

# Stroboscopy Rounds

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# Stroboscopy Rounds

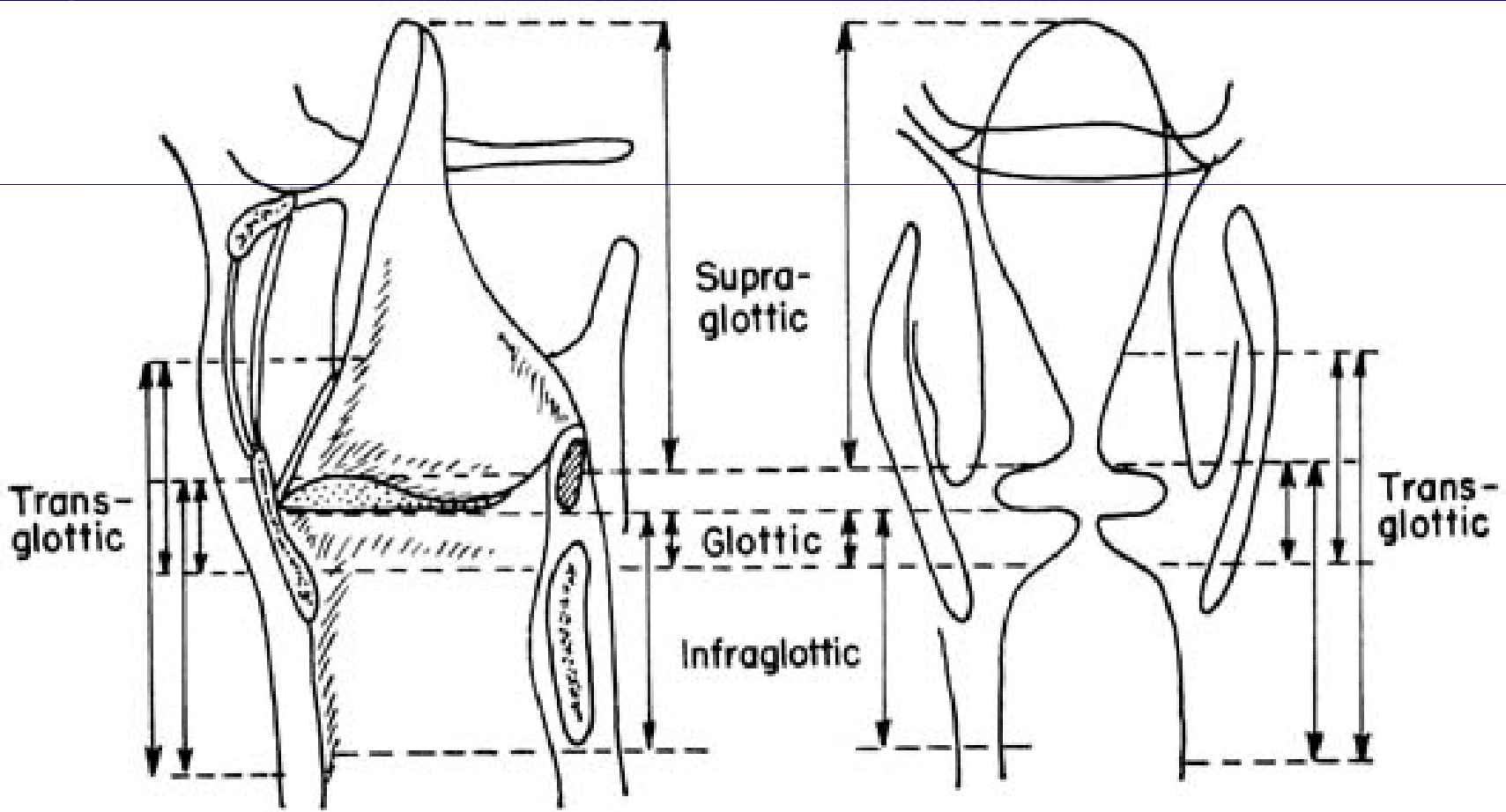
- Compartmentalization of the larynx
  - Sites and subsites
    - Supraglottis
    - Glottis
    - subglottis
  - Spaces
    - Pre-epiglottic space
    - Para-glottic space

# Stroboscopy Rounds

- Supraglottis subsites
  - Suprahyoid epiglottis
  - Infrahyoid epiglottis
  - Aryepiglottic folds\*
  - Ventricular bands
- Glottis subsites
  - TVC, anterior and posterior commissures
  - 1 cm horizontal plane inferior to lateral aspect of ventricle
- Subglottis
  - Lower boundary of glottis to inferior margin of cricoid cartilage.

# Stroboscopy Rounds

Cummings 99-1

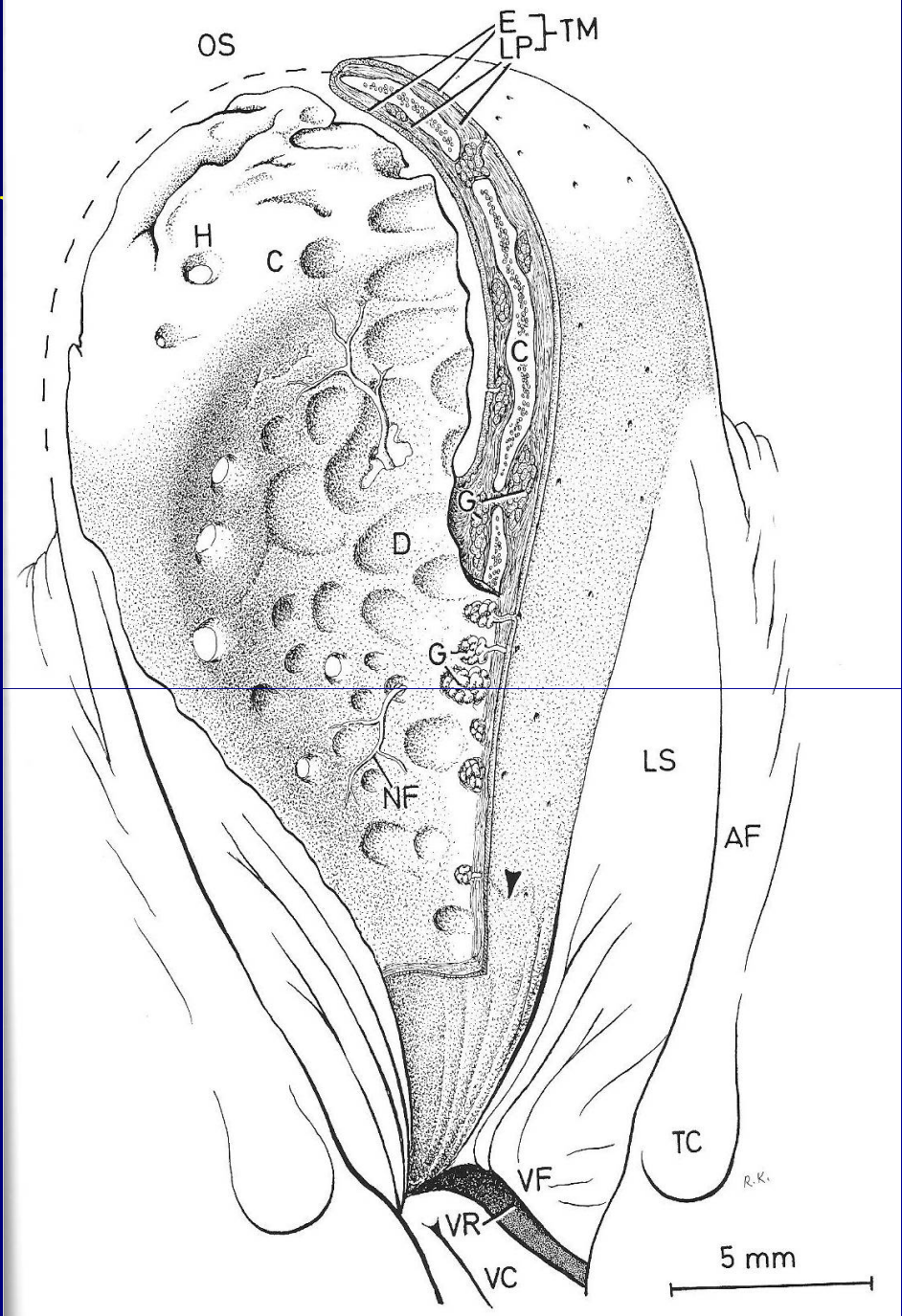


# Stroboscopy Rounds

- Supraglottis Structure:
  - Lingual and endolaryngeal surfaces
  - Suprahyoid and infrahyoid epiglottis
- Injection of dye and radiotracer spreads bilaterally and is limited by inferior false cord.
- Fenestrations due to submucosal glands, high rate of pre-epiglottic space spread, esp in infrahyoid epiglottis.

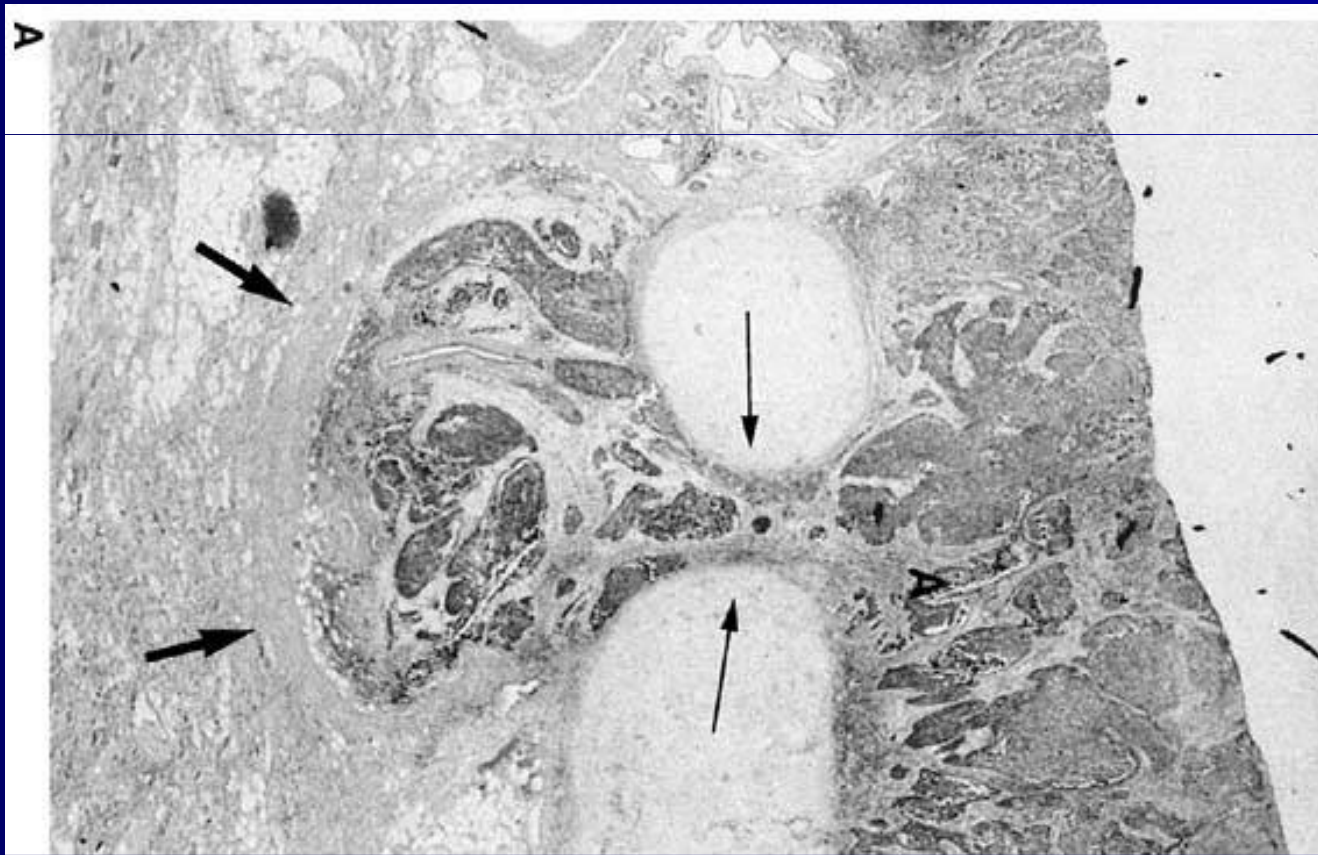
# Stroboscopy Ro

- Krstic, Plate 62
- McMinn, Figure 152



# Stroboscopy Rounds

- Cummings 99-2



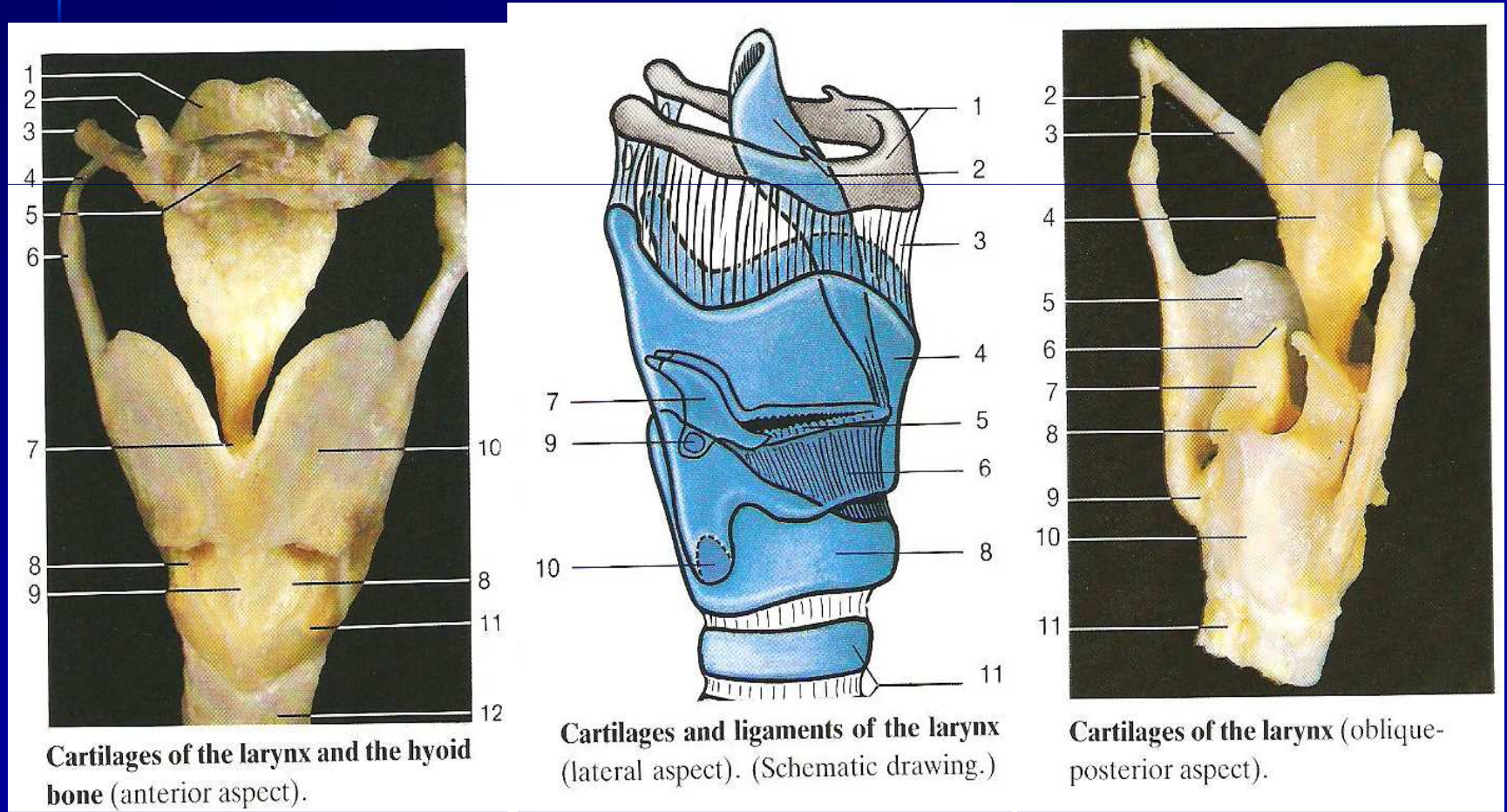
# Stroboscopy Rounds

- Pre-epiglottic space:
  - Hyoid and hyoepiglottic ligament (superior)
  - Thyrohyoid membrane (anterior)
  - Epiglottic (posterior).



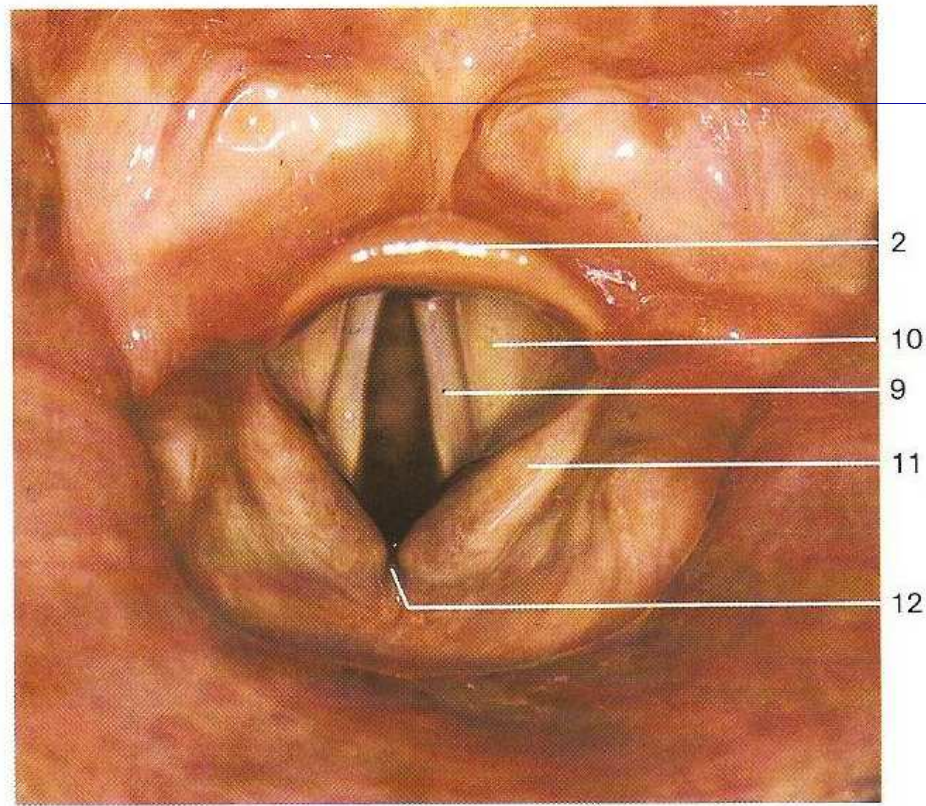
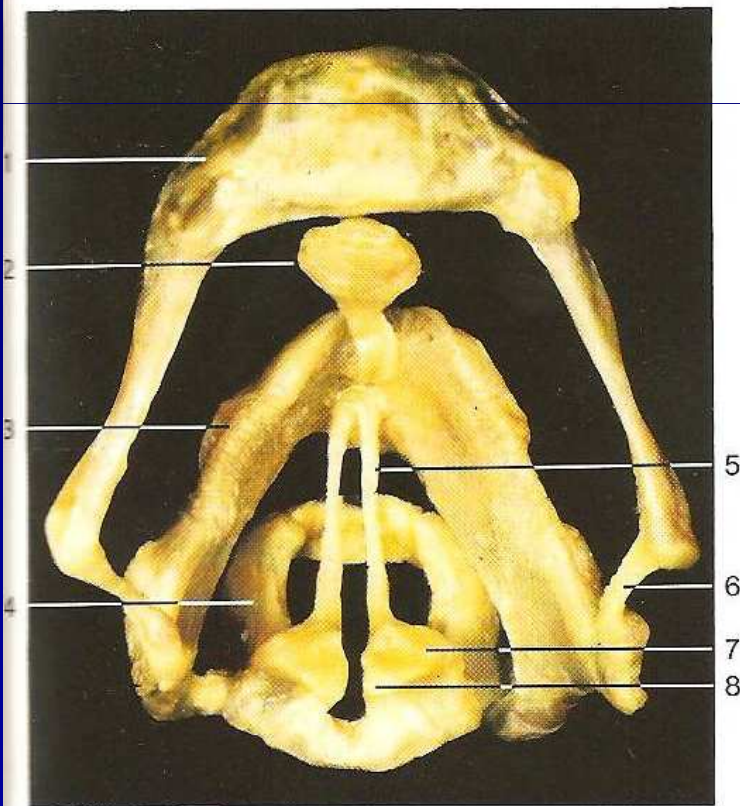
# Stroboscopy Rounds

- Rohen Plate 154



# Stroboscopy Rounds

- Rohen Plate 157

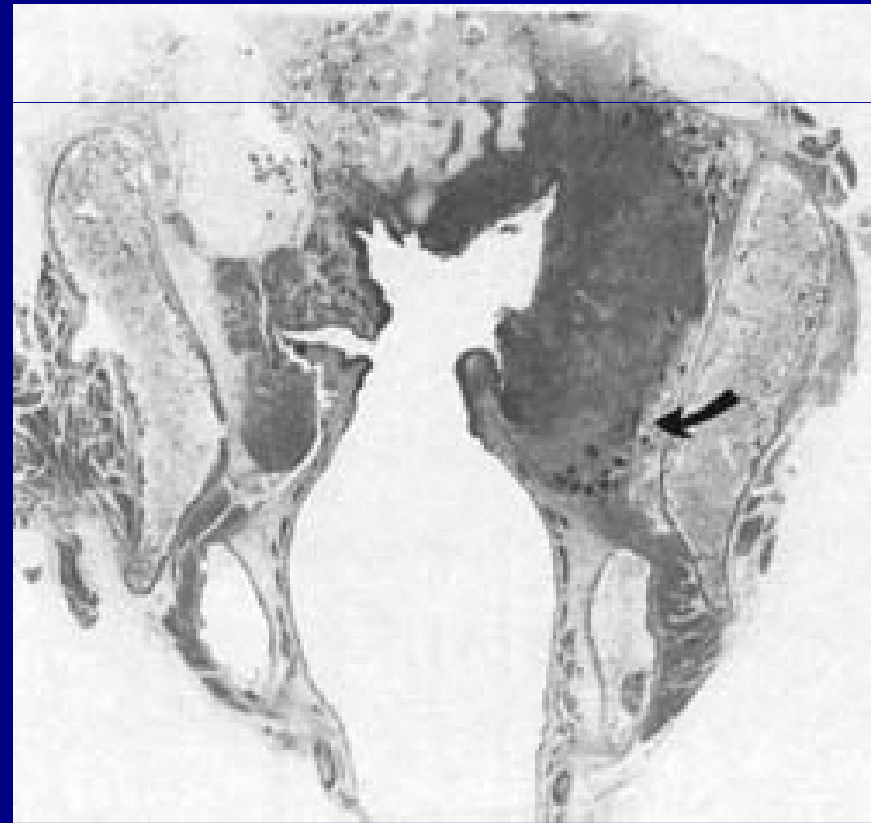
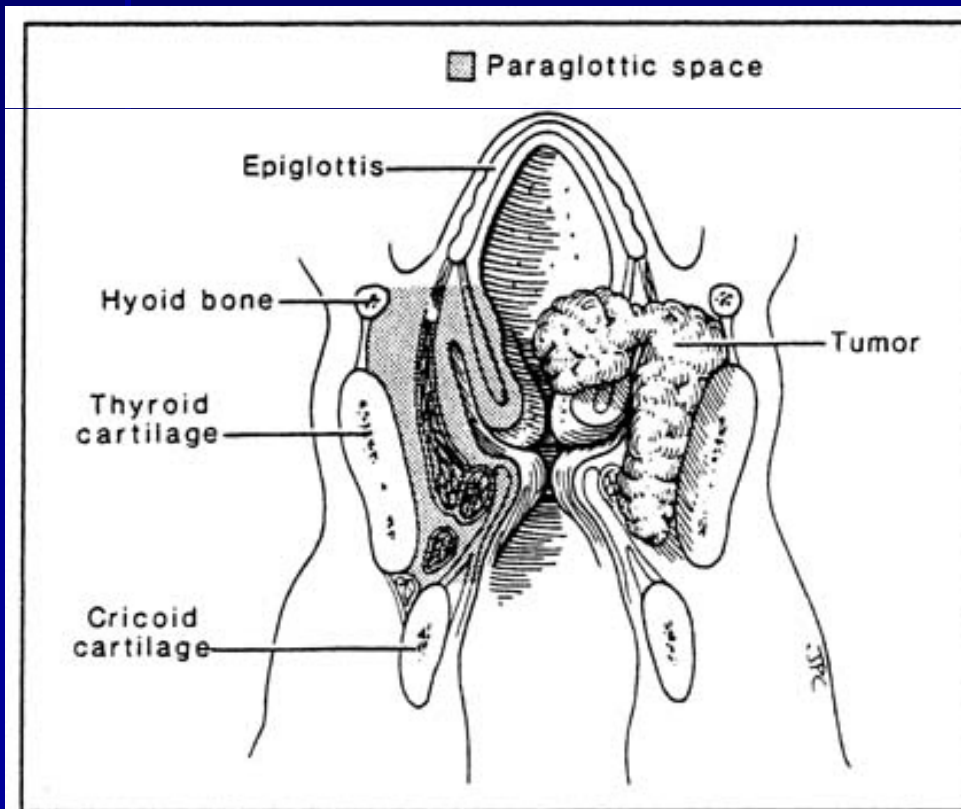


# Stroboscopy Rounds

- Paraglottic space:
  - Conus elasticus (anterior and medial)
  - Thyroid cartilage (lateral)
  - Quadrangular membrane (inferior)

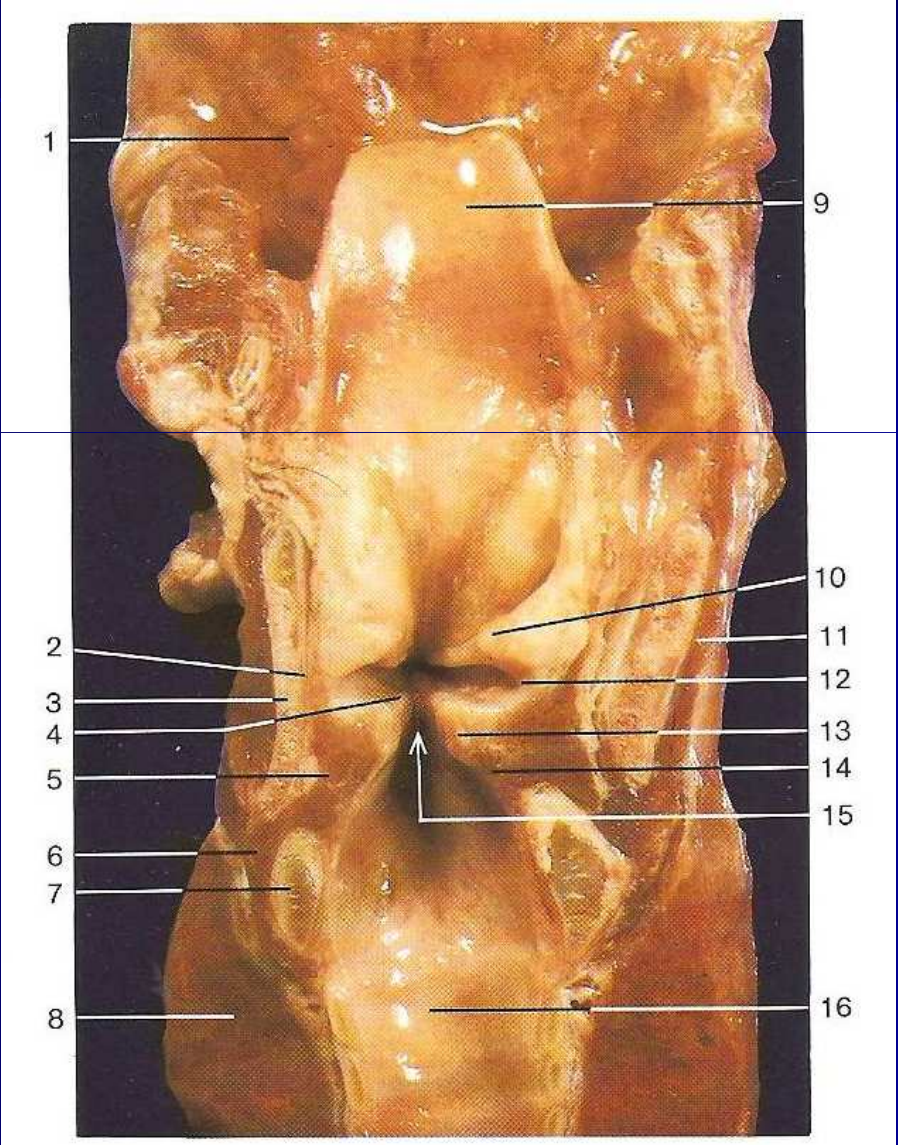
# Stroboscopy Rounds

- Cummings 99-3,4



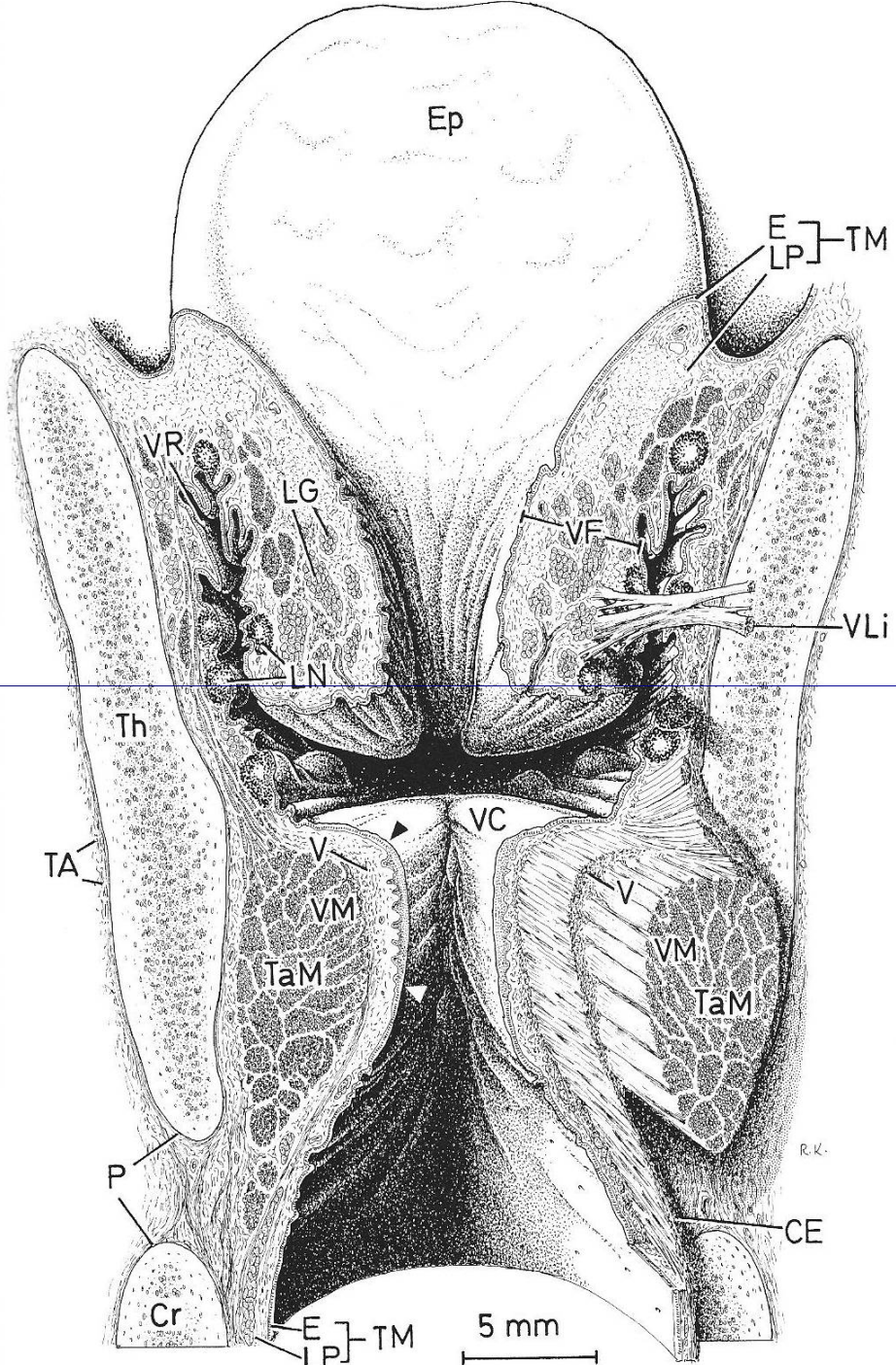
# Stroboscopy Rounds

■ Rohen Plate 157

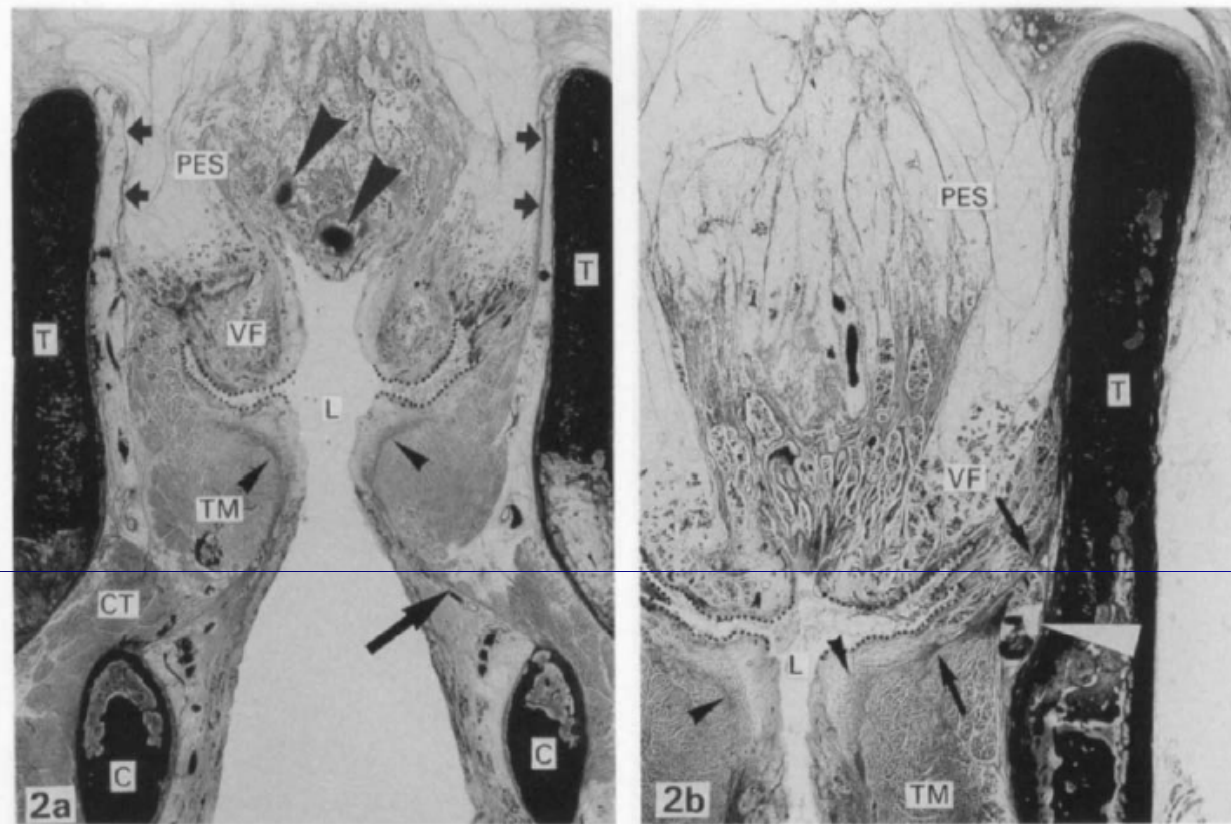


# Strobo

- Krstic, Plate 63
  - CE
  - Epi
  - Cell types



# Structure of the Larynx



**Fig. 2.** Frontal sections of male larynx, 56 yr, 600  $\mu$ m, plane of section cf. Figure 1a. T = thyroid cartilage, C = cricoid cartilage, TM = thyroarytenoid muscle, CT = cricothyroid muscle, VF = vestibular fold with groups of glands, L = airway lumen, PES = preepiglottic space, small black arrowheads = vocal cords, dotted line = laryngeal ventricle. (a)  $\times$  2.5. The PGS can be recognized as a layer of adipose tissue containing blood vessels (dark), immediately adjacent to the thyroid cartilage. It is separated from the PES by a distinct collagenous fiber septum (small arrows), which is attached to the perichondrium of the upper rim of the thyroid cartilage. Inferomedially, the PGS extends between the thyroarytenoid muscle and the cricothyroid muscle and is bordered by the conus elasticus (long arrow). Large black arrowheads = projections of anterior extremity of epiglottic cartilage. (b)  $\times$  4.0. In the anterior part of the larynx, the PGS (white arrowhead) appears as a small region of adipose tissue with conspicuous blood vessels (dark) between the thyroarytenoid muscle and the thyroid cartilage. Superiorly, the PGS is bordered by a collagenous fiber layer (arrows) fanning out between the superior surface of the thyroarytenoid muscle and the thyroid cartilage.

# Staging Moments

AJCC Cancer Staging Sixth Edition  
Larynx Staging Schema





# Staging Moments Outline

- Site-Specific Information
  - Definitions of T, N, M
  - Stage Groupings
- Provided as a reference to the Staging Moments larynx cases

# Primary Tumor (T)

- TX Primary tumor cannot be assessed
- T0 No evidence of primary tumor
- Tis Carcinoma *in situ*

## *Supraglottis*

- T1 Tumor limited to one subsite of supraglottis with normal vocal cord mobility
- T2 Tumor invades mucosa of more than one adjacent subsite of supraglottis or glottis or region outside the supraglottis (e.g., mucosa of base of tongue, vallecula, medial wall of pyriform sinus) without fixation of the larynx

# Primary Tumor (T)

## *Supraglottis*

- T3 Tumor limited to larynx with vocal cord fixation and/or invades any of the following: postcricoid area, pre-epiglottic tissues, paraglottic space, and/or minor thyroid cartilage erosion (e.g., inner cortex)
- T4a Tumor invades through the thyroid cartilage and/ or invades tissues beyond the larynx (e.g., trachea, soft tissues of neck including deep extrinsic muscle of the tongue, strap muscles, thyroid, or esophagus)
- T4b Tumor invades prevertebral space, encases carotid artery, or invades mediastinal structures

# Primary Tumor (T)

## *Glottis*

- T1 Tumor limited to the vocal cord(s) (may involve anterior or posterior commissure) with normal mobility
- T1a Tumor limited to one vocal cord
- T1b Tumor involves both vocal cords
- T2 Tumor extends to supraglottis and/or subglottis, and/or with impaired vocal cord mobility

# Primary Tumor (T)

## *Glottis*

- T3 Tumor limited to the larynx with vocal cord fixation and/or invades paraglottic space, and or minor thyroid cartilage erosion (e.g., inner cortex)
- T4a Tumor invades through the thyroid cartilage and/ or invades tissues beyond the larynx (e.g., trachea, soft tissues of neck including deep extrinsic muscle of the tongue, strap muscles, thyroid, or esophagus)
- T4b Tumor invades prevertebral space, encases carotid artery, or invades mediastinal structures

# Primary Tumor (T)

## *Subglottis*

- T1 Tumor limited to the subglottis
- T2 Tumor extends to vocal cord(s) with normal or impaired mobility
- T3 Tumor limited to larynx with vocal cord fixation
- T4a Tumor invades cricoid or thyroid cartilage and/or invades tissues beyond the larynx (e.g., trachea, soft tissues of neck including deep extrinsic muscles of the tongue, strap muscles, thyroid, or esophagus)
- T4b Tumor invades prevertebral space, encases carotid artery, or invades mediastinal structures

# Regional Lymph Nodes (N)

- NX Regional lymph nodes cannot be assessed
- N0 No regional lymph node metastasis
- N1 Metastasis in a single ipsilateral lymph node, 3 cm or less in greatest dimension
- N2 Metastasis in a single ipsilateral lymph node, more than 3 cm but not more than 6 cm in greatest dimension, or in multiple ipsilateral lymph nodes, none more than 6 cm in greatest dimension, or in bilateral or contralateral lymph nodes, none more than 6 cm in greatest dimension
- N2a Metastasis in a single ipsilateral lymph node, more than 3 cm but not more than 6 cm in greatest dimension

# Regional Lymph Nodes (N)

- N2b Metastasis in multiple ipsilateral lymph nodes, none more than 6 cm in greatest dimension
- N2c Metastasis in bilateral or contralateral lymph nodes, none more than 6 cm in greatest dimension
- N3 Metastasis in a lymph node, more than 6 cm in greatest dimension



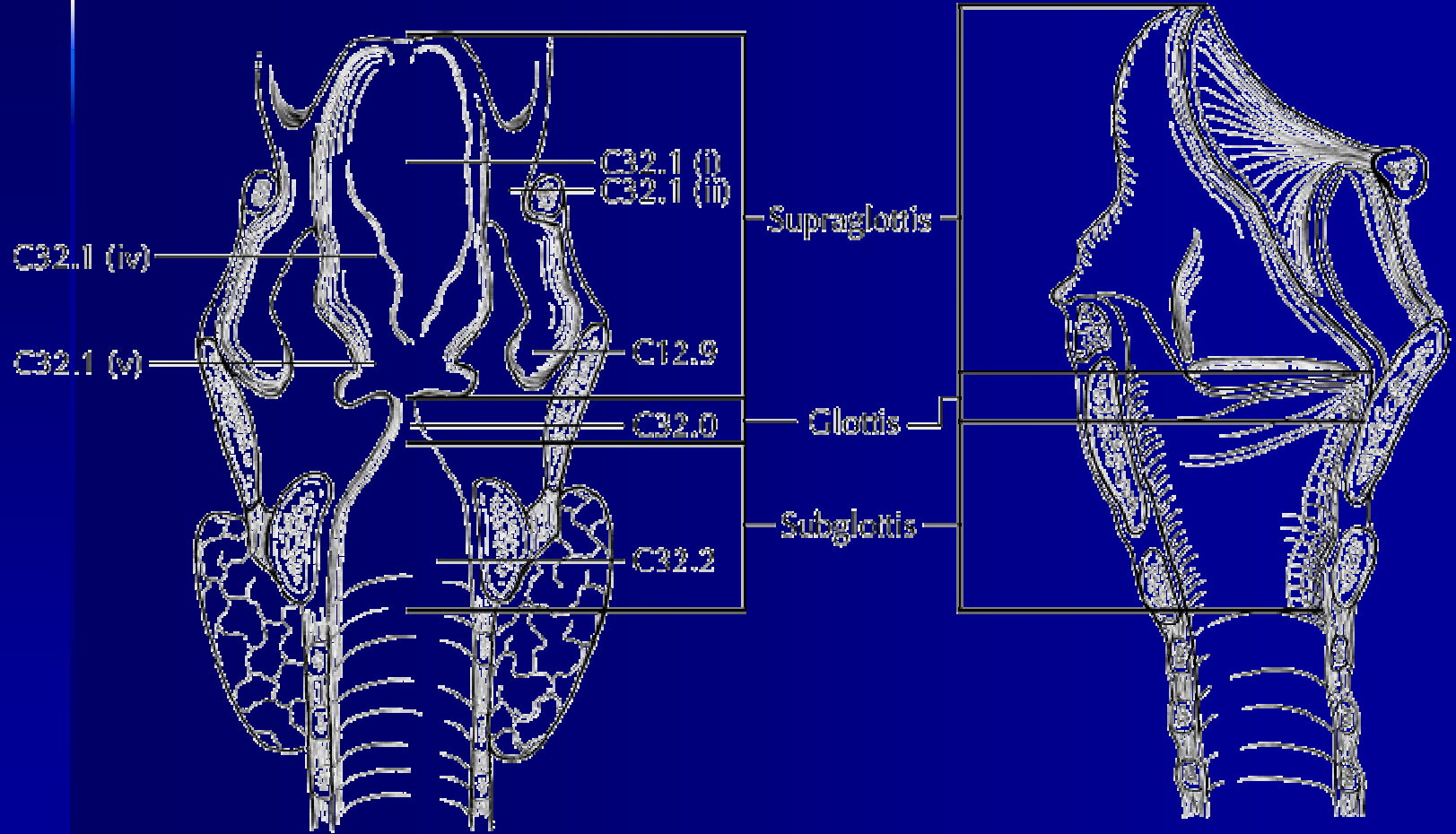
# Distant Metastasis (M)

- MX Distant metastasis cannot be assessed
- M0 No distant metastasis
- M1 Distant metastasis

# Stage Grouping

■ Stage 0	Tis	N0	M0
■ Stage I	T1	N0	M0
■ Stage II	T2	N0	M0
■ Stage III	T3	N0	M0
■	T1	N1	M0
■	T2	N1	M0
■	T3	N1	M0
■ Stage IVA	T4a	N0	M0
■	T4a	N1	M0
■	T1	N2	M0
■	T2	N2	M0
■	T3	N2	M0
■	T4a	N2	M0
■ Stage IVB	T4b	Any N	M0
■	Any T	N3	M0
■ Stage IVC	Any T	Any N	M1

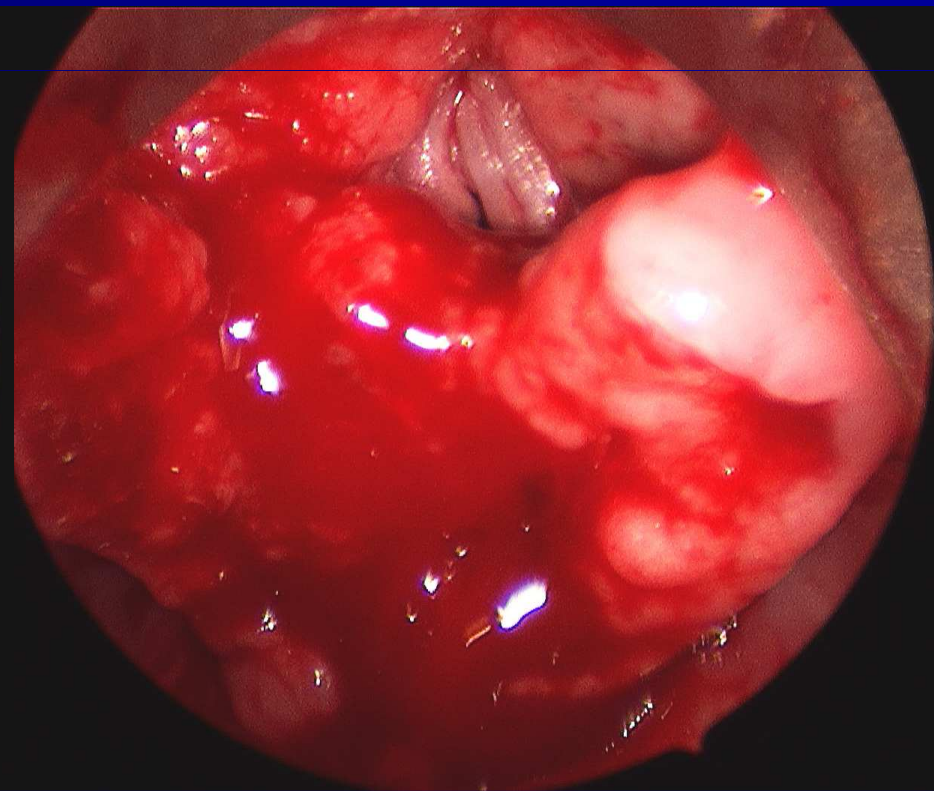
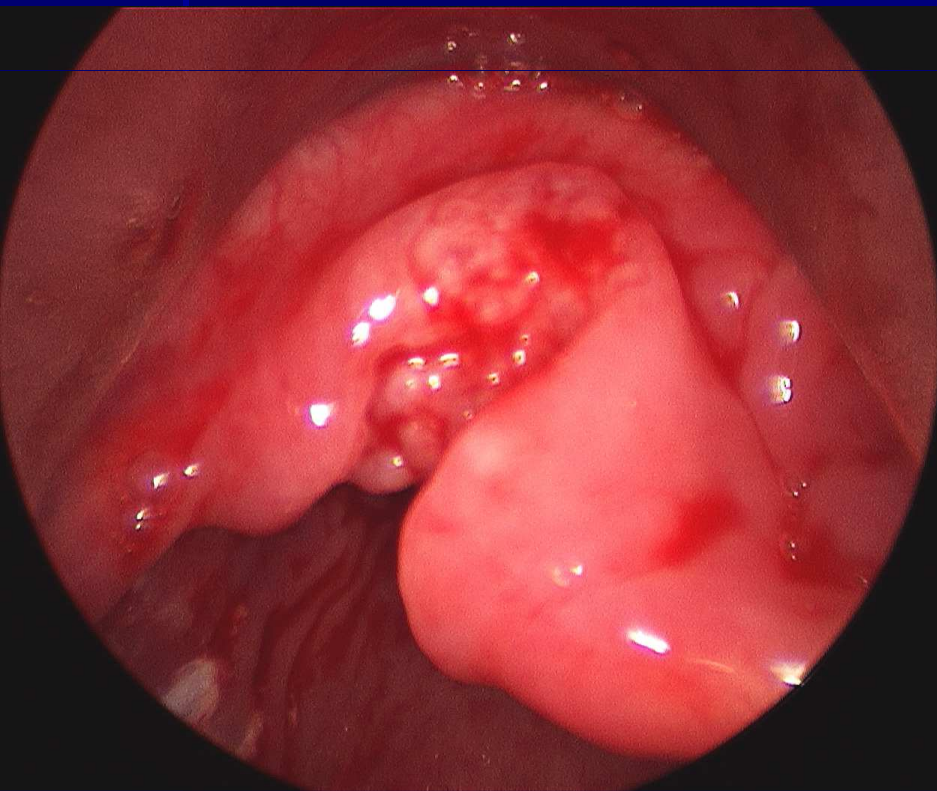
# Schematic Diagram of Larynx



# Staging Moments Summary

- Site-specific information & rules
- Clinical Staging
  - Based on information before treatment
  - Used to select treatment options
- Pathologic Staging
  - Based on clinical data PLUS surgery and pathology report information
  - Used to evaluate end-results (survival)

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