



Agenda

- Overview
- Collaborative Stage Data Collection System
- Treatment




OVERVIEW




Key Statistics

- Estimated new cases and deaths from throat cancer (including cancers of the larynx) in the United States in 2012
 - New Cases 13, 510
 - Deaths 2,330




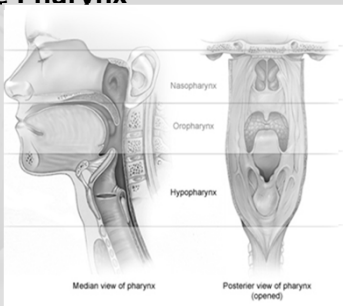
Risk Factors

- Alcohol
- Tobacco
- HPV infection



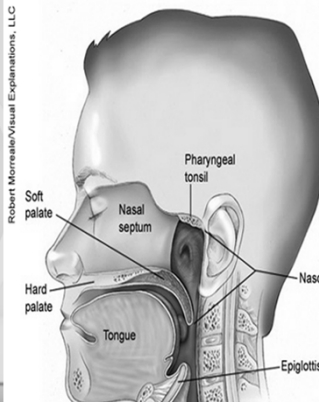
Anatomy of the Pharynx

- Nasopharynx
- Oropharynx
- Hypopharynx




Nasopharynx

- C11.0 Superior wall of nasopharynx
 - Roof of nasopharynx
- C11.1 Posterior wall
 - Adenoid
 - Pharyngeal tonsil
- C11.2 Lateral wall
 - Fossa of Rosenmuller

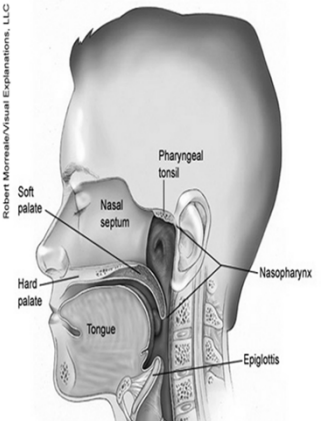


Robert Morreale/Visual Explanations, LLC



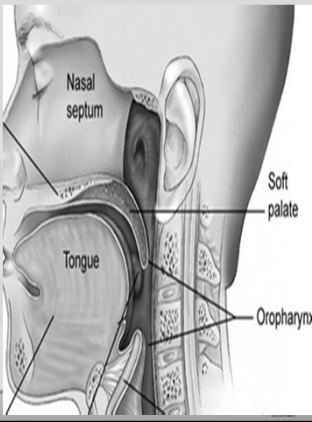
Nasopharynx

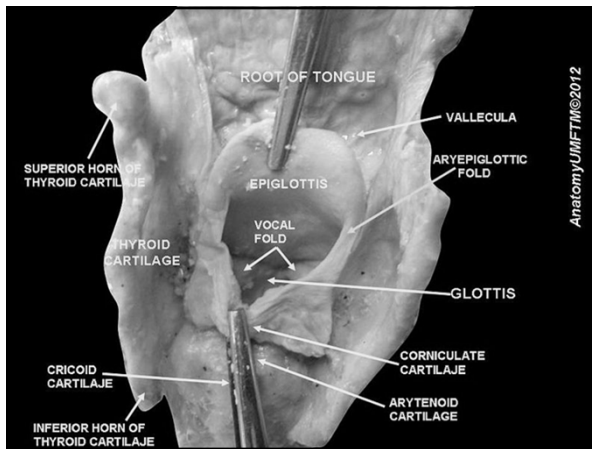
- C11.3 Anterior wall
 - Nasopharyngeal surface of the soft palate
 - Pharyngeal fornix
 - Choana
 - Posterior margin of the nasal septum
- C11.8 Overlapping
- C11.9 NOS



Oropharynx

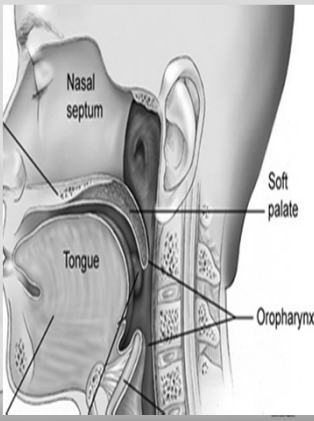
- C10.0 Vallecula
- C10.1 Anterior surface of the epiglottis
- C10.2 Lateral wall of oropharynx
 - Lateral wall of the mesopharynx





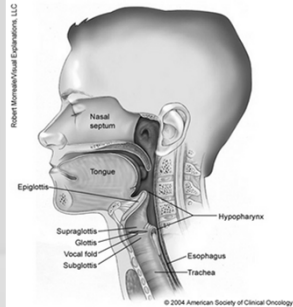
Oropharynx

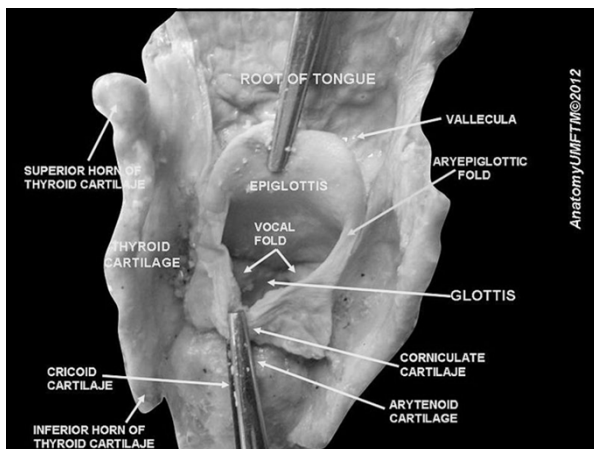
- C10.3 Posterior wall of the oropharynx
 - Posterior wall of the mesopharynx
- C10.4 Branchial cleft
- C10.8 Overlapping lesion
 - Junctional region
- C10.9 Oropharynx NOS
 - Mesopharynx, NOS
 - Fauces, NOS



Hypopharynx

- C13.0 Postcricoid region
 - Cricopharynx
 - Cricoid, NOS
- C13.1 Hypopharyngeal aspect of aryepiglottic fold
 - Aryepiglottic fold
 - Arytenoid fold
- C13.2 Posterior wall of the hypopharynx





Hypopharynx

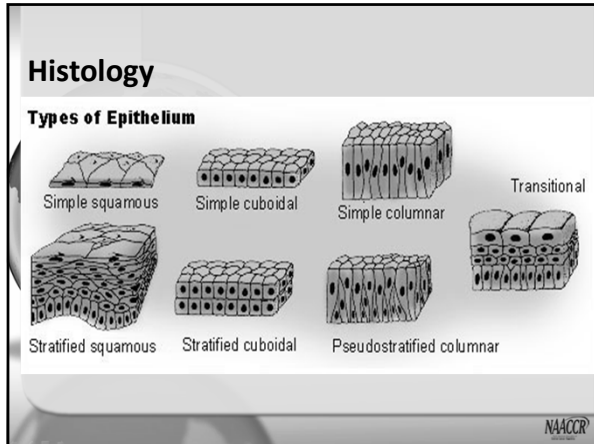
- C13.8 Overlapping lesion of the hypopharynx
- C13.9 Hypopharynx, NOS
 - Hypopharyngeal wall
 - Laryngopharynx

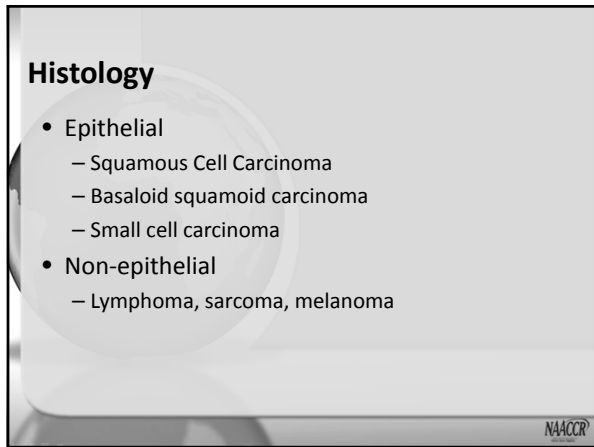
Pharynx, NOS

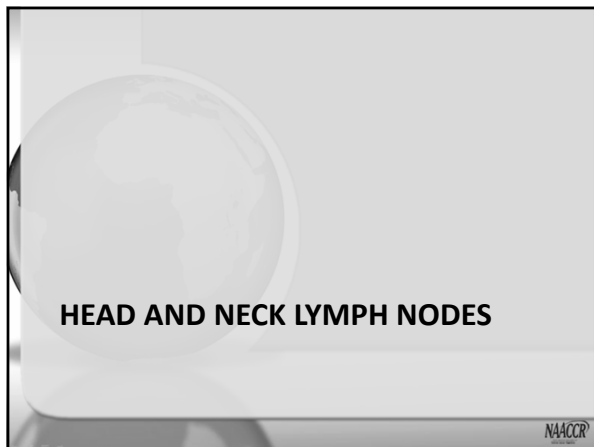
- C14.0 Pharynx, NOS
 - Pharyngeal wall, NOS
 - Wall of pharynx, NOS
 - Lateral wall of pharynx, NOS
 - Posterior wall of pharynx, NOS
 - Retropharynx
 - Throat
- C14.2 Waldeyer Ring
- C14.8 Overlapping lesion of the lip, oral cavity, and pharynx

Other Primary Sites in the Pharynx

- Base of Tongue
- Soft Palate
- Uvula
- Tonsils
 - Palatine
 - Right and left
 - Lingual
 - Pharyngeal
 - Adenoids

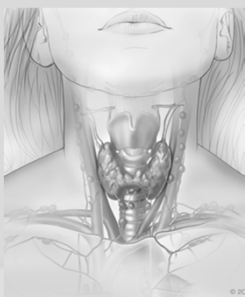






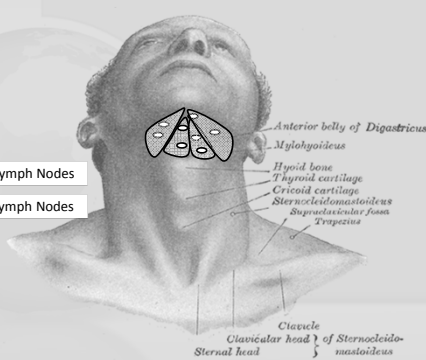
Important Landmarks

- Mandible
- Hyoid Bone
- Cricoid Cartilage
- Clavicle
- Internal Jugular Vein



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Level 1-7 Lymph Nodes

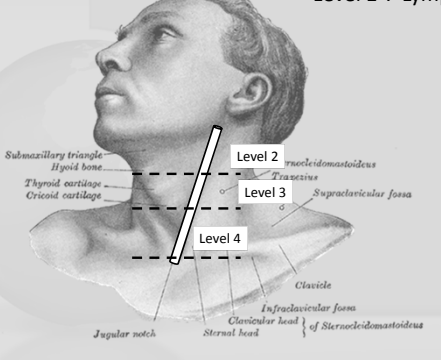


Level 1A Lymph Nodes

Level 1B Lymph Nodes

20th U.S. edition of Gray's Anatomy of the Human Body, NAACCR

Level 1-7 Lymph Nodes

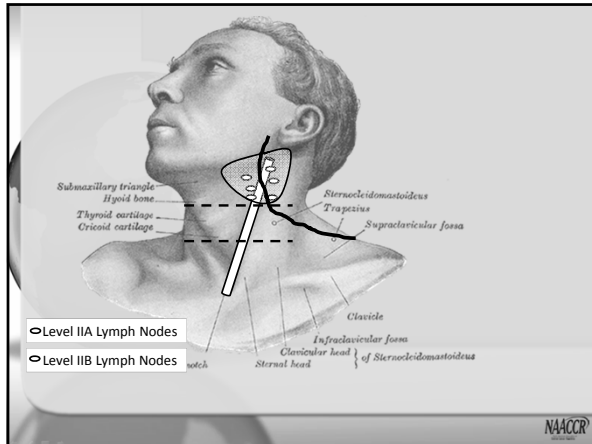


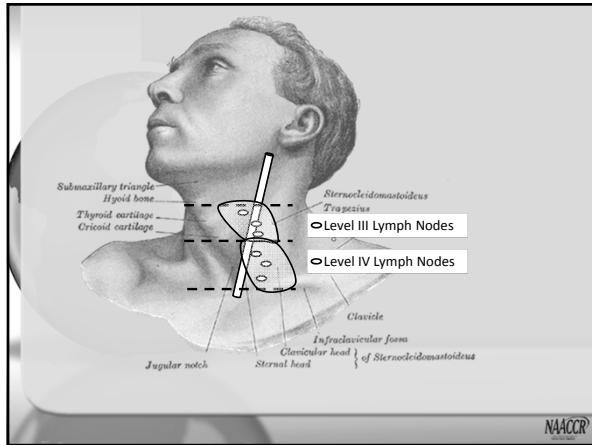
Level 2

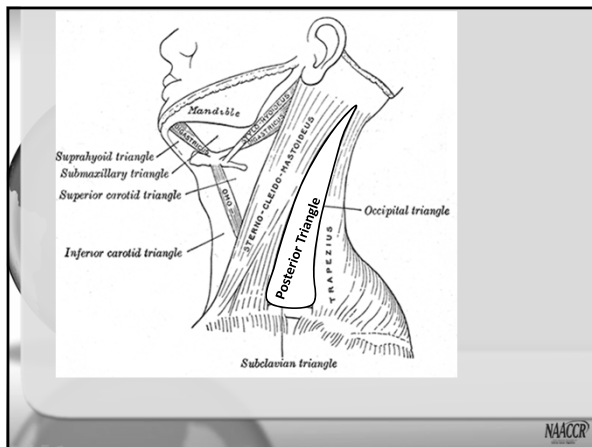
Level 3

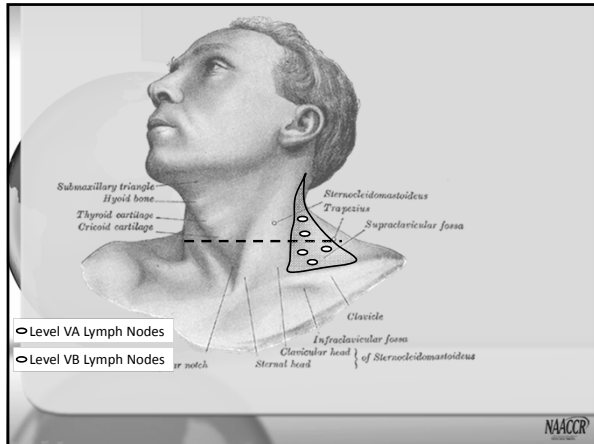
Level 4

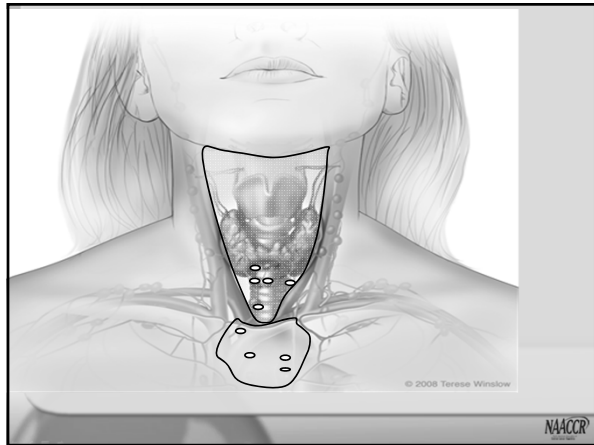
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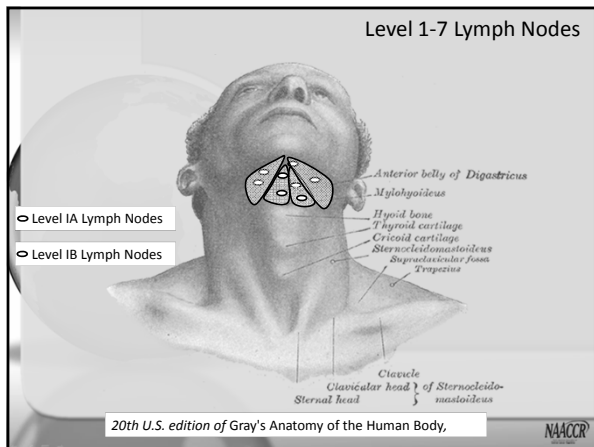


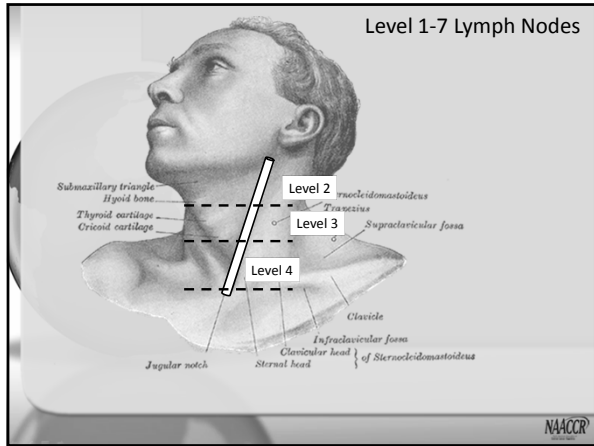


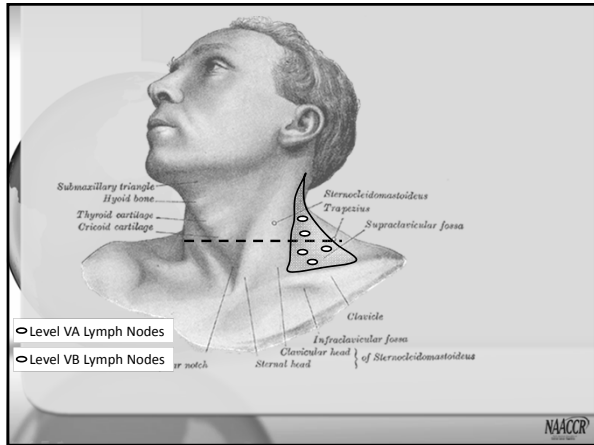


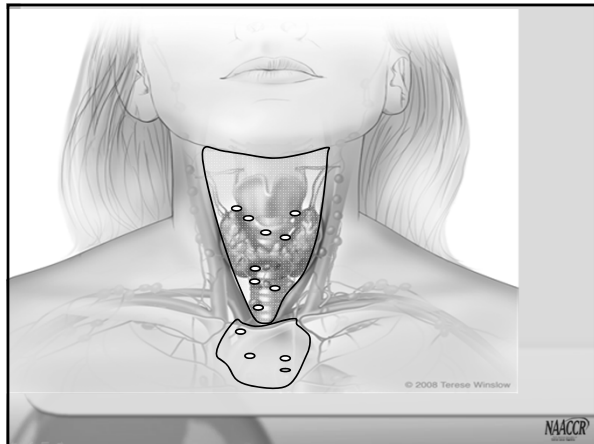












Other Lymph Node Groups

- Facial/Buccinator ◦
- Nasolabial ◦
- Parotid ◦
- Preauricular ◦
- Occipital ◦

First Echelon Lymph Nodes

- Nasopharynx and Oropharynx
 - Level II (A or B)
 - Level III
 - Level V (A or B)
- Hypopharynx
 - Level II (A or B)
 - Level III
 - Level IV

Distant Metastasis

- Distant metastasis is relatively uncommon at diagnosis
 - Lung
 - Bone
 - Liver
- AJCC Stage IV
 - IVA moderately advanced local/regional disease
 - IVB very advanced local/regional disease
 - IVC Distant metastasis

Coding Primary Site

1. Tumor Board
 - a. Specialty
 - b. General
2. Staging physician's site assignment
 - a. AJCC staging form
 - b. TNM statement in medical record

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Coding Primary Site

3. If neither 1 or 2 available, based on whether tumor was resected

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Coding Primary Site

4. If total resection of primary tumor was done, code based on:
 - a. Operative report – surgeon's statement
 - b. Final diagnosis on pathology report


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Coding Primary Site

5. If total resection was NOT done code based on:


- a. Endoscopy
- b. Radiation oncologist
- c. Diagnosing physician
- d. Primary care physician

Continued on next slide




Coding Primary Site

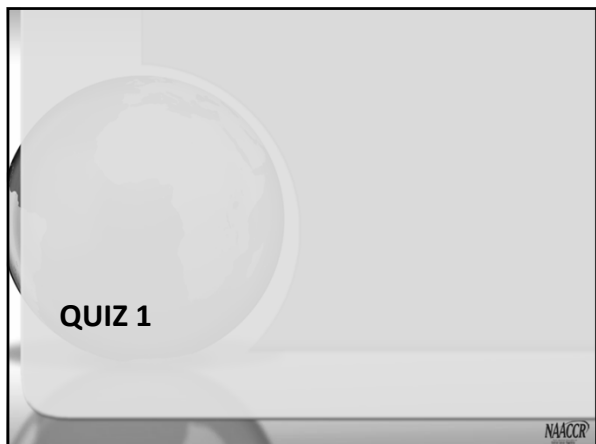
- e. Other physician
- f. Diagnostic imaging
- g. Physician statement based on clinical examination

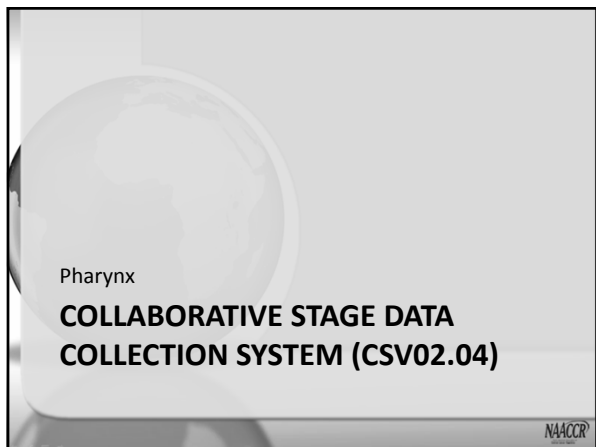


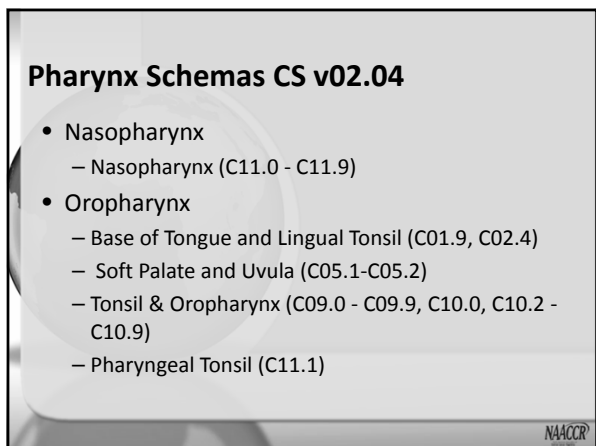
Default Site Codes

- Point of origin cannot be determined
 - C02.8 Overlapping lesion of tongue
 - C08.8 Overlapping lesion of major salivary glands
 - C14.8 Overlapping lesion of lip, oral cavity, and pharynx









Pharynx Schemas CS v02.04

- Hypopharynx
 - Pyriform Sinus, Hypopharynx, Laryngopharynx (C12.9, C13.0 - C13.9)
- Pharynx NOS
 - Pharynx, NOS, and Overlapping Lesion of Lip, Oral Cavity, and Pharynx (C14.0 - C14.8)

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Pharynx Schemas CS v02.04

Melanoma

- Melanoma Nasopharynx (C11.0 - C11.9)
- Melanoma Base of Tongue and Lingual Tonsil (C01.9, C02.4)
- Melanoma Soft Palate and Uvula (C05.1-C05.2)
- Melanoma Tonsil & Oropharynx (C09.0 - C09.9, C10.0, C10.2 - C10.9)
- Melanoma Pyriform Sinus, Hypopharynx, Laryngopharynx (C12.9, C13.0 - C13.9)
- Melanoma Pharynx, NOS, and Overlapping Lesion of Lip, Oral Cavity, and Pharynx (C14.0 - C14.8)

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CS Tumor Size

Code	Description
000	No mass/tumor found
001-988	001-988 mm (Exact size to nearest mm)
989	989 mm or larger
990	Microscopic focus or foci and no size given
991	Less than 1 cm
992	Less than 2 cm OR greater than 1 cm OR between 1 cm and 2 cm Stated as T1 with no other information on size*

*Oropharynx schemas; Pharynx NOS schema

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CS Tumor Size

Code	Description
993	Less than 3 cm OR greater than 2 cm OR between 2 cm and 3 cm
994	Less than 4 cm OR greater than 3 cm OR between 3 cm and 4 cm Stated as T2 with no other information on size*
995	Less than 5 cm OR greater than 4 cm OR between 4 cm and 5 cm
996	Greater than 5 cm
999	Unknown

*Oropharynx schemas; Pharynx NOS schema

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CS Extension: Nasopharynx

- Code 000: In situ
- Codes 105-510: Confined to nasopharynx or extends to oropharynx and/or nasal cavity without parapharyngeal extension
- Codes 555-590: Parapharyngeal extension
- Codes 605-645: Involves bony structures of skull base and/or paranasal sinuses
- Codes 710-810: Intracranial extension and/or involvement of cranial nerves, hypopharynx, orbit, or extension to infratemporal fossa/masticator space

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CS Extension: Oropharynx


Base of Tongue & Lingual Tonsil

- Code 000: In situ
- Codes 100-620: T category based on tumor size
- Codes 640-650: Extends to lingual surface of epiglottis
- Codes 710-775: Moderately advanced local disease
 - Invades larynx, extrinsic muscle of tongue, medial pterygoid, hard palate, or mandible
- Codes 780-810: Very advanced local disease
 - Invades lateral pterygoid muscle, pterygoid plates, lateral nasopharynx, skull base, or encases carotid artery

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CS Extension: Oropharynx
Soft Palate & Uvula

- Code 000: In situ
- Codes 100-600: T category based on tumor size
- Codes 640-645: Extends to lingual surface of epiglottis
- Codes 650-735: Moderately advanced local disease
 - Invades larynx, extrinsic muscle of tongue, medial pterygoid, hard palate, or mandible
- Codes 740-810: Very advanced local disease
 - Invades lateral pterygoid muscle, pterygoid plates, lateral nasopharynx, skull base, or encases carotid artery




CS Extension: Oropharynx
Tonsil & Oropharynx

- Code 000: In situ
- Codes 150-520: T category based on tumor size
- Codes 530-540: Extends to lingual surface of epiglottis
- Codes 610-705: Moderately advanced local disease
 - Invades larynx, extrinsic muscle of tongue, medial pterygoid, hard palate, or mandible
- Codes 708-810: Very advanced local disease
 - Invades lateral pterygoid muscle, pterygoid plates, lateral nasopharynx, skull base, or encases carotid artery



CS Extension: Oropharynx
Pharyngeal Tonsil

- Code 000: In situ
- Codes 105-566: T category based on tumor size
- Codes 568-575: Extends to lingual surface of epiglottis
- Codes 610-665: Moderately advanced local disease
 - Invades larynx, extrinsic muscle of tongue, medial pterygoid, hard palate, or mandible
- Codes 710-810: Very advanced local disease
 - Invades lateral pterygoid muscle, pterygoid plates, lateral nasopharynx, skull base, or encases carotid artery



CS Extension: Hypopharynx

- Code 000: In situ
- Code 100: Limited to 1 subsite of hypopharynx
- Code 200; 400-450: Invades more than 1 subsite of hypopharynx or an adjacent site without fixation of hemilarynx
- Codes 550-560: Fixation of hemilarynx or extension to esophagus
- Codes 600-638: Moderately advanced local disease
 - Invades thyroid/cricoid cartilage, hyoid bone, thyroid gland, or central compartment soft tissue
- Codes 640-810: Very advanced local disease
 - Invades prevertebral fascia, encases carotid artery, or involves mediastinal structures

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CS Extension: Pharynx NOS

- Code 000: In situ
- Codes 100-300: Confined to site of origin
- Codes 400-600: More than 1 region of pharynx involved or extension to adjacent organs or structures
- Code 800: Further contiguous extension

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Pop Quiz

- Tonsillectomy: Squamous cell carcinoma, 2.5 cm tumor, confined to tonsil; pT2.
- What is the code for CS Extension?
 - 150: Invasive tumor confined to 1 of the following subsites: Anterior wall including vallecula; 1 lateral wall; posterior wall
 - 310: Stated as T2 with no other information on extension
 - 999: Unknown

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CS Lymph Nodes: All Pharynx Schemas

- Includes lymph nodes defined as Levels I-VII and Other by AJCC
- Other information about regional lymph node involvement coded in SSF 1, 3-9
- Consider nodes ipsilateral if laterality not specified or midline nodes
- If nodes described as supraclavicular, determine if Level IV or Level V
 - Code as Level V if level cannot be determined




CS Lymph Nodes: Nasopharynx

- Choose code that specifies
 - Specific nodes involved
 - Bilateral, contralateral, or not stated if bilateral or contralateral




CS Lymph Nodes: Oropharynx & Hypopharynx

- Choose code that specifies
 - Specific nodes involved
 - Single or multiple nodes involved
 - Bilateral, contralateral, or not stated if bilateral or contralateral




CS Lymph Nodes: Pharynx NOS

- Choose code that specifies
 - Specific nodes involved




Pop Quiz

- Squamous cell carcinoma of nasopharynx with involvement of bilateral Level II lymph nodes and left Level IV lymph nodes.
- What is the code for CS Lymph Nodes?
 - 105: Unilateral positive Level II lymph nodes
 - 130: Unilateral positive Level IV lymph nodes
 - 405: Positive bilateral nodes listed in code 105
 - 430: Positive bilateral nodes, any listed in code 130 WITH or WITHOUT nodes listed in code 105 or 115




CS Mets at DX: All Pharynx Schemas

- Record distant metastasis including lymph nodes and/or distant sites at the time of diagnosis
- Code involvement of mediastinal lymph nodes, excluding superior mediastinal lymph nodes, in CS Mets at DX
- Code involvement of supraclavicular and transverse cervical lymph nodes in CS Lymph Nodes




SSF1: Size of Lymph Nodes

- Code largest diameter of involved regional nodes
- Clinical assessment
 - Code size as described in clinical or radiographic exam
- Pathologic assessment
 - Code size as described on pathology report




Pop Quiz

- Squamous cell carcinoma of nasopharynx. Per physical exam cervical nodes involved with size of largest involved node 3 cm. CT scan of neck showed nasopharynx tumor and largest involved cervical node 1.8 cm.
- What is the code for SSF1?
 - 018
 - 030
 - 999



SSF3 – SSF6: Lymph Node Levels for Head and Neck

- SSF 3: Levels I-III
- SSF 4: Levels IV, V, retropharyngeal nodes
- SSF 5: Levels VI, VII, facial nodes
- SSF 6: Parapharyngeal, parotid, and suboccipital/retroauricular nodes



SSF3 – SSF6: Node Levels

- Code presence or absence of node involvement
- One digit used to represent lymph nodes of a single level
- If you only have information about one level of lymph nodes, code all other lymph levels as 0
- If you know regional lymph nodes are positive but the lymph node level is unknown, code 000
- If no lymph nodes are involved clinically or pathologically, code 000

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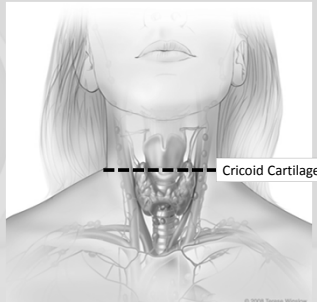
SSF3: Levels I-III

100	Level I lymph node(s) involved
010	Level II lymph node(s) involved
001	Level III lymph node(s) involved
110	Levels I and II lymph nodes involved
101	Levels I and III lymph nodes involved
011	Levels II and III lymph nodes involved
111	Levels I, II and III lymph nodes involved

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SSF7: Upper and Lower Cervical Node Levels

- Upper Cervical Nodes
 - Level I, II, III, VA
 - Facial, Parotid, Parapharyngeal, Retropharyngeal, Retroauricular, and Suboccipital
- Lower Cervical Nodes
 - Level IV, VB, VII
- Level VI can be either upper or lower



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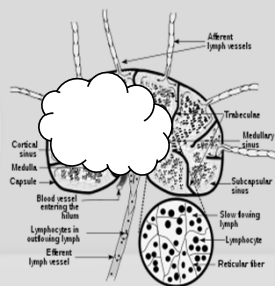
Pop Quiz

- Squamous cell carcinoma of nasopharynx with involvement of bilateral Level II lymph nodes, left Level IV lymph nodes, and bilateral Level V nodes.
- What is the code for SSF7?
 - 010: Upper level lymph nodes involved
 - 020: Lower level lymph nodes involved
 - 030: Upper & lower level lymph nodes involved
 - 040: Unknown level lymph nodes involved

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Extracapsular Extension

- When tumor with a lymph nodes extends beyond the wall of the node into the perinodal fat.



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Extracapsular Extension, Lymph Nodes

SSF8: Clinically

- Physical Exam
 - Fixed
 - Matted
- Imaging
 - Amorphous
 - Spiculated margins
 - Stranding into perinodal soft tissue

SSF9: Pathologically

- Macroscopic
 - May be described in gross dissection
 - Takes priority over microscopic description
- Microscopic
 - May not be evident in gross exam
 - Described in microscopic section of path report

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Pop Quiz

- CT scan of neck: Oropharyngeal tumor, most likely malignant, malignant cervical node adenopathy.
- Laryngoscopy & biopsy: Squamous cell carcinoma of oropharynx, tumor greater than 3 cm.
- Referred to oncology for chemotherapy.

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Pop Quiz

- What is the code for SSF8?
 - 000: No regional nodes involved clinically
 - 010: Regional nodes involved clinically, no extracapsular extension clinically
 - 030: Regional nodes involved clinically, unknown if extracapsular extension
 - 998: No clinical exam of regional lymph node

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Pop Quiz

- What is the code for SSF9?
 - 000: No regional lymph nodes involved pathologically
 - 010: Regional lymph nodes involved pathologically, no extracapsular extension pathologically
 - 050: Regional nodes involved pathologically, unknown if extracapsular extension
 - 998: No histopathologic exam of regional nodes

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SSF10: Human Papilloma Virus (HPV)

Status

- HPV plays a result in pathogenesis of some cancers
- Results of HPV testing on cancer tissue
- Highest risks: Types 16 and 18
- Other high risk: multiple types noted in SSF table
- HPV vaccine designed to protect against types 16, 18, 6, 11
- Codes 000 or 060
 - If test reports only negative or positive for high-risk HPV

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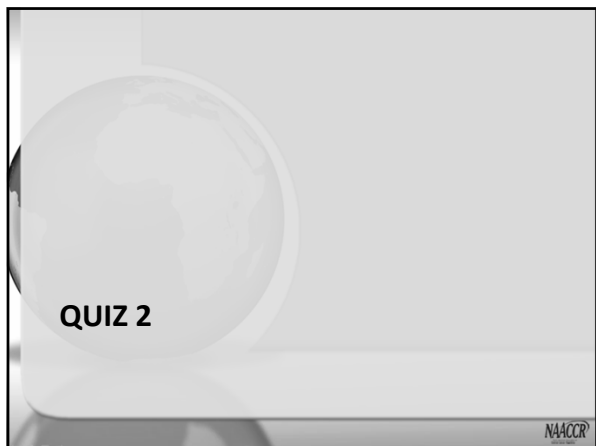
**SSF25: Schema Discriminator
Nasopharynx/Pharyngeal Tonsil**

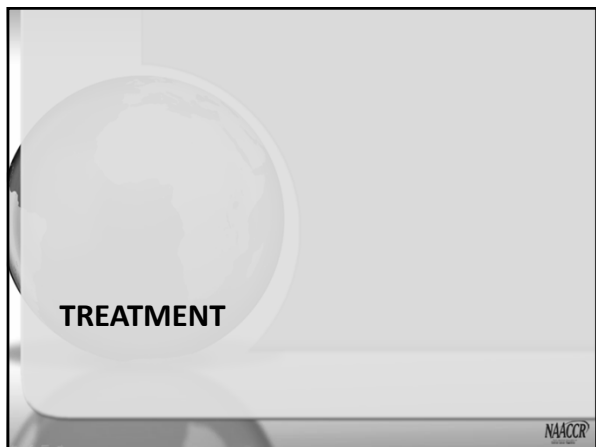
Code	Description	Schema
010	Posterior wall of nasopharynx Posterior wall of nasopharynx NOS	Nasopharynx
020	Adenoid Pharyngeal tonsil Nasopharyngeal tonsil	PharyngealTonsil
981	Nasopharynx cases coded to C11.0, C11.2, C11.3, C11.8, C11.9	Nasopharynx

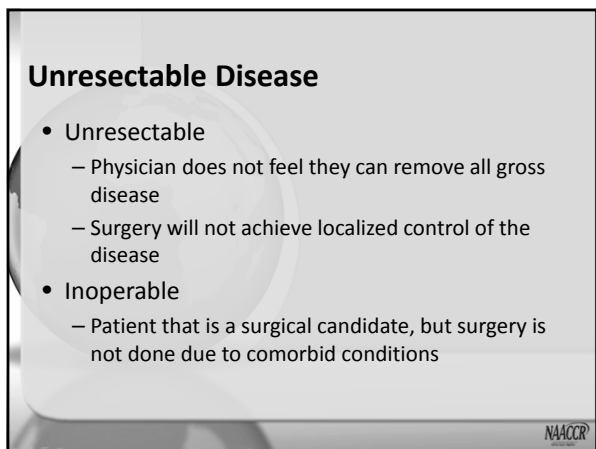
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QUESTIONS?

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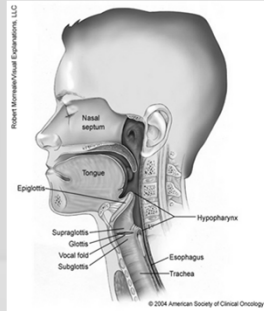
Salvage Surgery

- Patients that do not have a total response to chemotherapy and/or radiation may have salvage therapy to remove any residual cancer

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Surgery

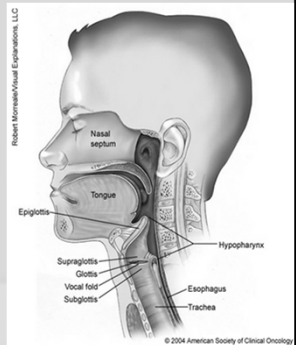
- 30 Pharyngectomy, NOS
 - 31 Limited/partial pharyngectomy; tonsillectomy, bilateral tonsillectomy
 - 32 Total pharyngectomy



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Surgery

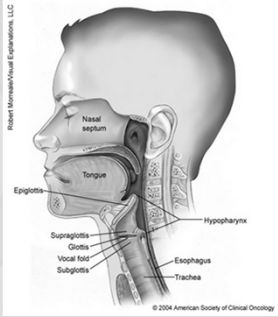
- 40 Pharyngectomy WITH laryngectomy OR removal of contiguous bone tissue, NOS (does NOT include total mandibular resection)
 - 41 WITH Laryngectomy (laryngopharyngectomy)
 - 42 WITH bone
 - 43 WITH both 41 and 42



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Surgery

- 50 Radical pharyngectomy (includes total mandibular resection), NOS
- 51 WITHOUT laryngectomy
- 52 WITH laryngectomy



Robert Marmorek/Visual Expeditions, LLC

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Neck Dissection

- Comprehensive neck dissection
 - Removal of level I-V lymph nodes
- Selective neck dissection for pharyngeal primaries
 - Neck dissection based on the understood common pathways of spread for head and neck cancers.
 - Removal of II-IV and VI if required

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Neck Dissection

- Selective neck dissection
 - Neck dissection based on the understood common pathways of spread for head and neck cancers.
 - Patient who receive a selective neck dissection are generally clinically node negative.

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Radiation

- Radiation Treatment Volume
 - Head and neck (05)
- Regional Treatment Modality
 - Primary tumors and gross adenopathy generally receive 66-74 Gy at 2Gy per day
 - Patients receiving hyperfractionation may receive 80-81 Gy (80.3 at 1.15 Gy twice daily)
- IMRT dose painting
 - Different dose levels to different structures within the same treatment fraction

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Chemotherapy

- Primary systemic therapy plus radiation for squamous cell carcinomas
 - Cisplatin
 - 5fu/hydroxyurea
 - Cisplatin/paclitaxel
 - Cisplatin/infusional 5fu
 - Carboplatin/infusional 5fu
 - Cetuximab

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Nasopharynx

- Early stage tumors are primarily treated with radiation therapy.
 - This may be done in combination with a platinum based chemotherapy.
- Later stage tumors are primarily treated with radiation combination of chemotherapy and radiation.

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Oropharynx

- T1 or T2 with N0 or N1 (tumor less than 4cm and no more than 1 positive ipsilateral node)
 - Definitive radiation therapy *or*
 - Excision of primary with or without a unilateral or bilateral neck dissection *or*
 - Radiation therapy and systemic therapy (usually only when N1).

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Oropharynx

- T3 or T4 (tumor greater than 4cm or tumor invades specific structures surrounding the oropharynx) and N0 (node negative).
 - Concurrent systemic therapy and radiation therapy *or*
 - Surgery *or*
 - Induction chemotherapy followed by concurrent chemotherapy and radiation *or*
 - Multimodality clinical trials

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Oropharynx

- T3-T4 (tumor greater than 4cm or tumor invades specific structures surrounding the oropharynx) and node positive or any T and N2-N3 (lymph node greater than 3cm or more than one lymph node involved)
 - Concurrent systemic therapy and radiation therapy.
 - Induction chemotherapy followed by chemotherapy and radiation therapy
 - Surgery to the primary and neck dissection
 - Multimodality clinical trial

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Hypopharynx

- Early T stage (T1 or a small T2) with negative lymph nodes.
 - Definitive radiation therapy
 - Partial Laryngopharyngectomy with selective neck dissection.

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Hypopharynx

- T1 with positive nodes or T2 or T3 with any N.
 - Induction chemotherapy
 - Laryngopharyngectomy followed by radiation and possibly adjuvant chemotherapy
 - If lymph node negative, then selective node dissection
 - If lymph node positive, then comprehensive neck dissection including level VI
 - Concurrent systemic therapy and radiation therapy.
 - Multimodality clinical trials

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Hypopharynx

- T4a and any N
 - Surgery and comprehensive neck dissection followed by chemotherapy and radiation *or*
 - Induction chemotherapy followed by concurrent chemotherapy and radiation *or* just radiation *or*
 - Concurrent systemic therapy and radiation therapy.
 - Multimodality clinical trials

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