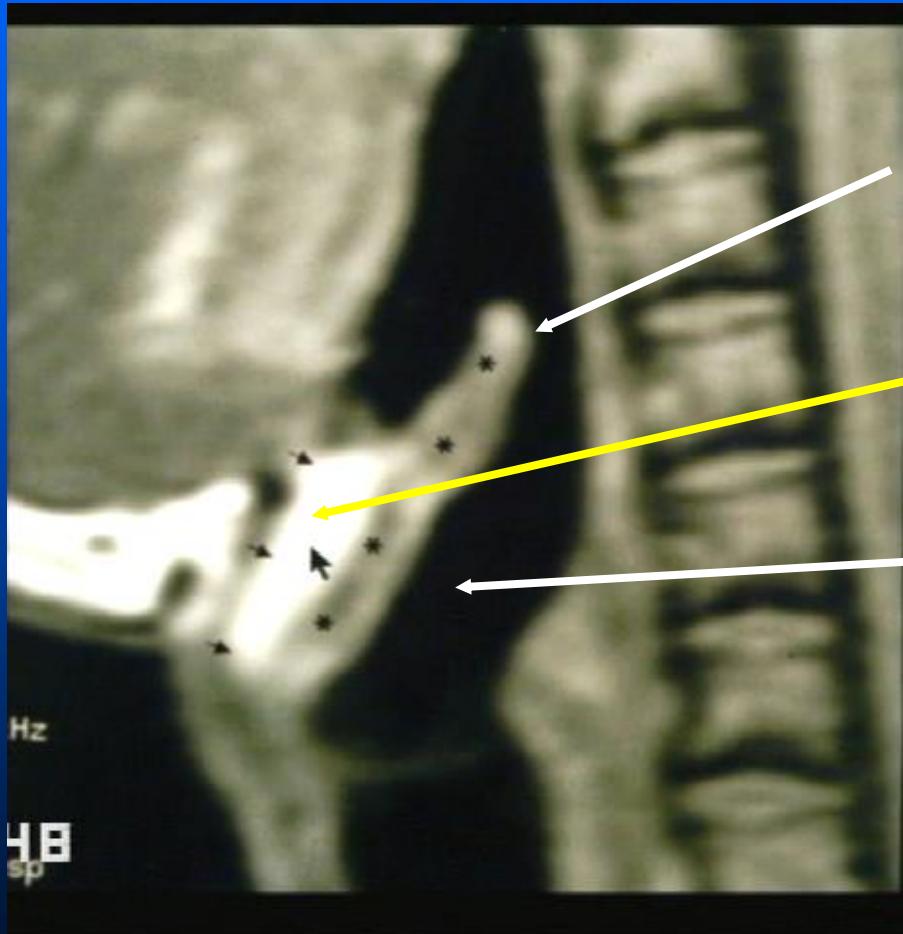


# Anatomy

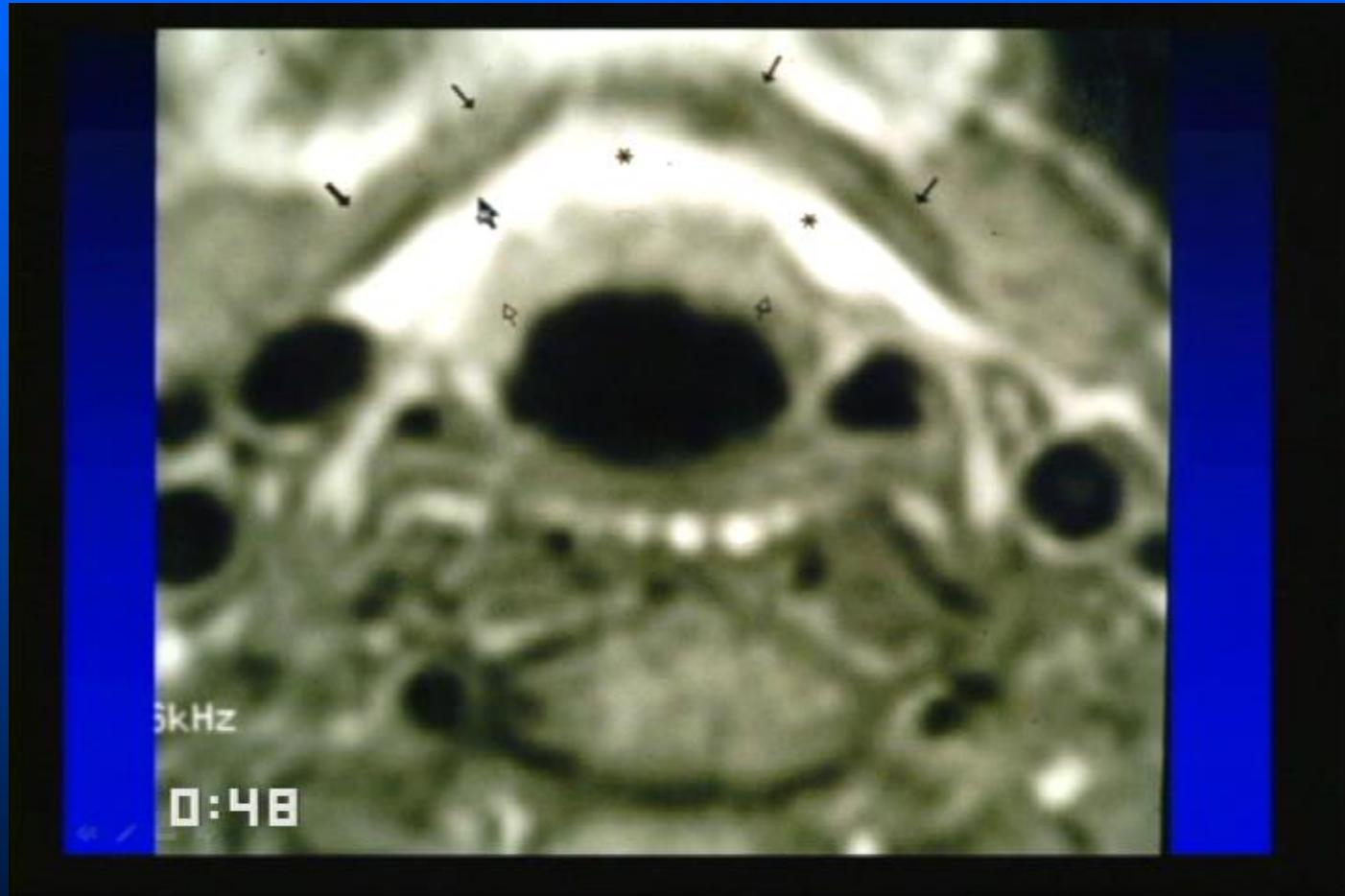


Suprahyoid

Preepiglottic fat

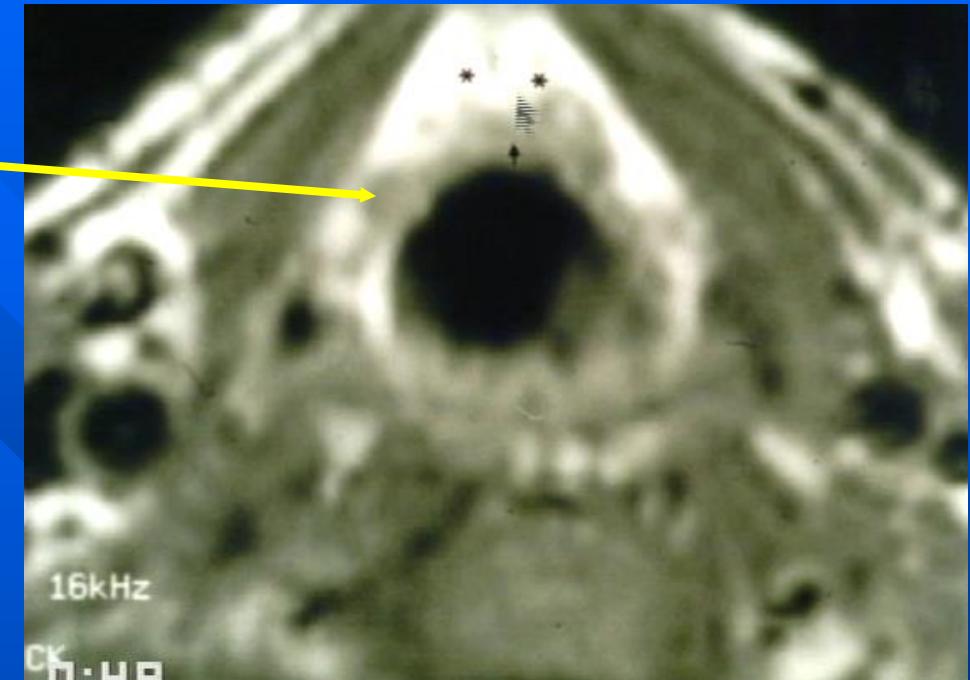
Infrahyoid epiglottis

•= Preepiglottic fat

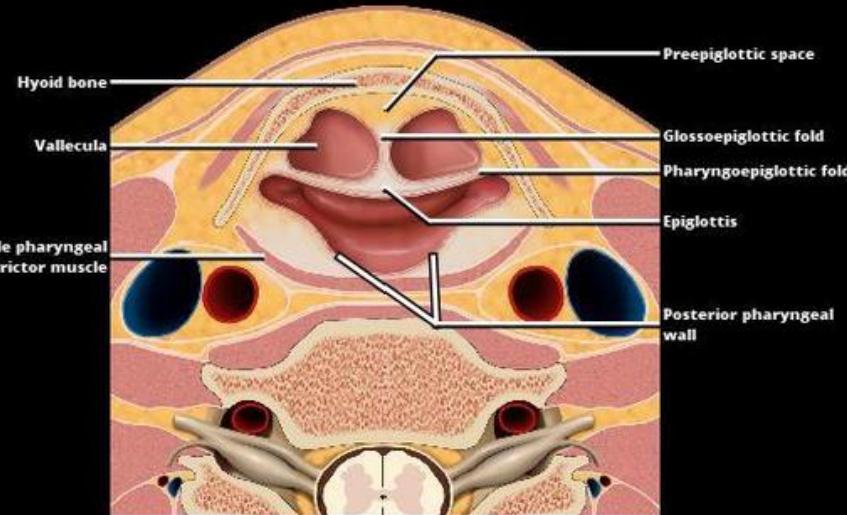


# Thyroglopic Ligament

- Separates pre-epiglottic space from superior paraglottic space

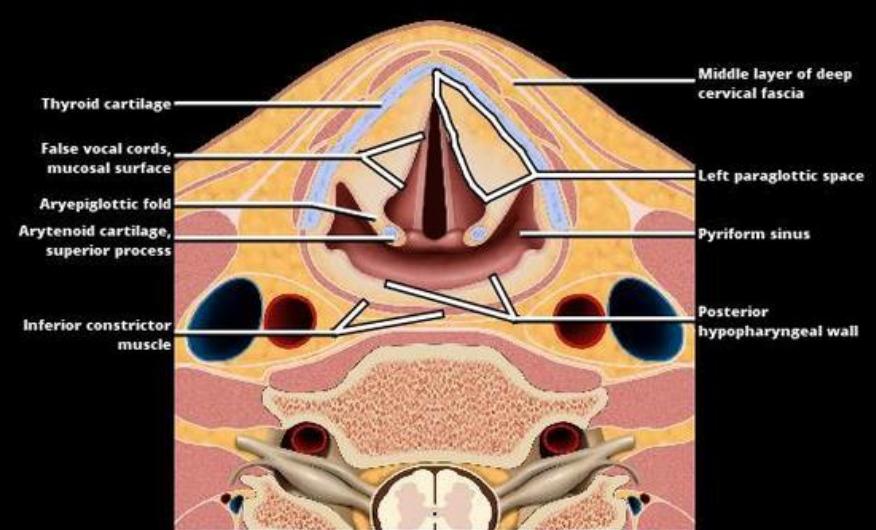


# Anatomy



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The 1st of 6 axial graphics of larynx & hypopharynx from superior to inferior shows the upper aspect of the hypopharynx at the hyoid bone level & high supraglottic structures. The free edge of epiglottis connects to the hyoid bone via the hyoepiglottic ligament, which is covered by glossoepiglottic fold, a ridge of mucous membrane.



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Axial graphic at the low supraglottic level shows false vocal cords (FVC) formed by mucosal surfaces of laryngeal vestibule. The paraglottic space is beneath FVC, a common location for submucosal tumor spread. Laryngeal ventricle SCCa is known to spread early in the submucosal paraglottic space.

# Preepiglottic and Paraglottic space

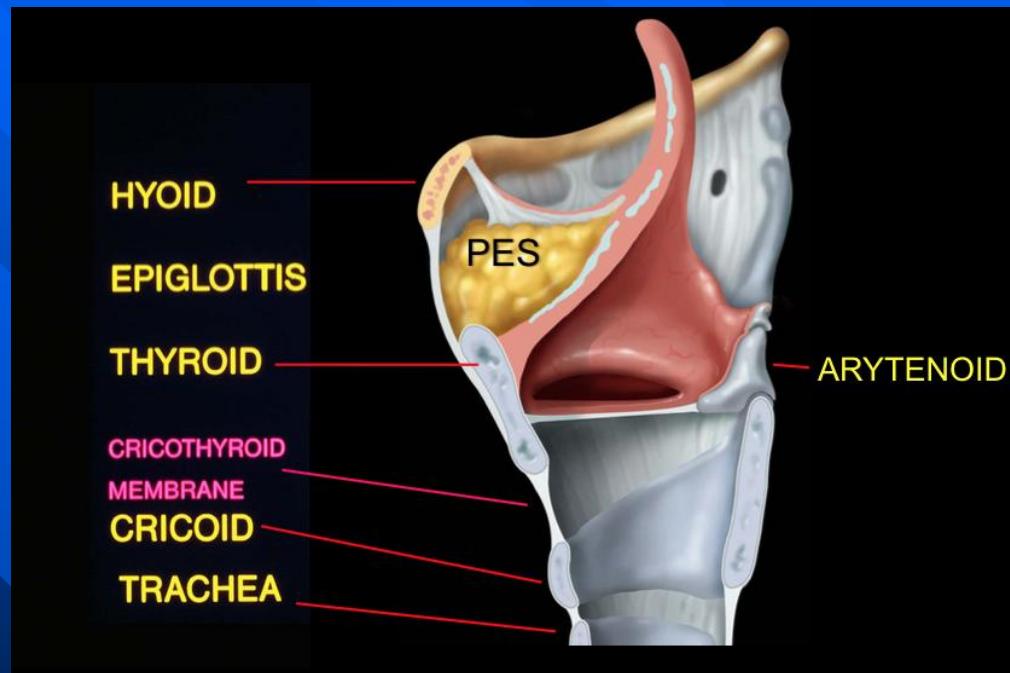
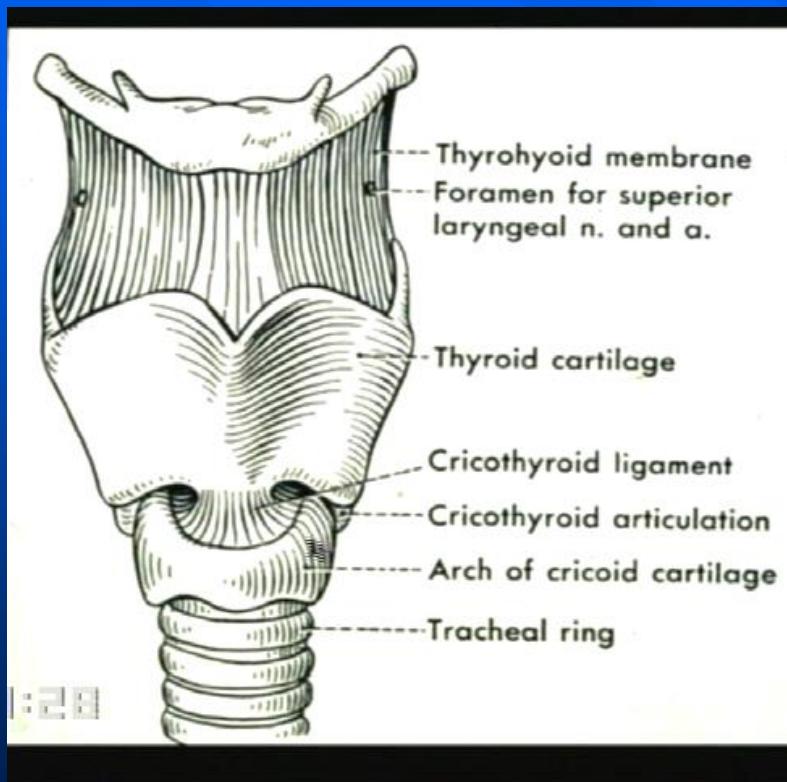
## ■ Preepiglottic space:

- Fat-filled space between hyoid bone anteriorly & epiglottis posteriorly
- Submucosal SCCa hides here (T3 stage)

## ■ Paraglottic space:

- Paired fatty areas deep to FVCs Superiorly they merge into preepiglottic space
- Terminates inferiorly at undersurface of TVC
- Submucosal location in which SCCa may hide

# Recurrent laryngeal nerve pierces cricoid thyroid ligament



# Supraglottis

## The Supraglottis

- Epiglottis
- Aryepiglottic folds
- Arytenoids
- False vocal cords

0:30

# Imaging

- Moderately enhancing mass involving epiglottis, AE fold, false vocal cord, PES,  $\pm$  PGS
- Epiglottic SCCa: Mass in suprathyroid epiglottis ("free margin") or body of epiglottis
  - Symmetry of bilateral lesion can "hide" lesion
  - PES involvement is clinically occult but denotes T3 stage
- AE fold SCCa: Posterolateral spread to pyriform sinus (hypopharynx) or anterior to false cord
  - Tumor may extend over superior AE fold to pyriform sinus
- False cord SCCa: Deep invasion into PGS should be sought
- PES spread allows extension to anterior commissure and true vocal cord (TVC)
- PGS spread allows true cord or thyroid cartilage involvement
- Extralaryngeal extension = tumor in soft tissues outside larynx
  - Most often: Through thyrohyoid notch or thyrocricoid ligament
  - Less often: Directly through thyroid cartilage
  - Extralaryngeal extension = T4a
  - Generally treated with total laryngectomy

# Supraglottic SCCa



# Reporting Tips

- Describe: Bulk of tumor in SG larynx, but report full extent of mass
- Describe: Status of cartilage
  - Is cartilage normal?
  - Has tumor eroded inner cortex?
  - Is cartilage completely penetrated?
- Describe: Extralaryngeal tumor essential to report

# Supraglottic (pearls)

- Look for preepiglottic & paraglottic space involvement with tumor = T3 disease
- Look for cartilage erosion; describe if inner cortex (T3) or through cartilage (T4)
- Cartilage sclerosis is nonspecific, may be perichondritis from adjacent tumor
- Look carefully for extra laryngeal extension to surrounding soft tissues (T4)
- Nodes frequent; 1st nodal station is **level IIE**
- Epiglottis SCCa frequently drains bilaterally