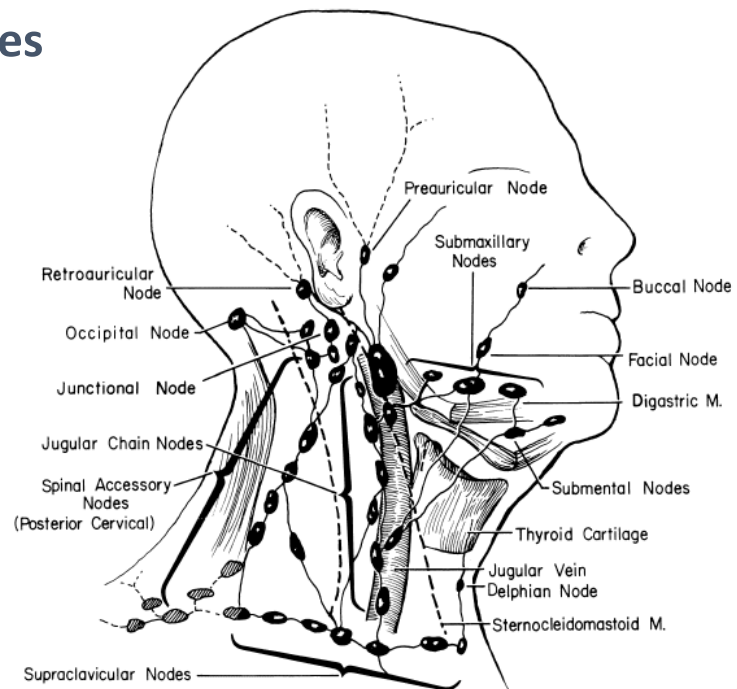
- 1/22/16 Right maxillectomy:
  - 2 x 1 x 0.7 cm tumor of upper alveolar ridge, poorly differentiated squamous cell carcinoma, which infiltrates through maxilla into the maxillary sinus.
  - Metastatic squamous cell carcinoma in 2 of 3 lymph right submandibular lymph nodes. The largest metastatic lymph node measured 2.1cm. No extranodal extension.

Data Item	Value
Clinical T	<b>cT1</b>
Clinical N	<b>cN0</b>
Clinical M	<b>cM0</b>
Clinical Stage	<b>1</b>
Pathologic T	<b>pT4a</b>
Pathologic N	<b>pN2b</b>
Pathologic M	<b>cM0</b>
Pathologic Stage	<b>4A</b>
Summary Stage	<b>7-Distant</b>



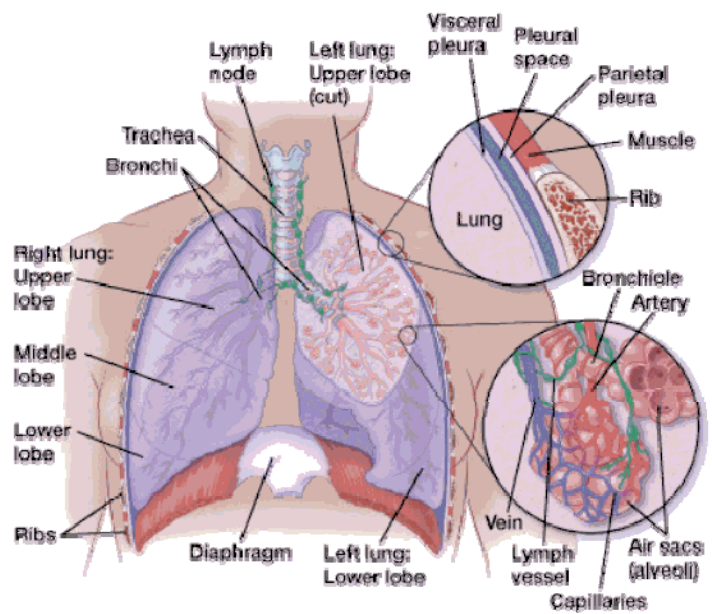
## ●●● Regional Lymph Nodes

- How many lymph nodes have metastasis?
- Are they on the same side as the primary (ipsilateral)?
- Extranodal extension?



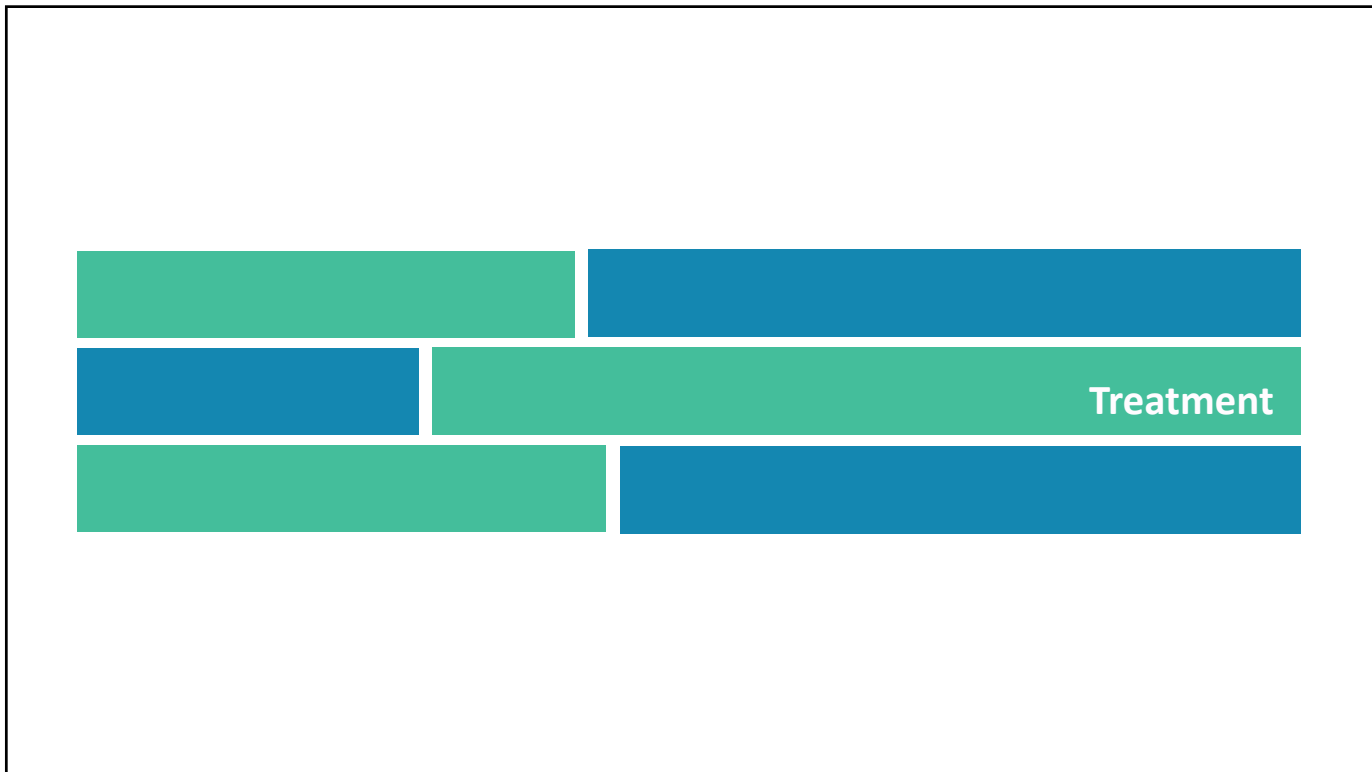
### ●●● Distant Metastasis

- Lungs
- Mediastinal (except level VII)
- Liver
- Skeletal



Questions?

Quiz 2



## ●●● Treatment - Lip

- **T1-T2 and no lymph nodes involved**
  - Surgical excision
  - External Beam Radiation (IMRT)
- **T3, T4 or Any T with N1-3**
  - Excision +/- lymph node dissection
    - Negative lymph nodes – no further treatment
    - Positive lymph nodes – possibly chemo, radiation or re-excision
  - External Beam Radiation +/- Brachytherapy or Chemotherapy

## ●●● Treatment - Lip

- **T4B or unresectable lymph nodes or newly diagnosed distant metastasis**
  - Clinical trials – preferred
  - Standard – concurrent chemo/radiation, definitive radiation +/- systemic therapy, or supportive care

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## ●●● Treatment – Oral Cavity

- **T1-2 with no lymph node involved**
  - Surgical Excision
  - External Beam Radiation (IMRT)
- **More than 4cm tumor without lymph node metastasis**
  - Excision of primary with neck dissection
- **T4a with any N or T1-3 with positive lymph nodes**
  - Excise primary and neck dissection
- **Advanced disease** - T4b any N, unresectable LN or M1
  - Clinical Trials
  - Standard therapy: concurrent chemo and radiation, definitive radiation +/- systemic therapy or supportive care

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## ●●● Surgery

- **30 – Wide excision, NOS**
  - Surgeon states wide excision on operative report
  - Tongue – Hemiglossectomy
- **40 – Radical excision of tumor, NOS**
  - More extensive excision of the primary tumor
  - **41 – Radical excision of tumor **ONLY****
  - **42 – 41 WITH mandible** (marginal, segment, hemi-, or total)
  - **43 – 41 WITH maxilla** (marginal, segment, hemi-, or total)

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## ●●● POP QUIZ!!!

- 4/3/16 biopsy of maxillary gingiva was positive for invasive papillary carcinoma.
- 5/3/16 Radical excision w/ partial maxillectomy – 2.6cm Invasive papillary SCC, poorly diff and SCC in situ. 0/8 level 1-3 LN. Margins negative.

Primary Site Surgery:

**43**

Scope Surgical LN:

**5**

Other/Regional Surgery:

**0**

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## ••• Neck Dissection

- **Selective**
  - Muscle, nerve and blood vessel in neck preserved
  - Depend on site, recommend for N0
- **Modified Radical**
  - Most common – All lymph nodes removed
  - Nerves and sometimes blood vessels or muscle spared
- **Radical**
  - All tissue from the jaw bone to the collarbone is removed
    - Muscle, nerve, salivary gland, and major blood vessels removed
  - NCCN term – Comprehensive, recommend for N3

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## ••• Radiation

- **Primary**
  - Low/Intermediate risk
    - Primary and sites of suspected spread
  - High risk
    - Primary and involved lymph nodes
    - Select cases – Interstitial brachytherapy
- **Adjuvant**
  - Some may undergo concurrent systemic therapy as well

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Questions?

Quiz 3

●●● **Coming Up....**

- Multiple Primary and Histology Rules  
– 5/4/2017
- Collecting Cancer Data: Liver and Bile Ducts  
– 6/1/2017

## ●●● And Our Fabulous Prizes Go To...



## ●●● CE Certificate Quiz Survey

- Phrase
- Link

<http://www.surveygizmo.com/s3/3477379/Lip-and-Oral-Cavity-2017>





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