

## 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



## AGENDA

- Anatomy
- Epi Moment
- Quiz 1
- Staging
- Treatment
- Quiz 2
- Case Scenarios

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## ANATOMY

### LARYNX



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## LARYNX ANATOMY

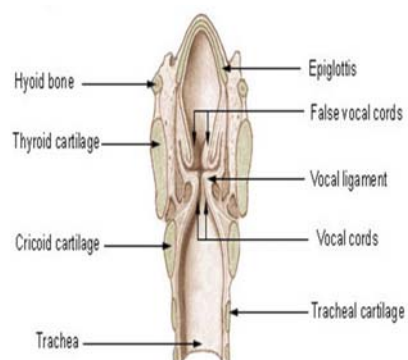
- Voice Box
- Passageway of air
- Extends from C3 to C6 vertebrae

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## LARYNX ANATOMY

- Divided into 3 Sections
  - Supraglottis
    - area above vocal cords, contains epiglottis
    - arytenoids, aryepiglottic folds and false cords
  - Glottis
    - containing true vocal cords, anterior and posterior commissures
  - Subglottis
    - below the vocal cords



SEER Training Modules, Larynx & Trachea. U. S. National Institutes of Health, National Cancer Institute. 17 October 2017 <<https://training.seer.cancer.gov/anatomy/respiratory/passages/larynx.html>>

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## LARYNX ANATOMY

- Epiglottis
- Anterior and Posterior Commissure
- Arytenoids
- Aryepiglottic Folds
- False vocal cords
- True vocal cords

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## LARYNX ANATOMY

- **Thyroid cartilage**
  - Adam’s apple
  - Thyrohyoid membrane
- **Cricoid cartilage**
  - Inferior wall of larynx
  - Median cricothyroid ligament
- **Epiglottis**
  - Closes off glottis during swallowing
- **Arytenoid cartilage**
  - Influence position and tension of the vocal cords
- **Corniculate cartilage**
  - Horn shaped pieces located at the apex of arytenoid cartilage
- **Cuneiform cartilage**
  - Club shaped pieces located anterior to the corniculate cartilages

## PRIMARY SITE CODING

- **C32.0**
  - True vocal cord
- **C32.1**
  - Epiglottis
  - Posterior Surface of epiglottis
  - False vocal cord
- **C32.3**
  - Arytenoid cartilage, Cricoid cartilage, cuneiform cartilage, thyroid cartilage

ICD03	Term
C32.0	Glottis
C32.1	Supraglottis
C32.2	Subglottis
C32.3	Laryngeal cartilage
C32.8	Overlapping lesion of larynx
C32.9	Larynx, NOS

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## MULTIPLE PRIMARY AND HISTOLOGY RULES

### HEAD AND NECK: CODING PRIMARY SITES

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## CODING PRIMARY SITE : PRIORITY ORDER

- Tumor Board
- Staging physician's site assignment
- Total resection of primary tumor
- No resection (biopsy only)
- Overlapping sites code

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## ASSIGNING STAGE WHEN PRIMARY SITE IS C32.8 OR C32.9

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## HOW DO WE ASSIGN STAGE WHEN PRIMARY SITE IS C32.8 OR C32.9

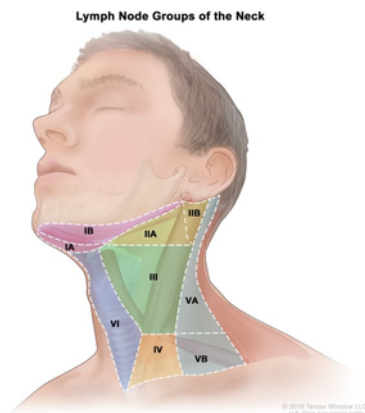
- Can assign a T value based on the location of tumor bulk or epicenter
- If epicenter can be identified – assign to the subsite where located
- If epicenter cannot be identified – use C32.8 or C32.9 code T value to TX, Stage Group should be 99

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## REGIONAL LYMPH NODES

- Internal jugular
  - Jugulodigastric (II)
  - Jugulo-omohyoid (IV)
  - Upper deep cervical (II)
  - Lower deep cervical (IV)
- Anterior cervical
  - Prelaryngeal (VI)



- Pretracheal (VI)
- Paratracheal (VI)
- Lateral tracheal (VI)
- Submandibular (IB)
  - Submaxillary
- Submental (IA)
- Cervical, NOS

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## DISTANT METASTATIC SITES

- Bone
- Lung – most common
- Liver

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## LARYNGEAL CANCER HISTOLOGIES

- Squamous Cell Carcinomas
  - Most common
- Adenocarcinomas
- Rare cancers
  - Sarcomas
  - Lymphoma
  - Plasmacytoma

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QUESTIONS?

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# EPI MOMENT



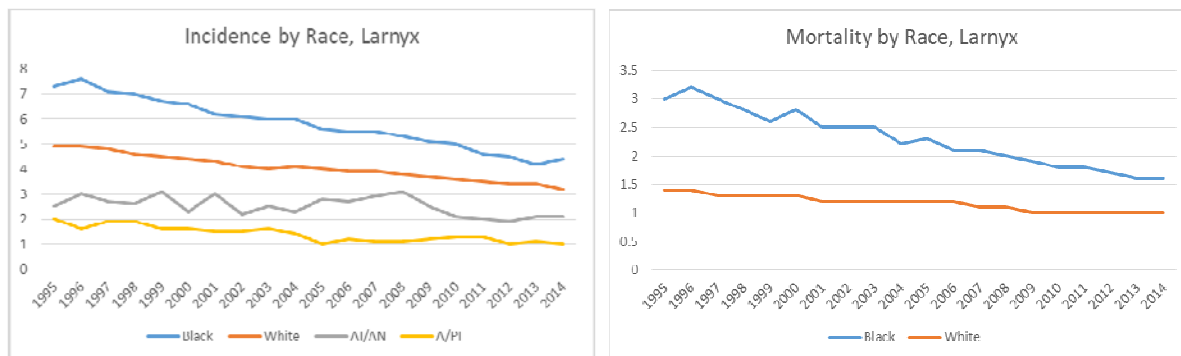
"official" theme songs...The Voice

## COLLECTING CANCER DATA: LARYNX

EPI MOMENT: RECINDA SHERMAN

NOVEMBER 2, 2017

## BURDEN OF LARYNX CANCER

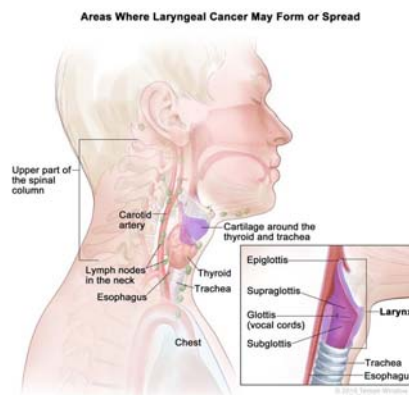


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## EPIDEMIOLOGY OF LARYNX CANCER

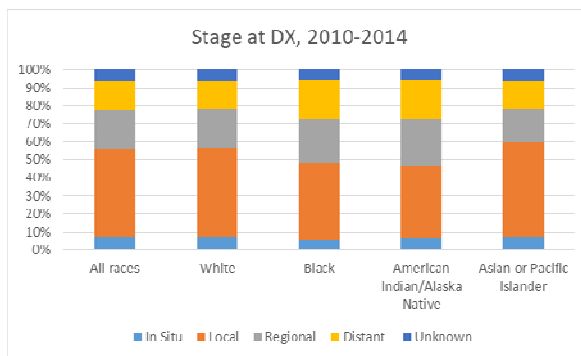
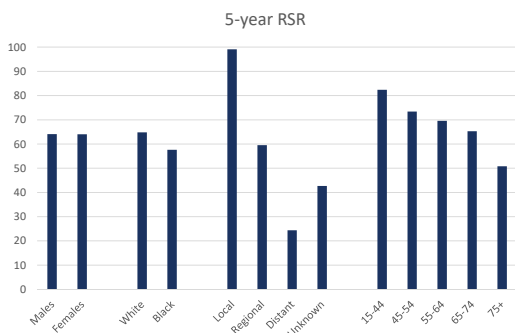
- SEER Site Recode: Respiratory Cancers
  - Analyzed in Head & Neck Group (oral + larynx, tobacco-associated, or alone stand-alone)
- Rare, 3.2 per 100,000 (mortality 1 per 100,000)
- 5-year survival 61%
- Incidence 6x higher in men (6.5 per 100,000)
  - Higher in blacks (9.5 per 100,000)
- Three anatomic subsites (differ in etiology, tx, and survival)
  - Glottic & supraglottic (majority of tumors)
  - Subglottic
- Predominately squamous
- Etiology unclear
  - Risk factors—tobacco, alcohol
  - Risk factors—poor nutrition, workplace exposures
  - HPV is rarely a factor



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## LARYNX CANCER PROGNOSIS

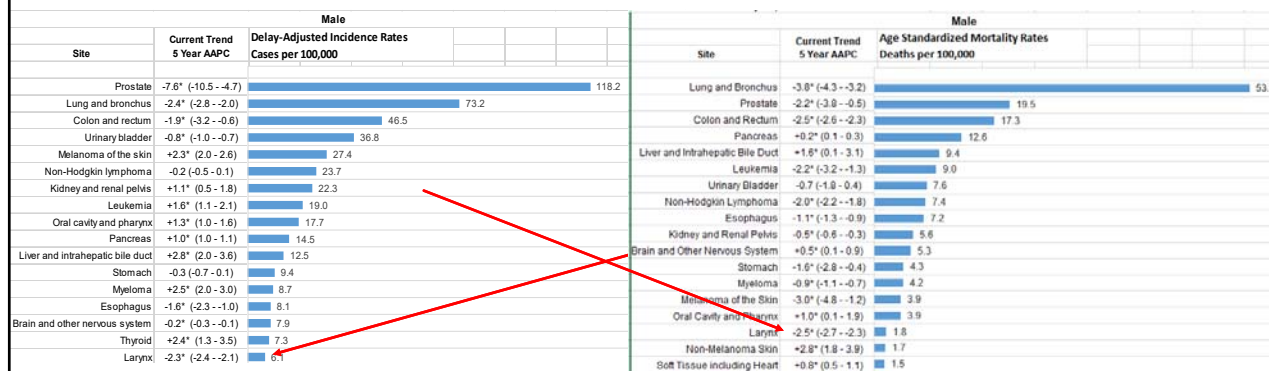


Survivorship concerns: dysphonia can significantly impact quality of life

Symptoms: hoarseness/voice changes, dysphonia, dyspnea, and swallowing dysfunction



## RECENT TRENDS, 2011-2015





## QUESTIONS?

QUIZ 1



## SUMMARY STAGE 2000



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## SUMMARY STAGE

- Listed with Respiratory tract sites
  - <https://seer.cancer.gov/tools/ssm/respir.pdf>
- Larynx chapters
  - Glottis (C32.0)
    - Intrinsic larynx, laryngeal commissure, true vocal cord, vocal cord, NOS
  - Supraglottis (C32.1)
    - Extrinsic larynx, laryngeal aspect of aryepiglottic fold, ventricular band, false vocal cord
  - Subglottis (C32.2)
  - Overlapping lesion or NOS (C32.3, C32.8, C32.9)

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## SUMMARY STAGE 2018

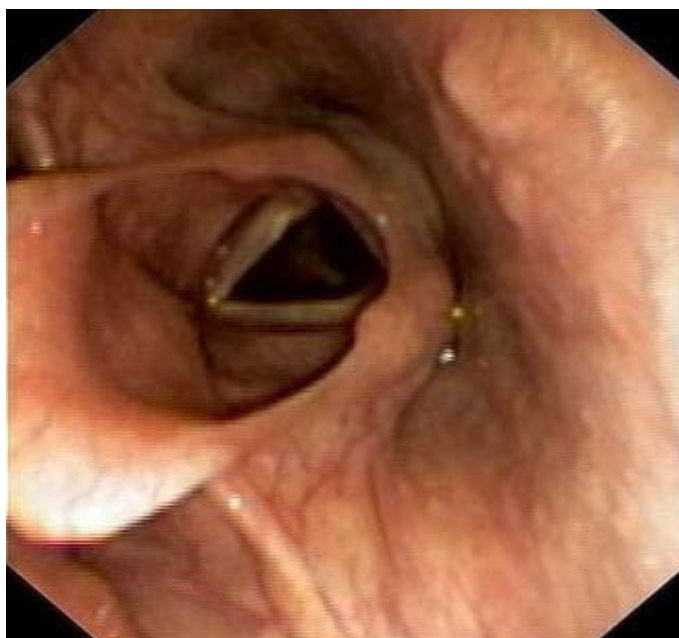
- Grouped with head and neck sites (not with respiratory)
- Regional lymph nodes will match head and neck sites

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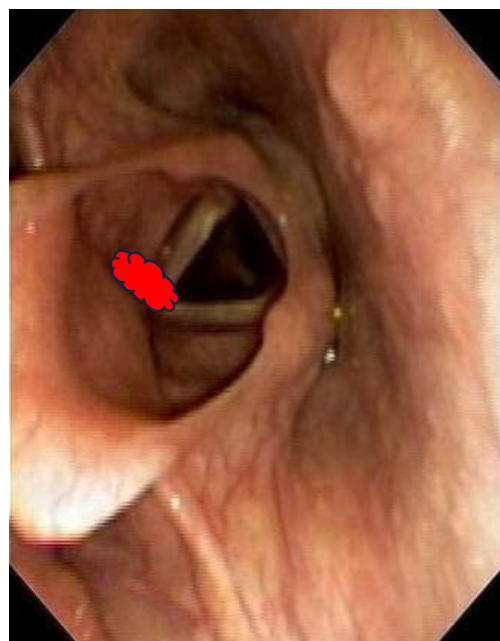
## LOCALIZED/REGIONAL

- Regional by direct extension
  - Extension to:
    - Base of tongue
    - Hypopharynx, NOS
    - Postcricoid area
    - Pre-epiglottic tissues
    - Pyriform sinus (pyriform fossa)
    - Vallecula



## POP QUIZ 1

- A patient is found to have a squamous cell carcinoma originating in the left true vocal cord with extension to the right vocal cord, anterior commissure, and supraglottis.



Summary Stage 2000	
Summary Stage 2018	

## AJCC STAGING

7<sup>TH</sup> EDITION CHAPTER 5 PAGE 57

8<sup>TH</sup> EDITION CHAPTER 13 PAGE 149

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## AJCC CANCER STAGE: LARYNX

- ICD-O-3 Topography Codes
  - C10.1 Anterior (lingual) surface of epiglottis
  - C32.0 Glottis
  - C32.1 Supraglottis (laryngeal surface)
  - C32.2 Subglottis
  - C32.8 Overlapping lesion of larynx
  - C32.9 Larynx NOS
- ICD-O-3 Histology Code Ranges
  - 8000-8576, 8940-8950, 8980-8981



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## RULES FOR CLASSIFICATION

- Clinical staging
  - Evidence prior to treatment
  - Nasolaryngoscopy
  - Laryngeal tumor biopsy
  - Radiologic nodal staging to supplement clinical exam
  - Microlaryngoscopy

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## RULES FOR CLASSIFICATION

- Pathologic staging
  - Evidence obtained in clinical staging and in histologic study of surgically resected specimen
  - Lymphadenectomy description describes size, number, and position of involved nodes and presence or absence of extracapsular spread (ECS)

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## CLINICALLY OCCULT TUMORS

- A thorough exam of the larynx has been conducted and no primary tumor has been identified.
- Case was diagnosed based on metastasis.
- Physician has indicated larynx is likely the primary site.
- T0 removed from larynx chapter in 8<sup>th</sup> edition (moved to chapter 6)

*Example: Patient is found to have a cervical lymph node positive for metastasis. Physician feels this is most like from a laryngeal primary.*

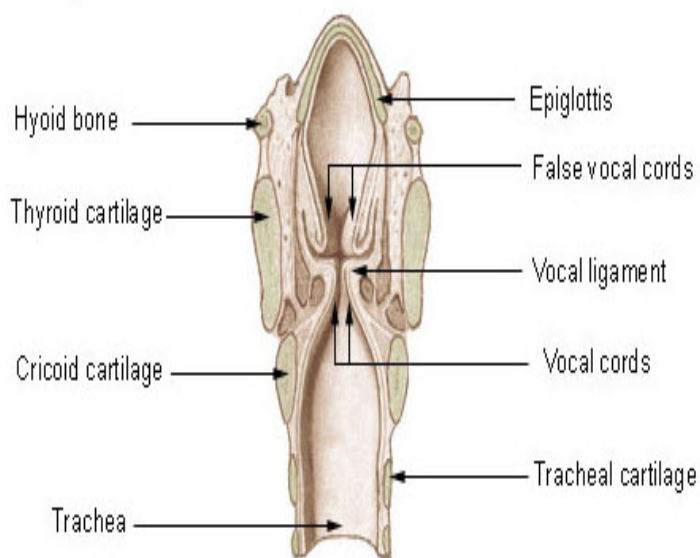
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## T VALUES

- Supraglottis, glottis, and subglottis have different T definitions.
- C32.8 and C32.9 should be assigned TX.

### Larynx



## POP QUIZ 2

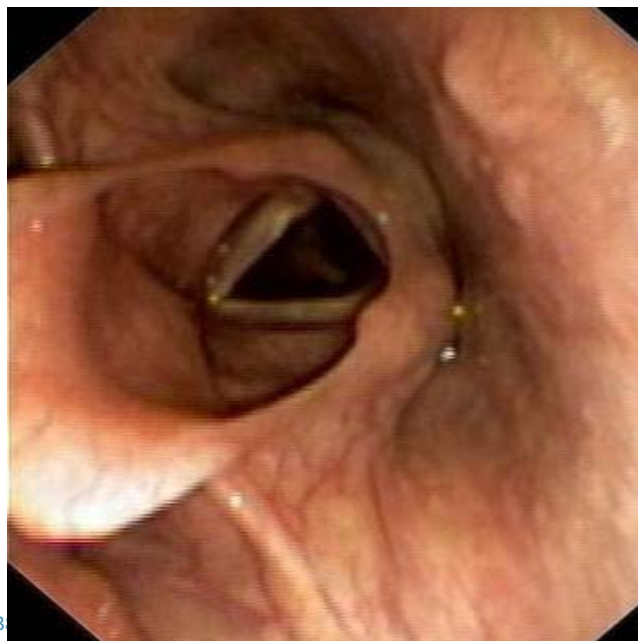
- A patient had a core biopsy of a 2cm movable cervical lymph node that was positive for squamous cell carcinoma.
- A laryngoscopy showed a tumor involving the right true vocal cord and right commissure.
- The physician cannot determine if the tumor started in the vocal cord or commissure.
- A staging work-up did not reveal any additional metastasis.

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Data Item	7 <sup>th</sup> ed	8 <sup>th</sup> ed
Clinical T		
Clinical N		
Clinical M		
Stage		
Path T		
Path N		
Path M		
Stage		

## SUBSITES

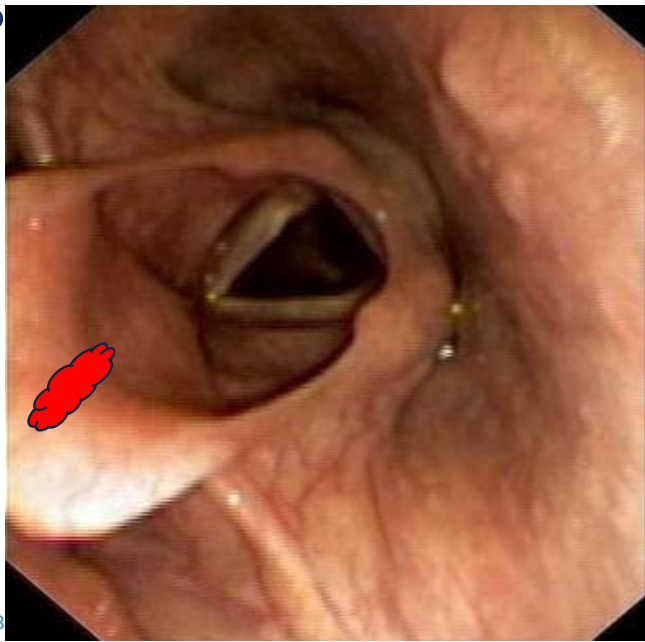
- Supraglottis
  - Suprahyoid epiglottis
  - Infrahyoid epiglottis
  - Aryepiglottic folds
  - Ventricular bands
- Glottis
  - True vocal cords (including commissures)
- Subglottis



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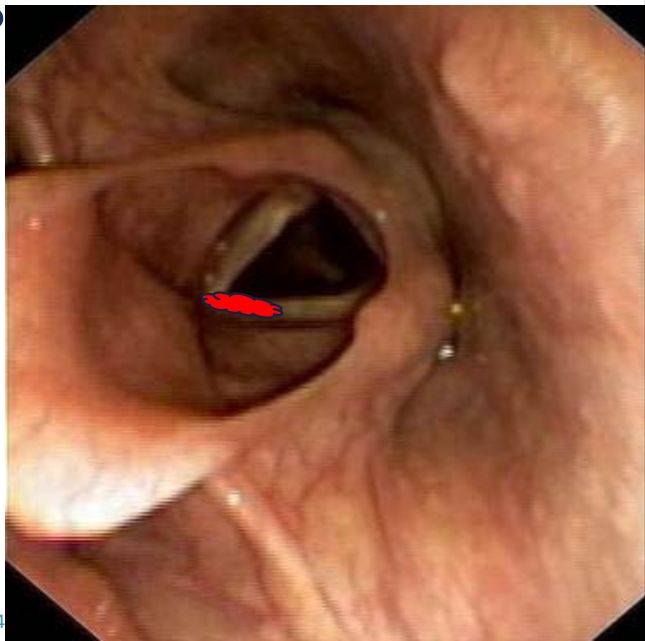
## 1-WHAT IS THE cT VALUE?

- Tumor arising on the lingual aspect of the suprahyoid epiglottis and extends along the mucosa to the Infrahyoid epiglottis. No further extension noted.



## 2-WHAT IS THE cT VALUE?

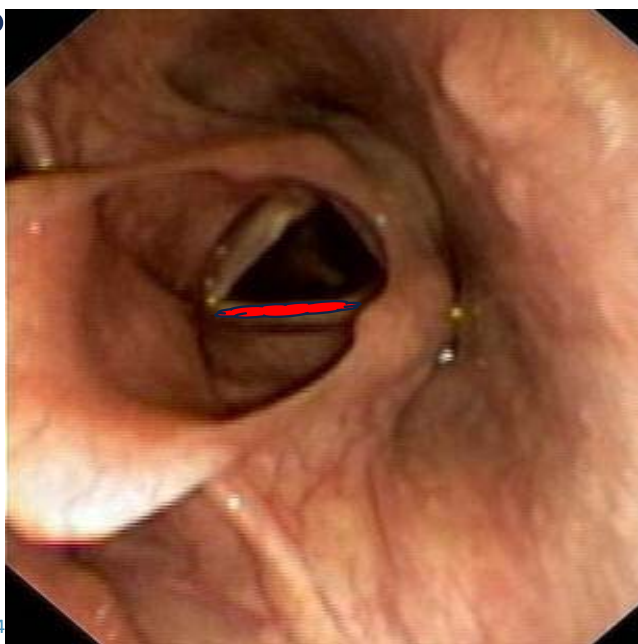
- Tumor arising on left true vocal and extends to the anterior commissure. The tumor involves the anterior portion of the right true vocal cord. No further extension noted.



### 3-WHAT IS THE cT VALUE?

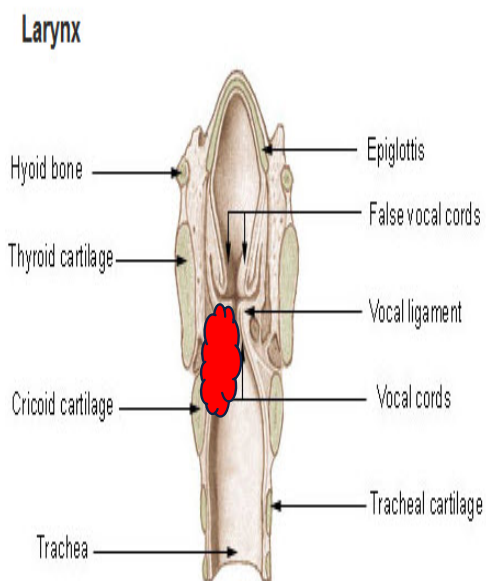
- Tumor confined to the left true vocal cord. The tumor is causing partial paralysis of the left cord. No further extension identified.

What if the vocal cord had been described as fixed or complete paralysis?



### 4-WHAT IS THE cT VALUE?

- A subglottic tumor extending to the true vocal cords and into, but not through, the cricoid cartilage. No further extension identified.



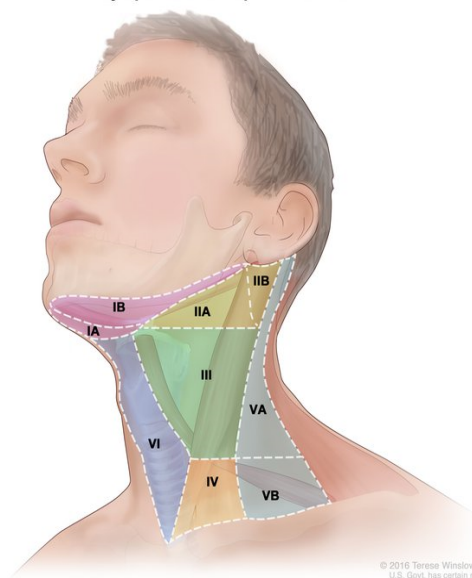
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## REGIONAL LYMPH NODES

- Supraglottis
  - Upper and mid jugular
- Glottic
  - Prelaryngeal
- Subglottic
  - Prelaryngeal

Lymph Node Groups of the Neck



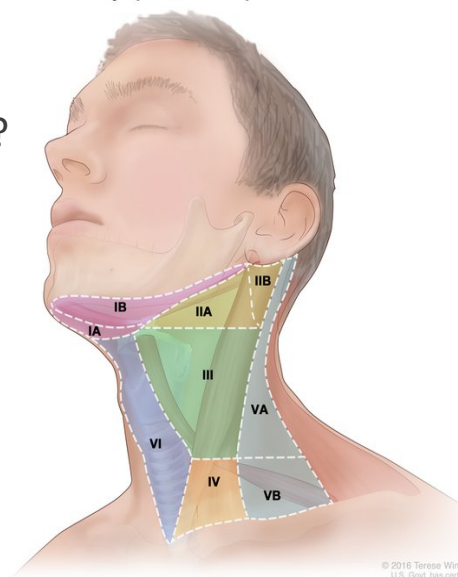
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## REGIONAL LYMPH NODES

- 7<sup>th</sup> & 8<sup>th</sup> Edition
  - How many lymph node are involved?
  - Ipsilateral vs bilateral?
  - Size of metastatic lymph node?
- 8<sup>th</sup> Edition
  - Extranodal extension (ENE)

Lymph Node Groups of the Neck



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## EXTRANODAL EXTENSION (ENE)

- Clinical
  - Unquestionable, unambiguous ENE
- Pathologic
  - Pathologically confirmed extension to surrounding tissues or structures



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## POP QUIZ 3 (CLIN)

- A patient had a core biopsy of a 2cm movable cervical lymph node that was positive for squamous cell carcinoma.
- A laryngoscopy showed a tumor arising in the Infrahyoid epiglottis with extension to the left vocal cord.
- A staging work-up did not reveal any additional metastasis.

What is the clinical stage?

Data Item	7 <sup>th</sup> ed	8 <sup>th</sup> ed
Primary Site		
Clinical T		
Clinical N		
Clinical M		
Stage		
Path T		
Path N		
Path M		
Stage		

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### POP QUIZ 3(PATH)

- The patient went on to have an endoscopic resection of the primary tumor and a lymph node dissection.
  - Primary tumor extends arises in infrahyoid areas and extends into the left vocal cord. The extend into, but not beyond postcricoid area. No additional extension is noted. Margins are negative.
  - 16 lymph nodes marked as level I and level II cervical lymph nodes were identified. 3 of the lymph nodes were positive for metastasis. The largest measured 1.5cm. No ENE identified.

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Data Item	7 <sup>th</sup> ed	8 <sup>th</sup> ed
Primary Site		
Clinical T		
Clinical N		
Clinical M		
Stage		
Path T		
Path N		
Path M		
Stage		

### POP QUIZ (4)

- A patient presents to your facility for surgery of a primary supraglottic tumor. The ENT has assigned a clinical stage of T3 N1 M0 Stage 3. The T3 is based on imaging showing invasion into the thyroid cartilage.
- Radical laryngectomy and bilateral neck dissection: 2 cm poorly differentiated squamous cell carcinoma of epiglottis extends into and through thyroid cartilage with microinvasion of the thyroid; 36 lymph nodes removed; 1 malignant ipsilateral cervical node. No ENE.

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Data Item	7 <sup>th</sup> ed	8 <sup>th</sup> ed
Primary Site		
Clinical T		
Clinical N		
Clinical M		
Stage		
Path T		
Path N		
Path M		
Stage		



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## DISTANT METASTASIS

- Most common sites of distant mets is lung
- Other sites include bone and liver
- Mediastinal nodes (other than level VII)

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**SSF'S**



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## 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
- SSDI-Lymph Nodes Size of Metastasis

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## SSF3 – SSF6: LYMPH NODE LEVELS FOR HEAD AND NECK

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



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## 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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## SSF9: EXTRACAPSULAR EXTENSION PATHOLOGICALLY, LYMPH NODES

- Extracapsular extension
  - Tumor within lymph nodes extends beyond the wall of the node into the perinodal fat
- 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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## SSDI'S

- Extranodal Extension Head and Neck Clinical
- Extranodal Extension Head and Neck Pathological

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## QUESTIONS?

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## TREATMENT

SURGERY, RADIATION, CHEMOTHERAPY

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## TREATMENT BY CLINICAL STAGE FOR GLOTTIS LARYNX

- Carcinoma in situ
- T1-T2 or Select T3
- T3 requiring total laryngectomy (N0-1)
- T3 requiring total laryngectomy (N2-3)
- T4a
- T4b, any N or unresectable nodal disease or Unfit for surgery
- Metastatic (M1) disease at presentation

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## TREATMENT BY CLINICAL STAGE FOR SUPRAGLOTTIC LARYNX

- T1-2, N0, Selected T3
- T3, N0
- T4a, N0
- Node-positive disease
- T4b, any N or unresectable nodal disease or Unfit for surgery
- Metastatic (M1) disease at presentation

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## OVERVIEW OF GLOTTIS AND SUPRAGLOTTIC TREATMENT

- In situ, early stage cancers
  - Surgery or radiation therapy
- Adjuvant treatment
  - Presence or absence of adverse features
- Resectable, advance stage cancers
  - If conservation is desired concurrent systemic therapy/RT
  - Total laryngectomy with thyroidectomy and neck dissection followed by adjuvant treatment

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## SURGERY

- Vertical Laryngectomy (31)
  - True and ipsilateral false vocal cord, intervening ventricle or ipsilateral thyroid, may remove arytenoids
- Anterior Commissure Laryngectomy (32)
  - The anterior commissure is resected with the overlying thyroid cartilage.
- Supraglottic Laryngectomy (33)
  - Removal of epiglottis, false vocal cords, aryepiglottic folds, arytenoid cartilages, ventricle, upper one third of thyroid cartilage and/or thyroid membrane

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## SURGERY

- Total Laryngectomy ONLY (41)
  - Removal of the entire larynx
  - No longer a connection between the trachea and the mouth and nose
- Radical Laryngectomy ONLY (42)
  - Removal of the entire larynx and adjacent sites

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## RADIATION

- IMRT
- Proton Beam
- Palliative Radiation

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## SYSTEMIC THERAPY

- Cisplatin
- Docetaxel
- Cetuximab
- Carboplatin
- 5-FU/hydroxyurea
- Paclitaxel
- Infusional 5-FU

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QUESTIONS?

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## COMING UP....

- Collecting Cancer Data: Uterus
  - 12/07/2017
- Collecting Cancer Data: GIST and Soft Tissue Sarcomas
  - 01/11/2018

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## Fabulous Prizes Winners



## CE CERTIFICATE QUIZ/SURVEY

- Phrase
- Link

<http://www.surveygizmo.com/s3/3952987/Larynx-2017>

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A word cloud centered around the English phrase "Thank You". The words are in various colors (blue, black, white) and orientations. Other visible words include: Diolch, Kiitos, Sheun, umesc, Kasih, Mamnoon, Torah, Shnorhakalutiu, Gamsahapnida, Takk, Shokriya, Ngiyabonga, Cam, Spaas, Mul, AÇi, Xie, Dank, Krap, Tack, Grazi, raibh, Gracias, Kautree, Bhagadaryia, Terima, Enkosi, danke, dan, Kun, Subriya, ederim, Hain, Dhan, daa, Kruthagnathalu, Arigatou, Dhonnobaad, Asante, Palenmiherr, or al, Dhanyavad, Khopjai, and many others.

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